

# INDEX

## A

- AAT, Meda T Series of transistorized module analog computer, 694
- Abbey Electronics & Automation Ltd., progress of, 273
- Abeles, P. W., on Introduction to Prestressed Concrete (review), 93
- Aberconway, Lord, on John Brown & Co. Ltd., 272
- Aberdare Engineering Ltd., boiler cleaning plant for Adelaide power station, 560
- ABG Allgemeine Baumaschinen-Gesellschaft, Titan paver-finisher machine for asphalt or concrete, 745
- Abramowitz, M., on Handbook of Mathematical Functions (book), 62
- Abrasive belt attachment, Minibelt, 86
- Wheel cutting-off machines, Type 261 (A. and S. Osmond Ltd.), 409
- Abwood Machine Tools Ltd., progress and prospects, 337
- AC Delco, 100 ton power press, 599
- AC 427 convertible motor car at Goodwood, 554
- AC, graphical methods applied to, by A. von Brunn (review), 157
- Machines, electromagnetic problems of, by B. J. Chalmers (book), 446; (review), 508
- Acbars Ltd., SMP magnetic-pneumatic floating table for machining operations, 503
- Acceleration tests on motor vehicles ISAM equipment for, 659
- Access towers (trade publication), 222
- Mobile and static (SGB Building Equipment Division), 536
- Accidents, aircraft, comment on, 67
- on construction sites, enquiry into, 688
- Hovercraft overturning, 680
- Industrial, N11P study of, 592
- Railway, causes and trends of (report), 713-714
- at Henwick Hall, 547
- Steel overbridge failure at Clapham Junction, 674, 678-679
- Road, causes of fatal injuries in, 806
- Engineering, education and enforcement in, 769, 806
- Research on possible remedies for (RRL), 610
- Speed limit of 70 mph and, 705
- Statistics on, 610
- Survey on, 806
- Accounting machine, 395 electronic, with magnetic disc memory (National Cash Register Co. Ltd.), 505
- Management, joint diploma, 705
- Accra-Tema Motorway, concrete construction of, 708
- Accuratool automatic turret lathe (Dowding & Doll Ltd.), 269
- A.C.E.-Hartons Ltd., training courses in instrumentation, 49; provision of temporary maintenance staffs, 49
- ACE Machinery Ltd., Alimak HBL raise climber for collieries, 56
- Acetal resin, Delrin, Dunlop 3 in hose coupling in, 567
- Acetic acid plant, computer control study, 212
- Acetylene synthesis from soot and hydrogen, 818
- Acquasave Mark 2 diaphragm ball valve, 64
- Acrylic elastomers, non-corrosive, research on (General Motors Corp.), 338
- Action Speed Tactical Teacher, 389
- Actracta audible direction flasher warning device for motor cars, 633
- Actuators for diesel hydraulic locomotives (Westinghouse), 26
- Maroth rotary screw, for flight load test frame, 621
- Rotork 12A, for sewage penstock operation, 754
- Valve, Synchropak, add-on units for, 815
- Ad. Auriemia Inc., Indicator 194 gas controlled temperature indicator, 120
- Adams, Dr. J. B., nuclear fusion research, 799
- Adams, J. M., on carbon, 502
- Adams-Norkan Ltd., impedance changer probe, 216
- Adamson, Daniel, treble pass, single flue economic boilers, 49
- Adapt-o-drill gun-type drill for high-precision holes, 758
- Adapter, pbc spindle speed-increasing, for machines (Metropolis Machine Tools Ltd.), 503
- Adcock & Shipley Ltd., Bridgeport copying machine for thread rolling dies, 594
- Addison, H., review of Russia My Native Land, 253; review of High Dam at Aswan, 637
- Addressing machines (trade publication), 638
- Adelaide power station, boilers and boiler cleaning plant for, 560
- Adhaesium adhesive for machine tool fixing to floor, 724
- Adhesive, Adhaesium, for machine tool fixing to floor, 724
- Cold-sealing, Cosil, 304
- Sealant, Casco-MI, 339
- Setting time testing device, 275
- Admel International Ltd., Super Permatrace, drawing paper, 52; drawing office supplies and equipment (trade publication), 382
- Administering research and development, by C. D. Orth, J. C. Bailey and F. W. Wolek (book), 318
- Admiral OHC motor car engine (Opel), 332
- Admiralty Materials Laboratory, research activities, 71-72; boiler and reactor corrosion research, 71; dissolved oxygen meter, 71-72; silicon nitride ceramic development, 72. *Letter*, 229; high damping capacity alloys, 22; fuel-cell research programme, 72; condenser heat-transfer research, 72
- Advance Electronics Ltd., type TC4 digital timer counter, 185; type VM79 portable millivoltmeter, 185
- AEC, Dumptruck dump trucks for El Cadillal dam project, 91; 690 and 1100 Dumptruck motor vehicle dumper trucks, 279; type 2AV690 six-cylinder diesel engine for Dumptruck dumper truck, 279
- Aeckerle, Hugo, Co., Unilok combined shunter, crane and fork lift truck, 58
- AEI-Birlec Ltd., new headquarters for, 208; amalgamation with Barnes Engineering Co. Ltd., 368; 45 ton channel type induction furnace, 593
- AEI Construction (Cables and Lines) Division, contract for cable installation in Sheffield, 241; submarine power cable to Mull, 336; transmission towers, 715
- AEI Electronics Group, development of ROLF coal-cutting equipment, 76; rechargeable 24 V mining battery 117; electrostatic flue dust monitor, 564; microwave moisture meters, orders for, 657
- AEI Electronics Ltd., type VH20 miniature ion gauge, 217; thyristor voltage regulators, 695
- AEI-Herr Ltd., new headquarters, 208
- AEI Lamp and Lighting Co. Ltd., Leader 15T aluminium lighting columns, 50; Mazda tungsten iodine light bulbs, 331
- AEI Telecommunications Group, two new factories in Scotland, 80
- Aer Lingus experience of One-Eleven airliner, 673
- Aerex Ltd., cooling fans (trade publication), 254; portable electric blower, 662
- Aerial masts for NATO station near Carlisle, 339
- Requirements for BBC-2 television programme, 303
- Aero-engine. *See Aircraft engine*
- Aerodynamics and hydrodynamics, two-dimensional problems in, by L. I. Sedov (book), 510
- of turbines and compressors, by W. R. Hawthorne (book), 94; (review), 636
- Aerofall Mills Ltd., Aerofall range of crushing and grinding mills, 56; (trade publication), 798
- Aeroflow combustion system in diesel engines (Perkins), 653
- Aerograph-DeVilbiss Co. Ltd., paint heaters, 535
- Aeronautical and Communications Exhibition, International (Genoa), 127
- Aeronautique Marcel Dassault, joint project for large capacity medium-range jet transport aircraft, 592
- Aeroplane. *See Aircraft*
- Engine. *See Aircraft engine; Turbine, gas*
- Aerorox breathing apparatus, 54
- Aerospace industry, technological fall-out, 100
- AEW Ltd., batch electric ovens, 153; electric oven for large plastic sheets, 662
- AGB Research Ltd., central heating survey, 224
- Agecroft C power station, silt prevention for condenser tubes, 475
- Agestia district heating project, 141
- Agricultural machinery (Smithfield Show), 743
- and equipment, exhibition of (Moscow), 256
- Exhibits at Royal Show, 78
- Agriculture, Royal Show (1965), exhibits at, 78-79
- *See also Tractors*
- Agua y Energia Electrica, El Cadillal earth fill dam and hydroelectric power scheme, 91
- Air bearings, development of (Westwind Turbines), 265-267
- Blowers (trade publication), 446
- Compressed. *See Compressed air; Pneumatic*
- Compressor. *See Compressor*
- Conditioner, Pacific-102, 224
- Conditioning (trade publication), 822
- Directory, modern refrigeration and, 1965 (book), 734
- Equipment for motor cars, 557
- Hydro-Flo chiller unit for, 792
- Motor car, Transair, 399
- System for Birmingham newspaper headquarters (Carrier Engineering Co. Ltd.), 600
- Unit, rooftop ductless, Airajust, 435
- Units, Thermotank Mark II, for liner *Queen Elizabeth*, 784
- Air Control Installations Ltd., precipitators (trade publication), 126; air intake filters (trade publication), 574
- Filter. *See Filter*
- Gauging, Series 11-018 fail safe precision controller for (C. A. Norgren Ltd.), 22
- Grinding (trade publication), 510
- Handling units, Clipper, 409
- Air Handling Units Ltd., Clipper air handling units, 409
- Air heaters (trade publication), 446
- Automatic oil-fired, Pak-a-Way (Package Co. Ltd.), 278
- Intake filters (trade publication), 574
- Air League, renewed activities of, 738
- Air Master compressed air set, 54
- Pollution. *See also Smoke abatement*
- Air Products Ltd., nitrogen control system, 152
- Purifier, Felvic, with ozone lamp, 114
- Surveys, vertical colour, 636
- Tools (trade publication), 798
- Traffic control, radar type AR-1, Plessey, 305
- Transport, Britain's position and prospects in, 295
- Travel long-distance, in 1970's, 163
- Turbines, development and application in drilling and grinding (Westwind Turbines), 265-267
- and water heaters, oil-fired, N400 (C. M. Hess Ltd.), 672
- Water vapour removal from, 694
- *See also Atmosphere*
- Airajust rooftop ductless air conditioning unit, 435
- Aircraft accidents, comment on, 67
- Air-bus joint proposals, 592
- Assisted take-off, BS605 rocket boost unit for (Bristol Siddeley Engines Ltd.), 107
- Automatic direction finder, type AD370, 457
- Pilot in airliners, 333
- Boeing 707 airliners, Marconi AD560 Doppler navigation system and airborne computers for, 464; E5 inertial navigation system for (Qantas Airways), 562
- Breguet Br 944 air-bus. *Correction*, 7
- Buccaneer, Hawker Siddeley, with rocket boost, 107
- Concorde supersonic airliner, electronic equipment for, 177; future of, 194
- Counter insurgency (COIN) concept and development types, 498-499
- Dakota, accident, 67
- Damage to houses, research (BRS), 256
- Design department at Cranfield College of Aeronautics, 39
- Requirements for civil airliners, by Dr. B. N. Wallis, 297
- Development prospects by Dr. B. N. Wallis, 296
- Douglas DC-9 airliner, comparison with One-Eleven, 673
- Engine materials, refractory metals as possible future, by G. Llewelyn, 502
- Turboprop, Dart R.Da7 (Rolls-Royce), 688
- General Dynamics/Convair Model 48 Charger, counter insurgency, 499
- German Aviation Show (Hanover, 1966), 159
- Hastings, crash, 67
- Hawker Siddeley 748, crash at Lympne, 67; orders for, 688
- Hawker Siddeley Trident 1 and 2 medium-haul transport, 273
- Industry, Air League activities in, 738
- National Plan impact on, 388
- Plowden report on, 801
- Position and prospects of, 801
- Position and prospects of, Dr. B. N. Wallis on, 296
- Titanium, beryllium, and the refractory metals in, by A. R. G. Brown and K. S. Jepson, 502
- Island BN-2 light commercial (Britten-Norman Ltd.), 308
- Jindivik target drone, 108
- Landing, all-weather projects, 334
- Automatic, equipment groups of, 334
- BLEU system, 334
- Instrument land system, 333
- Problems in bad weather, by G. W. Webber, 333
- Light armed reconnaissance (LARA), 498
- Aircraft-Marine Products (GB) Ltd., strato-therm terminals and splices, 247; Creative Analysis service to improve circuit efficiency, 307
- Medium-range jet transport, joint project for large capacity, 592
- and missiles, automatic control of, by J. H. Blakelock (book), 574
- Noise, 386
- at London Airport, 386
- North American OV-10A counter insurgency, 498
- One-Eleven, landing system on (British Aircraft Corp.), 334-335
- One-Eleven short-haul jet airliner, orders and operation for, 673
- Performance barriers, 334
- Profiles Nos. 1-24 (book), 542
- Research applications, NCR-Elliott 4100 computer, 369
- Safety barriers, 334
- Short Belfast transport, Head-up display systems for, 241
- STOL, advantages of, by Dr. B. N. Wallis, 297
- Super VC10 airliner, developed versions of, 83
- Take-off and overshoot director for (Elliott-Automation Ltd.), 244
- Transall C-160. *Correction*, 7
- Trident, for BEA (Hawker Siddeley), 273; landing system in (Hawker Siddeley) 334-335
- Twin-jet, executive, Hansa HFB 320, 246
- Vertical/short take-off and landing research, wind tunnel for, 495
- Vickers Super VC10 airliner, prospects of, 163
- Vickers VC10 airliner, landing system in, 334-335
- Viggen strike, Head-up display systems for, 241
- Airfields, lighting of, tungsten-iodine lamp for (Osram (GEC) Ltd.), 245
- Airmaster Engineering Ltd., Imp Airmaster dust extraction plant, 472
- Airmec tape control equipment, CD33 single spindle portal drilling machine with (BSA Tools Ltd.), 271
- Airport, Craow, Plessey Type 424 radar for, 812
- London, Plessey air traffic control radar type AR-1, 305; aircraft noise at, 386
- Manchester (brochure), 444
- Poznan, Plessey Type 424 radar for, 812
- Radar, Plessey HF200 heightfinders for, 433
- Runway lighting, 334
- Airsprint pack of inflatable splints, 567
- Aiton & Co. Ltd., annual statement, 273; export progress, 273
- Aiton, Wing-Cdr. J. M., on Aiton & Co. Ltd., 273
- Ajena dam, Volta River project, 363
- Akerman pile driver model 700-4P, 20
- Akosombo dam, Volta River project, 363
- Akosombo power station, first turbine on load, 336
- Aktiebolaget Billingsfors-Langed, Cosil cold-sealing adhesives, 304
- Alarm annunciators (trade publication), 542
- Scanning system for ships (Honeywell Controls Ltd.), 306
- System, electronic, Krotos, 434
- Visual (trade publication), 446
- Albemar Report on Youth Employment Service, 807
- Albu, C., review of Penguin Survey of Business and Industry 1965, 317
- Alcan GB-B57SWP aluminium alloy tubes in reservoir baffle wall, 210
- Alcan Industries Ltd., all-welded aluminium alloy cargo tanks for shipping ethylene, 81; N8 aluminium for auto-transformer tanks, 210; wall cladding (trade publication), 318; architectural aluminium (trade publication), 382
- Alcandox colour anodized architectural aluminium (trade publication), 382
- Alco Products Inc., Series-251 16-cylinder diesel engine for locomotives, 250; 2,400 hp diesel-electric locomotives for Belt Railway Co., 250
- Alcon self-priming pump, 817
- Aldington, Dr. J. N., on AEI Telecommunications Group, 80
- ALERT, lightweight digital computer, 311
- Alexandra Overalls Ltd., overalls (trade publication), 605
- Alf, automatic letter facer, 200
- Alfa Romeo Giulia TI motor car, description of, 710-711
- Alger, P. L., on Ethical Problems in Engineering (review), 765
- Alginat Industries Ltd., Duplex mixer of 220 gal. capacity, 144; FKM4, 200 Lodge-Morton mixer two tons capacity, 144
- Alginic acid, production of, 144
- Alimak HBL raise climber for collieries, 56
- Alimak-Verken AB, Alimak HBL raise climber for collieries, 56
- Allan, Dr. R. R., RAE prizewinning author, 81
- Allen, E. G. W., on LAMIDA, 687
- Allen, H. N. G., on W. H. Allen/Bedford School link, 236; professional training in mechanical engineering, 257
- Allen, J., sodium and its alloys with potassium, 501
- Allen, J., & Sons (Oxford), lightweight tractor, 79
- Allen, N., presidential address to IME, 545
- Allen, N. S. D., development of air bearings, 265
- Allen, P. W., & Co., range of fluorescent local light units for machines, 19
- Allen Transmatic Ltd., Transfil-Torbak weigh filling machine, 435
- Allen, W. H., & Sons Ltd., cooperation with Bedford School, 236; circulating pumps and motors for Didcot power station, 465
- Allen Ygnis Boilers Ltd., packaged boilers (trade publication), 605
- Allgemeine Elektrizitäts-Gesellschaft, gas turbines for Indonesia, 784
- Allied Structural Plastics, Aspect water storage cistern in plastics, 128
- Allis-Chalmers, M-100 series B diesel motor grader, 19; 260E elevating scraper, 434; HD-7G tractor shovel, 536; 21R tractor mounted adjustable ripper, 599
- Allison 250-C18 252 shp shaft-turbine engine for Hughes helicopter, 601
- Alloys, light, for engineering applications, recent developments in, by J. H. Dedrick, H. R. Clayton and P. A. Fisher, 502
- Structure and properties of, by R. M. Brick, R. B. Gordon and A. Phillips (book), 126
- *See also under specific alloy types*
- Allspeeds Ltd., Kopp Variator, 370



- Allwood, L. H., on Crane Fruehauf Trailers Ltd., 176
- Alpha-Chemie und Metallurgie, Kahl reactor experiment, 689
- Alpine motor car. See *Sunbeam Rapier Alpine*
- Alternators, construction and testing of 500 MW (Associated Electrical Industries), 355
- for motor cars, position and prospects of, 557
  - Stator, AEI, for Tuft Cove No. 1 power station, 528
  - Turbo, for Eggborough power station, 151
  - 500 MW, for Liddell power station, 528
  - Large, stator winding, new method of (AEI), 151
  - for Sizewell atomic power station, 70
  - See also *Generator; Turbo*
- Altitude reporting systems, automatic, Beacon Model ADC-ALT-4 encoder for, 179
- Aluminite finish, extruded aluminium for post box with (Aluminium Co. of America), 724
- Aluminium alloy, all-welded, cargo tanks for shipping ethylene (Gloster Saro Ltd.), 81
- Cylinder heads, 780
  - Fatigue life and variable loading, by T. R. G. Williams and M. T. Lowcock, 571
  - Hyduminium-48, 370
  - Tubes, Alcan GB-B57SWP, in reservoir baffle wall, 210
- Architectural (trade publication), 382
- Busbar, by A. G. Thomas and P. J. H. Rata (book), 254
- Aluminium Co. of America, reflector sheet (trade publication), 605; extruded aluminium for post box with Aluminite finish, 724
- Coating of steel by vacuum deposition, 181
  - Extruded, for post box with Aluminite finish (Aluminium Co. of America), 724
  - Lighting columns, Leader 15T, 50
  - NP8, for auto-transformer tanks, 210
- Alvan Blanch Development Co. Ltd., permeable-filling trailer, 79; Alvan Blanch A12 flowmeter, 153; tractor mounted concrete mixer, 507; Cascade 17, grain drier, 744
- Amalgamated Asphalte Co. Ltd., black top surfacing for Sevenoaks bypass, 746
- Amalgamated Union of Foundry Workers, activities of, 777; history of development of, 777; safety and health interests, 777
- Ambulance bed, shock-proof (Delaney Gallay Ltd.), 26
- America. See *North America; United States; Latin America*
- American Broadcasting Co., television satellite for 22 channels, 564
- Foundrymen's Society, seminar on production of sound castings, 96
- American Hoist & Derrick Co., American 999C High-Lift crane, 249
- American 999C High-Lift crane, 249
- American President Lines, cargo refrigeration system for (Chrysler Corp), 656
- American Ryan Industries Incorporated, association with W. P. Butterfield's Ltd., 176
- Society of Mechanical Engineers, ASME Handbook: Metals Engineering Design (book), 30
- American. See also *United States*
- AMF Thermatool, Inc., Thermatool high-frequency resistance welding equipment, 380
- Ammonia carrier (Hawthorn Leslie), 305
- Amplifier, dc (trade publication), 542
- Type I-163 (Bell & Howell Ltd.), 759
  - and indicator unit, combined (Kent Precision Electronics Ltd.), 310
  - Television video distribution (trade publication), 222
  - Tunable selective, 400 series (Avon Communications & Electronics Ltd.), 434
  - Turbulence, for logic functions, 135
- Amplivox "Minivox" hearing aid, 551
- Amprobe events recorder, 345
- Amsco dredge pump, 537
- Analogue to digital converter (trade publication), 702
- Output controller, three term, 153A (George Kent Ltd.), 726
  - Techniques, fundamental, by R. J. A. Paul (book), 702
  - Timer, transistorized (English Electric-Leo-Marconi Computers), 245
- Analysers, hydrogen in metals (Cambridge Instrument Co. Ltd.), 663
- Magnetic reaction, for non-destructive testing, 817
  - Oxygen, industrial, Type OA137 (Servomex Controls Ltd.), 598
  - Pulse polarographic, Melabs CPA-3, 663
  - Radioisotope, for ore slurry, 183
- Analysis of continuous beams and rigid frames, by Dr. P. S. Dravid (book), 734
- Numerical, elements of, by P. Henrici (review), 381
- Anchors, "Stato," for oil-drilling rig, 205
- Anderson, Bob (Engineers) Ltd., reconditioning machine for crawler track rollers, 530
- Anderson (Colours) Ltd., installation of 68 ton shell boiler, 112
- Anderson, D., & Sons, voluntary standards for troughed metal decking, 593
- Anderson, Prof. J. S., chemistry research grant for, 304
- Anderton Italiana SRL, agent in Yugoslavia for Anderton Springs Ltd., 176
- Anderton shearer-loader, 55
- Anderton Springs Ltd., overseas activity, 176; appointment of agents in Vienna and Yugoslavia, 176
- Andrew, Dr. R., principal, training dept. C and CA, 487
- Andrews, P. W. S., on Eagle Ironworks, Oxford (book), 158
- Andrianov, K. A., on Metalorganic Polymers (book), 222
- Angles, magnetic, of sintered polarized ceramic (Magnetic Handles (EET) Ltd.), 89
- Anglo-American Plastics Ltd., removal of head sales office, 336
- Animal foods, punched card system for mixing, 124. *Correction*, 183
- Anne Shaw Organization. See *Shaw, Anne*
- Anson, George, & Co. Ltd., Bell & Howell Anstat electrostatic copier, 731; photocopying equipment, 731
- Anstat electrostatic copier (Bell & Howell), 731
- Antex Ltd., model G 18W high-speed soldering iron, 178
- Antifreeze for central heating, Forlife (C.H.), 544
- Antill, J. M., on Critical Path Methods in Construction Practice (book), 638
- Antipodes, Inter-Oceanic distances to, 294
- Anti-vibration device for pneumatic drills (Moscow Mining Institute), 440
- Antonova Fam town motor car project, 398
- Antonova GT motor car, 398
- Any-sizer V-roll grinding device for precision diameters (Dayton Perforators (UK) Ltd.), 816
- AOIP, Vapomatic and Statormatic, automatic starters for asynchronous electric motors, 685-686; history of, 686
- Ap Lei Chau power station, 240; boiler equipment for, 721
- Appleby-Frodingham Steel Co., record steel production, 496
- Appliance Components Ltd., photoelectric controls (trade publication), 350
- Applied Chemicals Ltd., Graco Hydra-Clean air-operated pumps, 662
- Applied combinatorial mathematics, by E. F. Beckenbach (review), 92
- Mathematics for engineers and scientists, by S. A. Schelkunoff (review), 92
  - Physics for sixth formers, symposium on, 419
  - Science in schools, conference on, 481, 515
  - in schools, survey of, 237-239
  - in schools in USA, 559
- Apprentice competition, international (Glasgow), 162
- Foundry, competitions for, 615
  - Training, project work in, by R. Burke, 807
  - School, foundry workshop at (AEI), 718
- Apprenticeship schemes, F. Metcalfe on, 420
- Trends conference, BACIE (Eastbourne), 781, 807, 809
- APT Electronic Industries Ltd., Lektrokit series of heat sinks, 115; LKU-321 stabilized power sub-unit for Lektrokit system, 507
- Program for multi-axis continuous path control, 113
- Aquamiser Mark III universal evaporative cooling tower, 275
- Arc-furnace. See *Furnace, electric*
- ARC-OUT tap eroder for large components, attachment to, 410
- Arc welding. See *Welding*
- Arch computer sales, 289, 304
- Dams, theory of, by J. R. Rydzewski (book), 413
- ARCH on-line process control computer, 145
- ARCH 9000 computer for chemical plant control study, 212
- Archdale, James, & Co. Ltd., size 100 deep boring machine, 314
- Archer, L. Bruce, on Systematic Method for Designers (book), 702
- Architectural aluminium (trade publication), 382
- Arcoelectric Switches Ltd., neon indicators (trade publication), 318
- Arden, L. L., review of Microfilm Technology, 157
- Arfons, A., bid for land speed record, 712
- Arfons, W., bid for land speed record, 712
- Argall Machine Tool Co. Ltd., Personer hydraulic baling press, 536
- Argentine, El Cadillac earth fill dam and hydroelectric power scheme, 91
- Argus 100 computer for soaking pit on-line control, 124
- Arm, artificial, electronic, from Italy, 65
- Armenian Academy of Sciences, acetylene synthesis from soot and hydrogen, 818
- Armfield Hydraulic Engineering Co. Ltd., cryostatic metal processing equipment, 379
- Armourbond reinforced gummed paper tape, 282
- Armourtex resin-bonded kraft laminate, 282
- Armshire Reinforced Plastics Ltd., cold press moulding of plastics, 124
- Armstrong, Stevens & Son Ltd., Dynapak high-energy rate forming machine, 755-756
- Armstrong Whitworth (Metal Industries) Ltd., impact breakers (trade publication), 126
- Arnfield, R., on industrial liaison officers, 579
- Aronsson, B., on Borides, Silicides and Phosphides (book), 190
- Arrol, Sir William, & Co. Ltd., rebuilding of Craigellachie road bridge in steel, 268; Cockenzie power station, 492
- Arthritis and Rheumatism Council for Research, industrial survey, 418
- Arthur, H., on enquiry into postgraduate courses for engineers and technologists, 577
- Articulated ships, developments in, 719
- Multipacket, development of, 719
  - Artificial arm, electronic, from Italy, 65
  - Limbs, powered, design of, by Dr. E. Marquardt, 66
- Arup, Ove, & Partners, reinforced concrete football stand at Galashiels, 466; Sunderland Civic Centre, 600
- A/S Det Dansk-Franske Dampskibsselskab, bulk carrier design, 304
- Asbestos (trade publication), 446
- Cement products (Turners Asbestos Cement Co. Ltd.), 660
  - Roofing panels, Spantiles, 660
  - Sheets surfaced with Tedlar, Turnall Colourbest, 660
  - Secret fix ceiling panels, Turnall, 660
- ASEA, Oskarshamn atomic power station, 141; trading report, 305; agreement with ESAB, 400
- Aseasvets, acquisition by ESAB, 400
- Ashington County Grammar School, applied science activities, 239
- Ashmore, Benson, Pease & Co. Ltd., Aerofall range of crushing and grinding mills, 56; aerofall mills (trade publication), 798
- Aslib, Engineering Group's AGM, 157
- Aspect water storage cistern in plastics, 128
- Asphalt cutter, rotary, Roto-Cut, 20
- Assembly techniques, conference and exhibition (PERA), 255
- Associated Electrical Industries Ltd., safety standards for X-ray radiographic equipment, 10; purchase of marine radio business by Marconi, 48; mine winder controller, 57; speedometer and field diversion system for diesel-electric locomotives, 90; Type S electronic tachometer equipment, 90; power station at Khor-maksar, 144; new method of stator winding for large turbo-alternators, 151; transformers with distribution pillars, 182; single cylinder direct coupled steam turbines (trade publication), 190; remote controlled brushless turbine generator set, 306; construction and testing of 500 MW alternators, 355; 11 kV electric motors for Longannet power station, 368; 300 kVA fireproof transformers, 441; 8,500 hp converter fed mine winders, 442; 120 MW turbine generators for Hong Kong power station, 465; 100 MW turbo-generator set for Tuft Cove No. 1 power station, 528; steam turbine for Oldbury power station, 563; vacuum contactor for electric motor starters, 665; stronger lead (trade publication), 670; PBO2 overcurrent and earth fault relay, 696; foundry workshop at apprentice training school, 718; transformer noise suppression at Thorpe Marsh power station, 723; see also *AEI*
- Associated Industrial Consultants, seminar on management development, 683
- Associated Semiconductor Manufacturers Ltd., tunnel diodes at microwave frequencies, 506
- Association of British Chemical Manufacturers, integration with Association of Chemical and Allied Employers, 592
- of Chemical and Allied Employers, integration with Association of British Chemical Manufacturers, 592
  - of Industrialized Building Component Manufacturers Ltd., 607
  - Ouvriers Instruments Precision, remote control of ship steering gear, 243
  - of Scientific Workers, pay dispute of university laboratory technicians, 385
  - of Supervisory Staffs, Executives and Technicians, strike with International Computers and Tabulators Ltd., 230; organisation, activities and aims of, 230
- Aston Gyro, BEHA, recirculating forced-air heater, 576
- Aston Martin DB6 saloon motor car, improved version, 431
- Estate type motor car, 485
- Aswan Dam, by T. Little (review), 637
- Ateliers de Constructions Electriques de Charleroi, wall bushing with terminal boxes, 787
- Atherton, T., on Dorman Smith Holdings Ltd., 304
- Atkins, W. S., Toronto underground railway, 177
- Atlas Copco (Great Britain) Ltd., Models 310, 320, 330 Cavo pneumatic loaders, 54; Yak heavy duty rock drill, 410
- Atlas General Survey Program and computing service, 149
- Atlas range of diaphragm type manometers, 88
- Atmosphere generators (trade publication), 798
- Atmospheric pollution. See *Clean air; Smoke*
- Automat nucleonic tin-coating width gauge, 790
- Atomenergi AB, agreement with United Kingdom Atomic Energy Authority, 784
- Atomic Energy of Canada Ltd., Pickering atomic power station, 302; operation of WR-1 atomic reactor, 690
- in Europe, congress on (Frankfurt), 255
  - Plain man's guide to (trade publication), 254
  - Fuel elements, MTR type enriched uranium-aluminium alloy, 12
  - Production at Capenhurst, 784
  - Reprocessing plant at Mo1, Eurochemic, 392
- Atomic Power Constructions Ltd., tenders for Dungeness B atomic power station, 171
- Atomic Power Group, Sizewell atomic power station, 15-16; tenders for Dungeness B atomic power station, 171
- Lord Robens on, 6
  - Station, Cottam, economic assessment of, 171
  - Station, Dungeness A, comparison with Dungeness B, 171; design, construction and operating details, 299-302; commissioning time, 301
  - Station, Dungeness B, comparison with Dungeness A, 171; details of tenders, 171; novel features of, 171; reactor details, 171
  - Station, energy storage and. *Letter*, 613
  - Station, Indian Point (Consolidated Edison), 721
  - Station, Marviken, 141
  - Station, Oldbury, constructional details, 172-174; integral boiler-reactor design, 172-174; prestressed-concrete pressure vessel for, 172-174; testing of steam turbines, 563
  - Station, Oskarshamn, 141
  - Station, Pickering, turbo-generator sets for, 302
  - Stations, position and prospects of, 299
  - Station, Sizewell, fuel loading at, 15; description of, 70
  - Station, Tokai, on load, 689
  - Station, Trawsfynydd, 400 kV sub-station at, 241
  - Propulsion of ships, position and prospects of, 750-751
  - of ships, symposium on, 672, 750-751
  - System components, gaseous helium refrigerator for testing, 401
- Atomic reactor, advanced gas-cooled, for desalination of water, 451
- Advanced gas-cooled, development prospects, 171
  - Advanced gas-cooled, for Dungeness B power station, 171
  - Advanced gas-cooled, economic assessment of, 171
  - Advanced gas-cooled, position and prospects of, 628
  - Bores, "Creeping Weasel" for measuring of (English Electric Co. Ltd.), 550
  - CANDU, for Pickering power station, 302
  - Consort Mark 2 (Imperial College of Science and Technology), 12
  - Control rods, stainless-steel clad cadmium, 12
  - Dounreay Fast, output progress, 226
  - Dounreay Materials Testing, Boiling Water Irradiation Loop, 563
  - Dragon, Winfrith Heath, 392; progress report on, and details of, 207;
  - for Dungeness A atomic power station, 299-302
  - Halden project programme, 529
  - Instrumentation, Dungeness A power station, 302
  - Integral boiler construction, 172
  - Kahl, fuel assembly irradiation experiment, 689
  - Pressure vessel, prestressed concrete, 172
  - Pressurized water, Indian Point, 721
  - Steam generating heavy water, Winfrith Heath, zirconium alloy pressure tubes for, 501
  - and steam turbine installations, 552
  - Twin magnox, for Sizewell power station, 70
  - Water cooled and moderated, for Oskarshamn power station, 141
  - WR-1, operation of (Atomic Energy of Canada Ltd.), 690
- Attenburrow, E. H., review of Electronic Transformers, 764
- Attwood, C., on Squares and Square Roots (book), 638
- Atuanda town motor car, Fissore, 653
- Audax Ltd., transportable floodlighting tower, 695
- Audi motor car engine, 397, 556
- Audio and video signals on record, 288
- Audio-visual system, Phonovid, 288
- Auger borer, rail-mounted, 645
- Auger, R. N., Inc., development of, 135
- Austin & Pickersgill Ltd., trading report, 688
- Austinlite Ltd., Heinemann type JA magnetic miniature switchgear circuit breaker, 403
- Australian Iron & Steel Co., Model 76/92 Halden-Robertson flying shear, 666-667
- Austrian Airlines, order for Hawker Siddeley 748 aircraft, 688
- Auto Transmissions Ltd., AutoRange version of de Normanville type 230 overdrive for automatic transmission, 558; AutoRange overdrive, 584
- Auto Union, Audi motor car engine, 397
- Auto Union DKW, Audi motor car engine, 556
- Autobagger, Charrold, bulk carriage vehicle for solid fuels, 233-234
- Auto-Chemistallic peristaltic pump, 537
- Autocollimators, metrology with, by K. J. Hume (review), 573
- Autocrat weighing machine (W. & T. Avery), 551
- Autoflame equipment model AFR12 brazing machine, 535
- Soldering and brazing unit, 792
- Autoflo changeover valve for carbon dioxide cylinders, 814
- Automat portable oxygen resuscitator, 117
- Automat, A2, welding machine for submerged arc welding, 249
- Automat und Mensch: Kybernetische Tatsachen und Hypothesen, by K. Steinbuch (review), 797
- Automated Industrial Drilling Program (ICT), 627
- Automated Steam, automatic industrial boilers, 504
- Automatic chucking machine, 95N (BSA Tools Ltd.), 315
- Code generator (trade publication), 222
  - Direction finder, type AD370, to Arinc 550 specification (Marconi), 457
- Automatic Equipment Ltd., gas fired ovens, 280; automatic double-decker dipping and stoving plant, 410; CRT12 multi-spindle automatic spray painting machine, 630
- Laboratory Techniques Exhibition and Conference, 799
  - Letter facer, Alf, 200
  - Machine, single spindle, A16A (Strojimport), 437
  - Type AC single spindle chucking (Warner Swasey Asquith Ltd.), 271
  - Machinery for production of semiconductor diodes (Bader Machinery Co. Ltd.), 262-263
  - Pilot in airliners, 333
  - Railways (book), 318
- Automatic Telephone & Electric Co. Ltd., signal systems for mine working, 55
- Transmission for BMC Mini and 1100 motor cars, 522
- Automatic-36 refrigerator with automatic defrosting, 824
- Automation, age of, by Sir Leon Bagrit, 297
- at Bevercotes Colliery, 75-76
  - Conference, British (Eastbourne), 31, 576, report of, 651
  - Course, low-cost (PERA), 615
  - Electrowriter facsimile transmitter (Shipton Automation (Sales) Ltd.), 730
  - in industry, effect of credit squeeze, 289
  - Process, research into, 209
  - Social and economic implications of, papers and discussion on, 651
  - for space age, by A. W. Vickers, 823
  - Systems for Swedish cement plant (International Systems Control Ltd.), 305



- Automation techniques in chemistry, international exhibition on, 824  
 — and Technological Change, Trades Union Congress (booklet), 289  
 — and unemployment, 297  
 — See also *Fuel, Power, Process Control and Automation Exhibition*  
 Automobile. See *Motor car*  
 Automobile engineering, advances in, Part 3, by G. H. Tidbury (book), 670  
 — Worked examples in, by R. W. Bent (book), 798  
 Automotive Products, automatic transmission for Mini and 1100 motor cars, 522, 584  
 Autonetica G.10A gyro for inertial navigation system, 562  
 Autopert network analysis method, punched card, 105  
 AutoRange overdrive, Auto Transmissions, 584  
 — Version of de Normanville type 230 overdrive for automatic transmission, 558  
 Auto-transformer tanks in aluminium NP8, 210  
 AutoWard programmed capstan lathes, 314  
 Availability, high, steam turbines and, by H. Watson, 704  
 Avalanche near Mattmark Dam, inquiry into, 329  
 Aveling Electric Ltd., modular recording systems (trade publication), 126; type LF-SHF-2T field intensity analyser, 153; Type SLRC high power signal generator, 375; solid-state PG 101-decade pulse generator, 630  
 Aveling Barford Ltd., diesel mine car, 88; road roller attachment for marginal strips on motorways, 504  
 Avery, W. & T., Ltd., weighing equipment for animal foods. *Correction*, 183; furnace attachment for tensile tests, 214; servo-controlled universal testing machine, 280; Autocrat weighing machine, 551  
 Aviation, Ministry of, Plessey HF200 heightfinders for airport radar, 433  
 Avo Ltd., activities of, 400  
 Avon Communications and Electronics Ltd., 400 series tunable selective amplifiers, 434  
 Ayles, Rear Admiral I. G., review of The Elizabeth, 316  
 Aynsley, H., & Co., batch kilns for off-peak electrical firing, 181-182
- ## B
- BABCOCK-WILCOX Goldie McCulloch, boiler for Tuft Cove No. 1 power station, 528  
 Babcock & Wilcox Ltd., reheat marine steam turbine installation, 426; boilers for Cockenzie power station, 492; feasibility study on unitised reheat steam turbine, 520-521; boiler equipment for Ap Lei Chau power station, 721  
 Bach-Simpson, Simpson panel meters and testers, 80  
 Backwater Dam, opening of diversion tunnel for, 600  
 Badalex range of machinery (trade publication), 798  
 Bader Machinery Co. Ltd., automatic machinery for production of semi-conductor diodes, 262-263; special purpose machinery (trade publication), 798  
 Baffle wall, lightweight, for Bexhill reservoir, 210  
 Baghdad city centre redevelopment scheme prize-winning design, 466  
 Bagrit, Sir Leon, on age of automation, 297  
 Bagshawe & Co. Ltd., 45 ton channel type induction furnace, 593  
 Bahco Ltd., RPB 50 air extract valve, 144  
 Bailey, A. W., market research seminar, 681  
 Bailey, J. C., on Administering Research and Development (book), 318  
 Bain, William, & Co. (Structural) Ltd., switch house contract at Longannet power station, 272  
 Baker, Dr. L. R., review of Metrology with Autocollimators, 573  
 Baker, R. G., on Microstructure of Metals (book), 478  
 Bakish, R., on Handbook of Electron Beam Welding (review), 253; on International Conference on Electron and Ion Beam Science and Technology (book), 318  
 Balderhead Dam, description of, 526  
 Balderhead reservoir, description of, 526; inauguration of, 526  
 Baldrey, B., review of Maintainability: A Major Element of System Effectiveness, 92; review of Power and Conflict in Organizations, 636  
 Baldwin Instrument Co. Ltd., Atomat nucleonic tin-coating width gauge, 790  
 Balfour & Darwins Ltd., Pellet Welder casting repairer, 117  
 Baling press, hydraulic, Personer, 536  
 — Hydraulic, for scrap metal (Simon Handling Engineers Ltd.), 154  
 Ball bearings. See *Bearings*  
 — Glass, ground (trade publication), 638  
 Ball, K., on design study group at Liverpool University, 561  
 Ball plug gauges, tungsten carbide (Insley Industrial Ltd.), 187  
 — Valve, diaphragm, Acquisave Mark 2, 64  
 Ballantine Laboratories, Model 355 ac/dc digital voltmeter, 20  
 Ballast protection, railway track, neoprene sheets for, 791  
 Bamford, J. C. (Excavators) Ltd., 400  
 Bamfords Ltd., S950 combine harvester, 743  
 Band saw. See *Saw*  
 Bandmill, Forester 72 in heavy duty, with travelling frame, 123  
 Bangka 1 non-propelled tin-mining dredge, 433  
 Bank, Midland, Birmingham computer centre, 49  
 Bantam chain saw (Remington), 436  
 Barclay, Andrew, Sons & Co. Ltd., 621 hp diesel-hydraulic locomotive, 26  
 Bardsleys-Colchester Ltd., trucks and trailers (trade publication), 478  
 Bardcut busbar system, tapping box for, 310  
 — Portable busbar system, 339  
 Barge, flexible, Dracone, development position, 741  
 — Mounted trencher digger for riverside maintenance (T. Harrison Chaplin Ltd.), 312  
 Baring Bros. loan to Petreleos Mexicanos for fertilizer plant, 81  
 Barker, H. P., on Parkinson Cowan, 48  
 Barlow, R. E., on Mathematical Theory of Reliability (book), 126; (review), 285  
 Barlow-Whitney Ltd., exhibition of industrial process heating equipment, 255  
 Barnacle, H. E., on Mechanics of Machines, Vol. 1 (review), 29; on Mechanics of Automobiles (review), 220  
 Barnes-Birlec Ltd., formation of, 368  
 Barnes Engineering Co. Ltd., amalgamation with AEI-Birlec Ltd., 368  
 Baroni stainless steel beam, 370  
 Barr & Stroud Ltd., filters and networks (trade publication), 190; automatic code generator (trade publication), 222  
 Barraclough, R., on Bullnose Morris (review), 701  
 Barrage scheme, Clacton to Margate, 513  
 Barras, H. W., MHD power generation, 549  
 Barritt, D. T., on Simon Engineering Ltd., 16-17  
 Barron & Shepherd Ltd., goods lifts (trade publication), 222; mobile drum stacker, 472  
 Barrus, E. P., Ltd., Johnson outboard motors, 824  
 Barry, B. T. K., on Technology of Tinplate (book), 702  
 Bartle, J. W., on chartered engineers, 261  
 Barton, D. B., on Cornish Beam Engine (review), 765  
 Barwell, Prof. F. T., review of Friction and Wear, 573  
 BASF Co., cold press moulding of plastics, 124  
 Basins and baths, resurfacing process for (Porce-Master Chemical Co. Ltd.), 672  
 Baso Gas Controls, series 93 Basotrol internal pilot gas control, 246  
 Basotrol, series 93, internal pilot gas control, 246  
 Bass, John, Ltd., Bassaire sterile glove box, 311  
 Bassaire sterile glove box, 311  
 Baths and basins, resurfacing process for (Porce-Master Chemical Co. Ltd.), 672  
 — Side heating panel (Reginald Clayton Ltd.), 576  
 Battelle Documentation Service (booklet), 157  
 Battelle Memorial Institute, behaviour of metals strained at high rate, 277; ultrasonic burner, 306; study of filament-reinforced composite metals, 530  
 Battersea College of Technology, creep in concrete at 105 and 110°C, 122  
 Battery chargers (Vane Electrical Instruments Ltd.), 278  
 — and power supply, heavy duty combined, GLE 400 (Gresham Lion Electronics Ltd.), 20  
 — Condition indicator for motor cars, 558  
 — Discharge indicator (trade publication), 766  
 — Mining, rechargeable 24 V (AEI Electronics Group), 117  
 — Vehicles. See *Motor vehicle; Motor truck*  
 Bausch and Lomb Optical Co., light switch based on fibre optics, 187; fibre optics attachment for Nicholas illuminator (trade publication), 542  
 Bawn, W. B., & Co. Ltd., lockers (trade publication), 126  
 Baxendale, Richard, & Sons Ltd., Fantom forced draught open fire, 608  
 BBC-2 television programme, aerial requirements, 303  
 BBRV post-tensioning system for Bow Viaduct, 241  
 BEA Helicopters Ltd., Sikorsky S61N helicopter, 368  
 Beacon Model ADC-ALT-4 encoder for automatic altitude reporting systems, 179  
 Beam and column structures, numerical analysis of, by W. G. Godden (book), 542  
 — Continuous, and rigid frames, analysis of, by Dr. P. S. Dravid (book), 734  
 — Creep stress distribution in, by A. E. Johnson and J. Henderson, 571  
 — Prestressed concrete, for flight simulation test frame, 621  
 — Stainless steel, Baroni, 370  
 Beard, C. A., review of the Internal Combustion Engine, 316  
 Beardmore, William, & Co., furnace modernization (Scottish Gas Board), 560  
 Bearings, air, development of (Westwind Turbines), 265-267  
 — Ball (trade publication), 286  
 — and roller (trade publication), 702  
 — Gas lubricated, by N. S. Grassam and J. W. Powell (review), 126  
 — Turbine flowmeters (Westwind Turbines), 267  
 — Hybrid, in Silentair drill (Westwind Turbines), 265  
 — Material for minimal lubrication, Glacier DX (Glacier Metal Co. Ltd.), 759  
 — Pre-lubricated (trade publication), 798  
 — Roller (trade publication), 286  
 — Self-aligning spherical, range of (Hoffmann Manufacturing Co.), 436  
 — Skefko, for diesel hydraulic locomotives, 26  
 — Tapered, production of (Hoffmann Manufacturing Co. Ltd.), 757  
 — Rolling, for electrical rotating machines, meeting on (Hoffmann Manufacturing Co. Ltd.), 42  
 — Sintered metal oil-retaining, Wondermix, 634  
 Beauregard tanker, 433  
 Beche & Grohs, SP friction screw presses, 473; DGH counterblow hammers and hydraulic forging presses, 473  
 Bechtel Corp., BP refinery at Gothenburg, 433  
 Beckenbach, E. F., on Applied Combinatorial Mathematics (review), 92  
 Becker, Dr., shockwave processes, 617  
 Becker Equipment & Lifts Ltd., volumetric filters (trade publication), 222; lift installation for private houses, 320; scissor lifts (trade publication), 382  
 Beckermet Mining Co., remotely controlled mine loader in Haile Moor Mine, 818  
 Beckett, T. N., on Ford Motor Co., 353  
 Bed, ambulance, shock-proof (Delaney Gally Ltd.), 26  
 Bedford Press, founding of, 835  
 — School, cooperation with W. H. Allen & Sons Ltd., 236  
 Bedford trucks, record exports of, 240  
 Beeching, Lord, on nationalization of steel, 99  
 Beet harvester, tanker, Farmhand, 744  
 Belfast Harbour Commissioners, dry dock at Belfast Lough, 698  
 Belgian Nuclear Energy Authority, type 150 remote handling equipment, 152  
 Bell, C. J., on the Moulton bicycle, 356  
 Bell & Gossett Ltd., Thermo-Flo direct reading flow balancer, 146; four cylinder oil-less air compressors, 599  
 Bell & Howell Ltd., PlasmaVac thin film depositor, 85; type 5-124P2 portable oscillograph recorder, 185; new Basingstoke factory 464; history and development of, 464; Anstat electrostatic copier, 731; type 1-163 low-gain dc amplifier, 759  
 Bell Inc., magnetic reaction analyser for non-destructive testing, 817  
 Bell Telephone Laboratories, tuneable oscillator at optical frequencies, 52  
 Belling & Lee Ltd., aerial requirements for BBC-2 television programme, 303  
 Bellows-Valvair Kamper axial piston hydraulic pumps, 280  
 Bell's Asbestos & Engineering Ltd., stainless steel hose clips, 435  
 Belmont thermostatic radiator valve, 544  
 Belmos Peebles Mining Division, 90 hp flame-proof flange mounted electric motor, 53  
 Belt attachment, abrasive, Minibelt, 86  
 — Conveyor. See *Conveyor*  
 — Drive, Poly-Vee, for checkweighing machine, 424  
 Belt Railway Co., 2,400 hp diesel-electric locomotives (Alco Products Inc.), 250  
 Bemtel, development and activities of, 809  
 Bending machine, mobile, for large pipe, Mark 4 (General Descaling Co. Ltd.), 504  
 — Tube, 617  
 Benedikt and Jager K12 moulded block contactor, 633  
 Benes, V. E., on Mathematical Theory of Connecting Networks and Telephone Traffic (book), 605  
 Benham, P. B., on Mechanics of Solids and Strength of Materials (review), 189  
 Benedi cargo-passenger liner with Cargoaire cargo dewpointer system, 123  
 Benn, A. Wedgewood, on postal services, 514  
 Bennett, Mechanical Handling Ltd., clamp grip for handling bricks, 818  
 Bennett, W. R., on Data Transmission (review), 221  
 Bent, R. W., on Worked Examples in Automobile Engineering (book), 798  
 Berger, Lewis (Great Britain) Ltd., solventless epoxy coating for pig slug lining of pipelines, 152  
 Berk Acids Ltd., reorganization of, 273  
 Berk, F. W., & Co. Ltd., activities of subsidiaries, 273; automatic drum spray painting unit, 438  
 Berk Spencer Acids Ltd., reorganization of, 273; new sulphuric acid plant, 273  
 Berkin, J. P., on fuel oil, 323  
 Bernstein, S. L., on introduction of colour television, 450  
 Berry, R. L., on Management and Cost Control in the Metallurgical Industry (book), 638  
 Berry's Electric Ltd., AQ thermal storage water heater, BEAB approval, 640  
 Bertone Mini Cooper motor car at Goodwood, 554  
 Bertone special bodied Ford Mustang motor car, 485  
 Beryllium in aircraft industry, by A. R. G. Brown and K. S. Jepson, 502  
 — Technology, by T. W. Farthing, 501  
 Bessemer, Sir Henry, financier of ENGINEERING, 830  
 Bevercotes Colliery, automation at, 75-76  
 Bewick, R. L., regional commercial manager, ICI, 16  
 Bexhill reservoir, lightweight baffle wall for, 210  
 Bexley-Erith Technical High School, applied science activities, 239  
 BFI Electronics Ltd., tape punches and readers (trade publication), 638; instruments (trade publication), 670  
 Bias circuits, transistor (trade publication), 446  
 Bibliographer, electronic, Minsk-22, 188  
 Bicastrip range of multiway flat cable, 247  
 Bicycle, compact folding, 104  
 — Industry, effect of rise in living standards, 104  
 — Moulton, comparison with other small-wheel models, 104. *Letters*, 199, 229, 261, 328, 356, 453  
 — Junior 1970, 800  
 — Raleigh RSW 16, small-wheel, 104. *Letters*, 328  
 — Sales position and prospects, 688  
 — Small wheel. *Letter*, 328  
 Bierrett, Prof. Dr. Ing. G., on brittle fracture, 617  
 Big Bag nylon collapsible bulk storage container, 792  
 Big Ben Scaffolding Co., scaffolding over St. Pauls Cathedral, 369  
 Bilge pump, Macpump 300, 87  
 Billet inspection, automatic (United Steel Cos. Ltd.), 819  
 — Peeling machine, fully automatic (Sir James Farmer Norton & Co. Ltd.), 86  
 Billington, D. P., on Thin Shell Concrete Structures (book), 318  
 Billington, Dr. J. C., review of Copper in Cast Iron, 28  
 Bilston Glen Colliery, land-sale coal depot at, 121  
 Bimetal, inlaid, for electrical contacts (Johnson, Matthey & Co. Ltd.), 180  
 — Thermostatic (Telcon Metals Ltd. & Temco Ltd.), 370  
 Bins and trays (trade publication), 734  
 Binks-Bullows Ltd., L4103 dial type automatic spraying machine, 116  
 Binnie & Partners, Tryweryn reservoir, 527  
 Binumat flame cutting machine, numerical control for (Messer Griesheim Ltd.), 794  
 BIP Chemicals Ltd., glass fibre reinforced polyester for concrete shuttering and moulds, 724  
 BIP Engineering Ltd., Bipel "Transcrew" plastics transfer moulding, 118  
 BIP Group, resources (trade publication), 766  
 Bipel "Transcrew" plastics transfer moulding, 118  
 Birchon, D., on Dictionary of Metallurgy (book), 254  
 Birds and vermin, ultrasonic generator for scaring, Soniscare, 786  
 Birkett, Samuel, Ltd., type 501 pressure reducing valves with carbon rings, 115  
 Birks, J. B., on Progress in Dielectrics (book), 62  
 Birmingham, A. T., on The Production and Competition History of the Pre-1939 Riley Motor Cars (review), 796  
 Birmingham, City of, ICT 1904 computer for, 336  
 — College of Advanced Technology, symposium on design method, 357-360  
 — Computer centre, Midland Bank, 49  
 — Post and Mail newspaper headquarters, 600  
 — Radio tower, design and construction of (General Post Office), 676-677  
 Birmingham Small Arms Co. Ltd., sale of industrial engine business to Villiers Engineering Co. Ltd., 177; trading report, 689; centreless grinding machine for tapered bearing production, 757  
 — University, integrated course for export executives, 34; Petro-Forge system of high-energy rate forging, 775; Double-Acting Air-Driven Herf Machine, 775  
 Bishop, H. C., Gilley Law estate project, Sunderland, 528  
 Bishop, R. E. D., on Matrix Analysis of Vibration (book), 62; review of Vibrations, 349  
 Bison preferred dimension frame for system built hospital block, 698  
 Bison Wall Frame system, 465  
 Biswas, Asit K., on defence of Plato, 391  
 Bituminous rubberized waterproofing emulsion, Bituseal, 23  
 Bituseal bituminous rubberized water-proofing emulsion, 23  
 B & K Laboratories Ltd., Infrascopie Mark 9 precision infra-red radiometer, 817  
 B & K Machinery Ltd., colour coated steel sheet, 664  
 Black Arrow launching vehicle, 514  
 — Space vehicle, BS 606 and BS 625 rocket engines for (Bristol Siddeley Engines Ltd.), 107  
 Black-Clawson International, newsprint machines for Eastern Europe, 241  
 Black Hills, railroads of, by M. Filder (review), 732  
 Black Knight, space vehicle, success of, 107  
 Black, Prof. M., Steel Congress (Luxembourg), 616  
 Blade mills (trade publication), 413  
 — Turbine, electrochemical machining of, 469  
 Blakelock, J. H., on Automatic Control of Aircraft and Missiles (book), 574  
 Blanch, Alvan, Development Co. Ltd., tractor mounted concrete mixer, 507  
 Blanford, E. O. T., productivity scheme at Alexander Stephen & Sons, 298  
 Blank loader, automatic (J. P. Udal Ltd.), 409  
 Blankets, electric, testing of, 160  
 Blanking presses, fine, Osterwalder, 376  
 Blast-furnace slag, Slagceram construction material from (BISRA), 18  
 Blaw Knox Ltd., paraboloids for radio telescope, 106; designers and consultants for overhead power transmission towers, 715  
 Blending machine with interchangeable cones (L. A. Mitchell Ltd.), 537  
 — System for refinery (Elliott-Automation Ltd.), 25  
 BLEU aircraft landing system, 334  
 Blind pilotage navigation, 389  
 Blind, venetian, mono-cord, Brockhouse, 597  
 Bliss, E. W. (England) Ltd., 100 ton power press, 599  
 Blocks, loadbearing, lightweight (trade publication), 318  
 Blockmaking machinery, Portsmouth, by K. R. Gilbert (book), 478  
 Blowers, air (trade publication), 446  
 — Electric, portable (Aerex Ltd.), 662  
 — for Oldbury atomic power station, 173  
 Blundell's School, applied science activities, 238  
 BM Control Valves, BM 30W oil control valve for water heaters, 224  
 BMW 2000C and 2000CS coupé motor cars, 14  
 Board and case-making (trade publication), 510  
 Board of Trade, Engineering Index, 1; agreement on loans for exports to Germany, 496; Canextour drive for exports to Canada, 592; assistance to exporters, 738; Simpler Export Documents (booklet), 752  
 Boats, unsinkable dory (Dell Quay Sales Ltd.), 704  
 — Z-drive for, 347  
 Boeing Co., hot platen hydraulic press, 82  
 Boeing 707 airliner, Marconi AD 560 Doppler navigation system and airborne computers for, 464; E5 inertial navigation system for (Qantas Airways), 562  
 Boelter, L. M. K., on Heat Transfer Notes (review), 795  
 Boge, Hydromat combined spring and damper unit, 586  
 Bogie design, comparison of modern railway types, 581-582  
 — Railway, new approach to, 581



- Bogie pitching resonance, 581  
— See also *Truck*
- Boiler, automatic industrial (Automated Steam), 504  
— Cleaning plant, for Adelaide power station, 560  
— for Cockenzie power station (Babcock & Wilcox Ltd.), 492  
— Corrosion, research at AML, 71  
— for Coryton refinery, field erection of, 723  
— Drum, radiographic testing of (Davey, Paxman & Co. Ltd.), 10  
— Wagon for delivery of (British Railways), 340  
— Economic, Daniel Adamson treble pass, single flue, 49  
— Equipment for Ap Lei Chau power station, 721  
— Feed plant for Longannet power station, 368  
— — Water tanks, nitrogen atmosphere for, 152  
— Foster Wheeler ESRD, for MST-14 reheat steam turbine ship propulsion installation, 427  
— Gas-fired, Diplomat, range of, 32  
— Gas oil, Stone-Vapor 6145, for gas reforming plant, 240  
— Multi-pass tubular, for Oldbury atomic power station, 173  
— Natural gas fired, for steam turbine installations, 552  
— Oil-fired, Centramatic 35, 32  
— Oil-fired, for Lots Road power station, 602  
— Oil-fired, 120 MW reheat, for Adelaide power station, 560  
— Oil-fired packaged (Hartley & Sugden), 59  
— Oil-fired reheat, for Adelaide power station, 560  
— Packaged (trade publication), 605  
— — Thermax Two, 730  
— Plant design research (CEGB), 142  
— for reheat steam-turbine marine installation (Pametrad), 426  
— Shell, 68-ton (John Thompson (Wilson Boilers) Ltd.), 112  
— Solid fuel, Stokermatic F100s, 736  
— Tube vibration at Oldbury atomic power station, 173  
— for Tuft Cove No. 1 power station (Babcock-Wilcox Goldie McCulloch), 528
- Boilerhouse installation, automatic, for hospital (Richard Crittall & Co. Ltd.), 49
- Boiling heat transfer in steam generating units, symposium on (IME), 95
- Bolsover, R., *Birmingham Post and Mail* headquarters, 600
- Boltomet-917 free-machining copper alloy, 370
- Bolton, Thomas, & Sons, Boltomet-917 free-machining copper alloy, 370
- Bolton, W. F., on Railwayman's Diesel Manual (review), 94
- Bonanza Minor safety work boots, 248
- Bond Cars Ltd., Bond 875 three-wheeler motor car, 332
- Bondi Committee on Britain's space programme, 514
- Bonding, direct, avalanche diodes by (G. E. Electronics (London), Ltd.), 475  
— Materials, Loctite, 371
- Bondmaster trademark of Pittsburgh-Midland (Adhesives) Ltd., 113
- Bonestell, C., on Mars (review), 821
- Bonifacio, R., on SGS-Fairchild Group, 561
- Bonneville Power Administration, English Electric auto transformers, 80
- Bonnington & Collins, Sunderland Civic Centre, 600
- Boom, loading (HNP Industrial Sales Ltd.), 86
- Boot, industrial, vinyl soled (Honeywell Footwear Ltd.), 51  
— Safety work, Bonanza Minor, 248
- Booth, A. D., on Digital Computers in Action (book), 734
- Booth, H. C., vacuum cleaner, 840
- Booth, James, Aluminium Ltd., Duralumin for lightweight suspended platform, 149
- Booth, J. F., on Hepworth Iron Co. Ltd., 336
- Booth, John & Sons (Bolton) Ltd., pressed steel sections to requirements, 401
- Borax (Holdings) Ltd., activities of subsidiaries, 273
- Borchardt, F. A. (Machinery and Plant) Ltd., GFM stretch forging machine, 626
- Borer, auger, rail-mounted, 645
- Borg Fabriks AB, Cartrac and Liftrac automatic conveyor system, 819
- Borides, silicides and phosphides, by B. Aronsson, T. Lundstrom and S. Rundqvist (book), 190
- Boring machine, deep, size 100 (James Archdale & Co. Ltd.), 314  
— Mill, vertical, SKJ10 (Strojimport), 437  
— Milling, and surfacing machine, horizontal with numerical control, Model 724P (H. W. Kearns & Co. Ltd.), 315  
— and turning mill, large vertical, TMS1-60/130 (O-M Ltd.), 635
- Borns, Dr. H., association with ENGINEERING, 835
- Borrett, G. E., on Pillar Holdings Ltd., 785
- Boston Marine & General Engineering Co. Ltd., automatic marking machine for plastics, 154
- Bottles, polythene, Rondec Universal Stage 5 printing machine for, 242
- Boughton, P., review of CO<sub>2</sub> Shielded Consumable Electrode Arc Welding, 541
- Boulding, E., on Power and Conflict in Organizations (review), 636
- Boultofbre reinforced glass fibre chimney materials, 217
- Boulton, William, Ltd., Boultofbre reinforced glass fibre chimney material, 217
- Bourne, Dr. J. R., on research into industrial mixing, 276
- Bow viaduct, BBRV post-tensioning system for, 241
- Bowaters UK Pulp and Paper Mills Ltd., automatic feedstock control of paper-making machine, 276
- Bowden, Lord, on MIT report on Boston-Washington railway system, 33
- Bowen, Col. H. C., scheme for waterboarding in chalk downs, 497
- Bowlby, Sir Anthony, on metric system for screw thread, 706-707
- Boyle, Sir Edward, mobile exhibition, "Technology Today", 749
- B & R Relays Ltd., Q60 contactor night storage heating systems, 24; Siemens plug-in relays (trade publication), 62; MR203 dry reed switch, 282; Benedikt and Jager K12 moulded block contactor, 633
- Bracket, hanger, adjustable (SGB Building Equipment Division), 434
- Bradford Institute of Technology, faculty developments, 81; symposium on applied physics for sixth formers, 419; computer for, 753
- Bradford Royal Infirmary, system-built construction of maternity unit, 698
- Bradley & Co. Ltd., Spacesaver storage system for parts, 184
- Braithwaite & Co. Structural Ltd., TemPark steel-framed demountable car park, 27
- Brake bleeder, Tecavent, 120
- Brake-bleeding unit (Pneumatic Components Ltd.), 726
- Brakes, electromagnetic (Warner), 179  
— Load-sensitive, for commercial vehicles (Clayton Dewandre), 429  
— Testing machine, high speed (Hill Equipment Ltd.), 216
- Braking, Maxaret controlled, in Jensen Interceptor motor car, 525
- Bramley Hill multi-storey flats construction at, 698
- Brand, Charles, & Son Ltd., Belfast dry dock project, 698
- Bras, J. L., on Introduction to Rubber (book), 286
- Bray, George, & Co. Ltd., diffusion-flame burners for methane, 725
- Bray jet, methane combustion in, 725
- Brazing, hand torch (trade publication), 158  
— Machine, Autoflame equipment model AFR12, 535  
— and soldering unit, Autoflame, 792  
— Welding and Soldering, metallurgy of, by J. F. Lancaster (review), 732
- Breakdown. See *Accident*
- Breakdown agent for carbon dioxide casting process, Dexil 34 (BNF), 666
- Breathing apparatus, Aerorlox, 54
- Brech, E. F. L., on Management and Cost Control in the Metallurgical Industry (book), 638
- Breedlove, C., bid for land speed record, 712
- Brefcon International Ltd., steelwork for refinery in Yugoslavia, 624
- Breguet Br 944 air-bus, *Correction*, 7
- Bren Manufacturing Co., Crusader web-fed offset printing press for newspapers, 84
- Brenkin, Dr-Ing. G., education of professional engineers in West Germany, 74
- Brent Cross, crane jib failure at, 425
- Bretby/Cowlishaw Walker overhead monorail in collieries, 41
- Bretby-Wakefield underground supplies motor vehicle, 55
- Bricks, clamp grip for handling (Bennett Mechanical Handling Ltd.), 818
- Brick, R.M., on Structure and Properties of Alloys (book), 126
- Brickwork research (BRS), 256
- Bridge, Brooklyn: fact and symbol, by A. Trachtenberg (book), 542  
— Building in reinforced and prestressed concrete, course for senior staff, 487  
— Craigellachie road, rebuilding in steel, 268  
— London, state of repair, 130; proposed new bridge, 130  
— Modern British, by D. Henry and J. A. Jerome (book), 94  
— Oosterschelde, constructional details on, 488; course visit to (Cement and Concrete Association), 488; prestressed concrete construction, 728  
— Pedestrian, in prefabricated steel, 728  
— Railway, inspection procedure, 679  
— Road, reinforced concrete, for Sevenoaks bypass, 746  
— Zdkov arch, constructional details of, 414  
— See also *Viaduct*
- Bridgeport copying machine for thread rolling dies, 594
- Bridgman, P. W., hydrostatic extrusion process, 811
- Brierley, Z., Ltd., Rotacone drill grinding machine, 314
- Briggs, Prof. A., engineers and society in the 1860's, 826-828
- Briggs, William, & Sons, voluntary standards for troughed metal decking, 593
- Brightlife miniature neons, 114
- Brightrad air heated radiant tube, 660
- Brightside Foundry Engineering Co. Ltd., BISRA cantilever rolling mill, 151
- Brightside Heating & Engineering Co. Ltd., technical abstracts (trade publication), 254; formation of Brightside Kilpatrick Engineering Services Ltd., 496; "Bright-rad" air heated radiant tube, 660
- Brightside Kilpatrick Engineering Services Ltd., formation of, 496
- Briscoe, E. M., on silicon nitride ceramics, 229
- Bristol Dynamaster X-Y plotter, 790
- Bristol Siddeley Engines Ltd., BS 606 and BS 625 rocket engines for Black Arrow space vehicle, 107; BS 605 rocket boost unit for aircraft assisted take-off, 107; PR37/2 rocket unit for Jindivik target drone aircraft, 108; Black Arrow launching vehicle, 514; on-site course in welding appreciation, 580
- Bristol Tutor teaching machine, development of, 518-519
- Briston, J. H., on Polymer Technology (book), 222; (review), 821
- Britchrome Co. Ltd., works expansion, 561
- Britain, position as world power, 293
- Britec Ltd., "Chronoseis CGG.33-01" transistorized digital chronometer, 630
- British Aircraft Corp., Super VC10 airliner, developed versions of, 83; Super VC10 airliner, prospects of, 163; landing system on One-Eleven aircraft, 334-335; joint project for large capacity medium-range jet transport aircraft, 592; orders and operation for One-Eleven short-haul jet airliner, 673; Precision Indicator of the Meridian (PIM) units, 689  
— Industry's Research Association, NCR-Elliott 4100 computer for aircraft research applications, 369
- British Aluminium Co. Ltd., Leader 15T aluminium lighting columns, 50
- British Arca Regulators Ltd., series 104 and 116 control valves, 155
- British Association, Presidential Address to Engineering Section, by Dr. Barnes Wallis, 293-297; fuel and power symposium (Cambridge), 323; technology in a liberal education, by J. C. Dancy, 324; landing of aircraft safely in all weathers, by G. W. Webber, 333; forecasting in industry, by E. O. Jones and J. G. Morrell, 353; transmission of electrical power, by H. B. Dreyfus, 372; distribution of electrical power, by H. T. Ransley, 405-408; storage of energy in bulk, by Dr. A. B. Hart and P. S. K. Eaves, 531-534. *Letter*, 613; history of reporting of meeting in ENGINEERING, 836  
— for Commercial and Industrial Education, annual conference (Loughborough), 319, 391, 420; trends in apprenticeship conference (Eastbourne), 781; conference on apprenticeship trends, 807; trends in apprenticeships conference (Eastbourne), 809  
— Automation Conference (Eastbourne, 1965), 31, 576; report of, 651
- British Berkefeld Filters Ltd., PFO/DOM hand pump filter for potable water, 473
- British Broadcasting Corp., tests on colour television systems, 258; aerial requirements for BBC-2 television programme, 303; television field delay equipment, 338
- British Celanese Ltd., new subsidiary, 368
- British Cellophane Ltd., Tenasco 900 heavy gauge weather sheeting, 115; dished slat conveyor for film rolls, 568  
— Columbia International Trade Fair (Vancouver, 1967), 159
- British Commonwealth. See *Commonwealth*
- British & Commonwealth Shipping Co. Ltd., formation of Overseas Containers Ltd., 322
- British Copper Refiners Ltd., new electrolytic refinery, 496; plant installation for BNF/MRA continuous casting experiments, 628  
— Council for the Rehabilitation of the Disabled, second international seminar, 65; demonstration of Italian electronic arm, 65
- British Crane & Excavator Corporation, Neal NS45 Mk. 2 diesel-mechanical mobile crane, 312; order for plant hire firm, 336; Instaclip range of boltless pipe clips, 346; failure of jib on Coles 15 ton mobile crane, 425; appointment of quality and reliability officer, 785  
— Electric and Allied Manufacturers' Association, *Electronic Equipment for Industrial System*, 476  
— Electrical Approvals Board, testing of electric blankets, 160; approval of thermal storage water heaters, 640  
— — Power Convention, speculation on future fuel policy, 3; report of, 5  
— Employers' Confederation, conference on fire prevention in industry, 161  
— Federation, winding up of activities, 209
- British European Airways, Hawker Siddeley Trident 1 and 2 medium-haul transport aircraft, 273; helicopter service in Channel Islands, 368; Pak-a-Way oil-fired heaters for cargo depot, 564  
— Exhibition (Tokyo), advance notice, 63; exhibit at, 347
- British Geon Ltd., pvc production increase, 593
- British Gypsum Ltd., Hardstem and Hardstop rock sealing compounds, 118
- British Hydrocarbon Chemicals Ltd., new ethylene plant at Grangemouth, 81; doubling of Rigidex output, 81; new unit for particle form polymers (Phillips process), 81  
— Industrial Measuring and Control Apparatus Manufacturers' Association, BIMCAM handbook 1965, 444  
— — Research Associations, cooperative research study group visit to Denmark, 337  
— Institute of Management, Elbourne Memorial Lecture on management and the public interest, by Sir Norman Kipping, 159; management consultancy activities, 579  
— Instruments directory and data handbook (book), 254
- British Insulated Callender's Cables Ltd., Mingrin cables (trade publication), 30; pneumatic protection of telephone cable networks (trade publication), 30; pvc indoor telephone cables (trade publication), 158; radio frequency cables (trade publication), 190; design service for floor heating, 224; Biccastrip range of multiway flat cable, 247; Leo 3 computer system for stock control and accounting work, 273; aerial masts for NATO station near Carlisle, 339; EPR for cable insulant, 345; cables (trade publication), 350; flexible and floor warming cables (trade publication), 350; prefabricated road warming cable mats, 441; pvc wiring kits for industrialized building, 594; design service for electrical services, 594; Trinidad-Tobago submarine power cable, 625; cable kits (trade publication), 638; glass fibre insulator for overhead electrification system, 644; high temperature flexible cords (trade publication), 702
- British Insulated Callender's Construction Co. Ltd., overhead electrical equipment for British Railways London Midland Region main line, 643  
— Insurance Association, conference on fire prevention in industry, 161  
— Interplanetary Society, symposium on modern trends in space technology, 287  
— Iron and Steel Federation, bursaries for welding technology course at Cranfield, 73
- British Iron and Steel Research Association, open days at Battersea laboratories, 18; slab reheating study, 18; Elquench quenching process, 18; magnetic hardness monitor for moving strip and continuous annealing lines, 18; Slagceram construction material from blast-furnace slag, 18; cantilever rolling mill, 151; on The First Twenty Years Operational Research, by R. H. Collett (review), 540; making steel continuously by spraying, 723
- British Jeffrey-Diamond Ltd., Minimatic and Maximatic coal cutting machines, 55; Anderton shearer-loader, 55; Bretby-Wakefield underground supplies motor vehicle, 55
- British Joint Corrosion Group, Stress Corrosion Cracking of Martensitic Stainless Steels, by J. E. Truman, 691
- Marine Equipment Council, formation proposals, 688  
— Medical Association, rheumatism in light industry, 418  
— Metal Sinterings Association, symposium, 127
- British Motor Corp. Ltd., BMC Minis: Maintenance, Tuning and Modification, by D. Marshall and I. Fraser (book), 30; (review), 158; Rear Vista rear window wipers for Mini motor car, 180; ICT1904 computer for, 336; automatic transmission for Mini and 1100 motor cars, 522; MGB coupe motor car at Goodwood, 554; Mini motor car versions at Goodwood, 554; automatic transmission for Mini motor cars, 584; description of 15 bhp Mini-tractor, 711; Mini-tractor tractor, 744  
— National Export Council, "Selling to Canada" (booklet), 592  
— Non-Ferrous Metals Research Association, grant for research in high temperature materials, 113; study of continuous casting of copper, 628; agreement with Fosco Group on Process 34 formulation, 666  
— Nuclear Energy Society, conference on prestressed concrete pressure vessels (March 1967), 159; symposium on nuclear-powered ships, 672, 750-751  
— — Forum, symposium on nuclear-powered ships, 672, 750-751  
— Occupational Hygiene Society, International symposium on inhaled particles and vapours, 191
- British Overseas Airways Corp., Skylift truck for aircraft overhaul department, 152; air routes flown by, 295  
— — Engineering Services Bureau, activities of, 738
- British Oxygen Co. Ltd., Quasi-Arc LD 180 ac welding set, 117; powder injection equipment for flame cutting, 183; equipment for combining pressure-testing and purging, 210; Rocol RTD cutting oil for machining of stainless steel, 500; liquid nitrogen shrinkage of walking dragline shafts, 724
- British Oxygen Cryoproducts, importation of liquid helium, 17; helium refrigerator for bubble chamber, 553; helium recovery unit, 794; purification unit for helium, 814
- British Paints Ltd., protection of oil-drilling rig, 205
- British Petroleum Co. Ltd., Westernport refinery, automatic blending system for, 25; investigation into ocean resources, 80; gas discovery by *Sea Gem* oil drilling rig, 418; gas exploration in North Sea, 641; *Sea Gem* oil drilling rig in North Sea, 771  
— Plastics Federation, *A Guide to Reinforced Plastics*, 820  
— Productivity Council, preparations for quality and reliability year, 578; activities of, 579; conference on Productivity, Technology and Change, 607
- British Railways, welding and ultrasonics schools at Derby, 38; signalling modernization, 46; resignalling carried out at Rugby, 46-47; conference on electrification of Euston to Liverpool and Manchester main line trunk route, 63; Shirebrook West servicing depot for diesel locomotives, 82; AEI speedometer and field diversion system for diesel-electric locomotives, 90; London Midland Region electrification, 145; 25 kV ac four-car multiple unit trains for LMR suburban services, 274-275; DP2 diesel-electric locomotive prototype, 336; block trains for transporting limestone, 337; modernization scheme for workshops, 337; electric multiple unit trains for London Midland Region, 340; wagon for delivery of boiler drums, 340; research on fuel cells for diesel-electric locomotives, 340; London Midland Region, automatic telephone exchange at Euston Station, 401; Pace-maker equipment for track-to-train communication tests, 411; spectrographic analysis of diesel engine lubricating oils, 440; automatic voltage regulator for Brush type 4 diesel-electric locomotive, 441; electrification of London Midland Region main line from Euston to Manchester and Liverpool, 455; power station coal deliveries by permanently coupled train, 529; railway accident at Henwick Hall, 547; bogie design, 581-583; automated marshalling yard at Tinsley, 626; overhead electrification equipment of London Midland Region main line, 643-645; open day at Engineering Research Department, Derby, 649-650; wire-loop induction communication link by conductors laid in track, 649; passenger coach construction research, 649-650; railway vehicle simulation by computer, 650; activities of Dynamic Section and Mathematics Section of Research Department, 650; suspension research for four-wheeled vehicles, 650; maintenance-free track research, 650;



- fatigue failure of laminated springs on freight vehicles, 650; Westland SR-N4 passenger/car ferry hovercraft service, 674; signal box failure at Clapham Junction, 674, 678-679; Buchanan House office block at Glasgow, 689; Ventura diesel engine for Type I locomotive, 780; descaling of ferry cargo decks, 789; prefabricated railway lineside buildings, 790
- British Railways Board, symposium on cavitation corrosion in diesel engines, 319
- British Resin Products Ltd., Rigidex high density polyethylene, 81; plastics cladding for London flats, 690
- Road Federation, on delay in road construction programme, 227
- British Rototherm Co. Ltd., flame-proof casing for indicator/control thermometers, 217; model 595 pocket size magnetic thermometer, 283
- Scientific Instrument Research Association, British instruments directory and data handbook (book), 254; New Materials and Processes in Instrument Manufacture, by P. J. Geary (book), 798
- Ship Research Association, annual report of activities, 707
- Shipbuilding Conference, shipyard orders for 1965, 593
- Society for Strain Measurement, note on journal *Strain*, 157
- Standards Institution composition of committees. *Letter*, 69; electric blankets, 160; permanent residential caravans, 480; radiographic examination of fusion welded circumferential butt joints in steel pipes, 627; metric system for screw threads, 706; comment on activities of, 738-739; rubber conveyor belting of ply construction, 753
- British Steam Specialties Ltd., activities of Dunellen Ltd., subsidiary, 48
- Steel Castings Research Association, symposium on castings in welded fabrication, 823
- Steelmakers' Bursaries in Welding Technology, 73
- British Tap & Die Co. Ltd., taps and dies (trade publication), 605
- British Titan Products Ltd., titanium tetrachloride, 177; partnership in Sherbro Minerals Ltd., 400
- Trade Centre (New York), 464
- Transport Docks Board, construction of harbour at Port Talbot for iron ore imports, 369; Kings Lynn quay pile driving operations, 466
- Twin Disc three-stage torque converter for diesel hydraulic locomotives, 26
- British United Airways, helicopter service in Channel Islands, 368
- British Vacuum Cleaner & Engineering Co. Ltd., model TH92W vacuum cleaner for wet or dry pick-up, 731; founding of, 840
- British Waterways Board, interim report of Development Committee, 193
- Welding Research Association, carbon dioxide shielded consumable electrode arc welding, by A. A. Smith (book), 62; one-year postgraduate course in welding technology, 73; on CO<sub>2</sub> Shielded Consumable Electrode Arc Welding, by A. A. Smith (review), 541
- Brittain, K. H., composition of BSI Committees, 69
- Britten-Norman Ltd., Islander BN-2 light commercial aircraft, 308
- Brittle fracture, by Prof. Dr. Ing. G. Bierrett, 617
- Brno Fair, machine tools at, 437
- Broadbent, G. H., function of creativity in design, 358
- Broadbent, T. W., "Isaac Newton" telescope, 165
- Broadwall Engineering Co. Ltd., automatic water pressure booster, 21
- Brockhouse, J., & Co. Ltd., trading report, 752
- Brockhouse, J. L., on J. Brockhouse & Co. Ltd., 752
- Brockhouse mono-cord venetian blind, 597
- Brodie, M., management development seminar, 683
- Bromage, K., on Copper in Cast Iron (review), 28
- Bromborough power station, nitrogen atmosphere above feed water storage tanks, 152
- Bromby, Lt.-Cmdr. H. S., on VSO scheme for ex-apprentices, 647
- Bromley Technical High School, applied science activities, 239
- Brookhirst Igranite, activities of, 400
- Brooklyn bridge: fact and symbol, by A. Trachtenberg (book), 542
- Brooks Instrument NV, remote indicators (trade publication), 605; turbine flowmeter (trade publication), 702
- Broom & Wade Ltd., new factory at High Wycombe for production of rotary compressors, 587
- Brotherhood, Peter, Ltd., annual report, 529
- Brower, Magneform process, 617
- Brown, A. R. G., titanium, beryllium and refractory metals in aircraft industry, 502
- Brown, B., on High-Intensity Ultrasonics (review), 220
- Brown Bros. & Co. Ltd., electrohydraulic ram type ship steering gear, 243
- Brown, David, Corp. Ltd., group activities, 48
- Brown, David, Industries Ltd., products at Engineering Materials and Design Exhibition, 371
- Brown, F. H. S., British Electrical Power Convention, 5, 7; on Dungeness B nuclear power station, 171
- Brown, G., National Plan, 385, 387
- Brown, John, & Co. (Clydebank) Ltd., gas turbine agreement with General Electric Co. (US), 17; activities of, 272; trading report, 272; activities of subsidiaries, 272; effect of new taxation, 272; tests on hull design of Cunard liner, 380; *Queen Elizabeth* liner, drydocking for major improvement programme, 784
- Brown, John, Land Boilers Ltd., activities of, 272
- Brown, K. M., review of The Cornish Beam Engine, 765
- Brown, M. H., on Brown & Tawse Ltd., 177
- Brown, S. G., Ltd., remote control of ship steering gear, 243
- Brown & Sharpe Ltd., No. 2B automatic screw machine, 376; Turr-e-Tape AB1118 numerically controlled drilling machine, 376
- Brown & Tawse Ltd., position and prospects of, 177; activities of subsidiaries, 177
- Brown & Tawse Plant Ltd., JF Strong-Grip wire rope clamp, 87; activities of, 177
- Brown & Tawse Tubes Ltd., activities of, 177
- Browning, N. F. E., director of town development, Winsford, 463
- Bruce Peebles & Co. Ltd., site assembled transformer at Iron Acton substation, 15; 90 hp flameproof flange mounted electric motor, 53; De La Rue Bull Compatibles/400 computer, 177; transformers for Cockenzie power station, 492
- Brunner, E., on Eagle Ironworks, Oxford (book), 158
- Brush Electrical Engineering Ltd., Tryweryn reservoir, 527; Model RD1 industrial tractor, 731; gas turbine generator for New Zealand, 753
- Brush type 4 diesel-electric locomotive, automatic voltage regulator for (Hawker Siddeley Dynamics Ltd.), 441
- Bryanston School, applied science activities, 238
- Bryant Centa-Form centreless grinding machine, 59
- Bryant Centalign grinding machines, 757
- Bryant & May Ltd., 300 kVA fireproof transformers, 441
- Brydor Ltd., micro circuit breaker (trade publication), 62
- Brytallium Castings (Bolton) Ltd., warm air curtain and door for foundry, 594
- BSA Sintered Components Ltd., sintered components (trade publication), 286
- BSA Tools Ltd., CD33 single spindle portal drilling machine with Airmecc tape control equipment, 271; 95N automatic chucking machine, 315
- Bubble chamber, helium refrigerator for (British Oxygen Cryoproducts), 553
- Buccaneer aircraft, Hawker Siddeley, with rocket boost, 107
- Bucleuch bulk carrier, Pilgrim nut fitted on, 260
- Buchanan, Prof., report on traffic in London, 131
- Buchanan report, practical measures for implementing, 450
- Buckley, P. S., on Techniques of Process Control (review), 221
- Budd Co., transport of the future, 33
- Budgen Instruments Ltd., Amprobe events recorder, 345
- Bugatti 101, 3 litre, motor car, Ghia, 652
- Building Exhibition, International (Olympia), exhibits at, 597, 598, 660; on programme of, 607; warm air heating equipment, 736
- House, on clay slope, research on, 256
- Research activities of (BRS), 256
- Industrialized (Fram and Russell), 528
- Factories for Jespersen 12M system of, 590-591
- 12M Jespersen system, 143
- Pvc wiring kits for (British Insulated Callender's Cables Ltd.), 594
- Two-storey system of (Terrapin Ltd.), 209
- Industry, communications in the, by G. Higgin and N. Jessop (book), 190; (review), 382
- Building & Maintenance Equipment Ltd., access towers (trade publication), 222
- Materials, working party on, 752
- Prefabricated, glass reinforced polyester panels for, 790
- Railway lineside, 790
- Products, plastics (trade publication), 822
- Research Board, annual report, 256; activities of, 256
- Station, tracing household smells, 320; 1,000 ton press for concrete wall panels, 566; mortar spraying process for concrete wall panels, 566; Chevron battery casting method for concrete wall panels, 566
- Sites, Barduct busbar system for, 339
- and structures, wind effects on (book), 94
- System, 12M Jespersen, mobile moulds for precast concrete panels, 240
- "680" prefabricated timber (W. C. Youngman Ltd.), 696
- See also *Concrete, reinforced*
- Bulb, light. See *Light bulb*
- Bulk carrier, Bucleuch, Pilgrim nut fitted on, 260
- Norwegian contract for (Harland & Wolff Ltd.), 241
- Overseas orders for (John Readhead & Sons), 304
- Universal, overseas orders (John Readhead), 304
- Storage container, nylon collapsible, Big Bag, 792
- Bull, John, Rubber Co. Ltd., Prescollan polyurethane rubber components, 371
- Bulldog Graco Hydra-Clean air-operated pumps, 662
- Bullington Rural District Council, refuse compaction by wet drum, 791
- Bullnose Morris, by L. P. Jarman and R. Barraclough (review), 701
- Bumper Sub for oil-drilling rig, 205
- Bunyan, T. W., Pilgrim nut for ship propellers, 260
- Bureau of Standards. See *United States National*
- Burflex Ltd., weld flash stripper for butt welded tubes, 794
- Burgess & Associates Inc., vibratory feeding equipment with plastic springs, 277
- Burgess Products, BBS 10 bandsaw, 384
- Burgess, R. E., on Progress in Semiconductors (Vol. 9) (book), 510
- Burke, Ian, Martin & Partners, Buchanan House office block for British Railways at Glasgow, 689
- Burke, R., project work in apprentice training, 807
- Burkinshaw, B., VISA simulation apparatus, 458
- Burmah Oil Co. Ltd., ownership of Odeco (UK) Ltd., 205
- Burmah Oil North Sea Exploration Group, 204
- Burn, D., "The Future of Steel" (pamphlet), 99
- Burners, diffusion-flame, for methane, 725
- Gas, packaged conversion units (PowR-matic Ltd.), 761
- Oil, Monarch F-80-CC nozzle, 768
- Nu-way Q3 Rotovac proportioning, 49
- Rig tests at Marchwood Laboratories, 142
- Ultrasonic, 306
- Burnham, T. H., on Elements of Industrial Organization (book), 190
- Burns-Green, Bob, VSO liaison officer, 646
- Burntisland Shipbuilding Co., all-welded aluminium alloy cargo tanks for shipping ethylene, 81
- Burton Griffiths & Co. Ltd., SP friction screw presses, 473; DGH counterblow hammers and hydraulic forging presses, 473; die-casting machines, 662
- Bus, double-decker, Daimler Fleetline, 368
- Busbar, aluminium, by A. G. Thomas and P. J. H. Rata (book), 254
- System, Barduct, tapping box for, 310
- Portable, Barduct, 339
- Busch-Jaeger Dürener Metallwerken A.G., Loewy extrusion press for, 656
- Bushings, transformer, production and testing unit for (Ferranti Ltd.), 440
- Wall, with terminal boxes (Ateliers de Constructions Electriques de Charleroi), 787
- Business decision problems, seminars on analysis of, 391
- Efficiency Exhibition (Olympia), exhibits at, 505
- Equipment (trade publication), 318
- and industry, 1965, Penguin survey of, by R. Malik (review), 317
- Management courses (Industrial Education International), 391
- of product design, by J. Pilditch and D. Scott (review), 381
- Schools, progress in activities at, 718
- Bustard, Transportation Engineering Conference, 8
- Butler, C. T., applied science in schools conference, 517
- Butler, R. F., on Kirkstall Forge Engineering Ltd., 400
- Butterfield, W. P. (Engineers) Ltd., activities of, 176
- Butterfields, W. P., Ltd., export drive, 176; formation of Harcostar Ltd., 176
- BX Plastics Ltd., Cobex pvc corrugated sheeting in reservoir baffle wall, 210
- By-pass, High Wycombe, progress of, 112
- By-Pass, Sevenoaks, limestone for, 337; Titan paver-finisher machine for, 745
- By-pass viaduct, Cowbridge, progress of, 112

## C

- CABINET, fume, for tall apparatus, Turbro, 599
- Protective, Kingsway Fillpoint, for oil filter terminals, 119
- Cables (trade publication), 350
- and cable bedding materials (ERA), 658
- Conductor eccentricity corrector (trade publication), 574
- Cable Covers Ltd., Talurit hard setting plastic putty, 507
- Flexible and floor warming (trade publication), 350
- Glands, Mark II series of (Hawke Cable Glands Ltd.), 539
- Installation in Sheffield, contract for (AEI Construction (Cables & Lines) Division), 241
- Insulation, Ethylene Propylene Rubber (EPR), 345
- Kips, prestressing, for Bow viaduct, 241
- Kits (trade publication), 638
- Mats, prefabricated road warming (British Insulated Callenders Cables Ltd.), 441
- Mingrin (trade publication), 30
- Multiway flat, Biccastrip, range of, 247
- Networks, telephone, pneumatic protection of (trade publication), 30
- Paper-insulated, temperature cycles for (ERA), 658
- Radio frequency (trade publication), 190
- Reeling drum for cranes (Malcolm Cross Ltd.), 216
- Saddle, flexible nylon (Herzbi Ltd.), 310
- Submarine power, to Mull, 336
- Power, Trinidad-Tobago, 625
- System (trade publication), 574
- Telephone, pvc indoor (trade publication), 158
- Submarine, from Canary Islands to Spain, 273
- Trunking (trade publication), 318
- Underground, for power transmission by, 373
- See also *Power transmission; Wire rope*
- Cadmium control rods, stainless-steel clad, 12
- Copper equipment for overhead electrification system, 645
- Selenium photo-conductive cell, type NSL-364C (Hird-Brown Ltd.), 245
- Caio, L., on Variational Techniques in Electromagnetism (review), 60
- Calcium silicate thermal insulation, Crosfield process for, 121
- Calculator, IME84 transistorized desk (Muldivo Calculating Machines Ltd.), 505
- Inertia (trade publication), 286
- Printing, Logus 27, 505
- Caldwell, J., steam turbine design trends, 552
- Caledonian Grinding Machine Tool Co. Ltd., Model 88 drill grinding machine, 186; Model 55 Profile Accurascope grinding machine, 343
- Calibration of large force measuring devices (NBS), 595
- of length scales, laser for (NPL), 443
- Calne Electronics Ltd., solid-state PG101-decade pulse generator, 630
- Calweld piling rigs for pile driving through concrete, 466
- Cam design, by D. B. Welbourn. *Letters*, 328, 356, 419
- Cambridge Instrument Co. Ltd., radiation thermopiles (trade publication), 542; hydrogen in metals analyser, 663; pipe thermocouple (trade publication), 670; clearway thermometer (trade publication), 702; thermoelectric rocking microtome, 729; Stereoscan scanning electron microscope, 747-748
- Cambridge University, grant for research into industrial automation, 209; engineering department intake, 580; management education, 615
- Camera, cartographical, Lee-Smith, 283
- Cine, Instamatic, 512
- for television recording, 175
- Drum, high speed, Ferrovolt, 794
- Nikon Nikkormat FT and Nikon F, 699
- for optical marking out, GP500 system, 11
- Cameron, Dr. A., review of Gas Lubricated Bearings, 126
- Cameron, H., Gardner Ltd., Mark 3 fork lift unit for tractors, 346
- Camfast Clips Ltd., plastic clips for copper pipes, 608
- Campkin, C., non-destructive testing by, 444
- Cans, round, Model 2MR automatic double seaming machine for (Moon Bros. Ltd.), 214
- Canada, Canextour drive for export to, 592
- Canada Iron Foundries, Toronto underground railway, 177
- Selling to (booklet), 592
- Canadian General Electric Co. Ltd., AEI alternator stator for Tuft Cove No. 1 power station, 528; WR-1 atomic reactor, 690-691
- Institute of Steel Construction, structural steel designs (trade publication), 478
- Canary Islands to Spain, submarine telephone cable from, 273
- CANDU atomic reactors for Pickering power station, 302
- Canextour drive for exports to Canada, 592
- Cannanore cargo liner, Pilgrim nut fitted on, 260
- Cannell, R. L., on Loughborough College of Technology, 391
- Canning, W., & Co. Ltd., indexing system for rotary table polishing machines, 179; Zonax activated carbon filter pads for plating solutions, 539
- Cantilever construction for Zdakov bridge, 414
- Structures for overhead electrification system, 644
- Canvey Island refinery (United Refineries Ltd.), 813
- Capacitors, ceramic disc, type 13K range of (London Electrical Manufacturing Co. Ltd.), 346
- Electrolytic, C428 (Mullard Ltd.), 538
- Metallized polyester, for printed circuits (London Electrical Manufacturing Co. Ltd.), 309
- Miniature silvered mica, Silver Star range of (Johnson, Matthey & Co. Ltd.), 507
- Plug-in, Jensen type KTTS, for computers, 178
- Silicone rubber encapsulated (Plessey Co. Ltd.), 218
- Capenhurst atomic explosive plant, modernization programme, 784
- Capper Pass Ltd., new plant for solder refining, 82
- Caps-Jeffrey microfilm enlarger/viewer, 551
- Car park, automated information system for Stevenage, 272
- Steel-framed demountable, Tempark, 27
- System, re-usable multi-storey, in precast concrete, 25
- Parking exhibition, 223
- Car Washeteria Ltd., Kleen King high pressure cold water cleaning unit, 792
- Caravan equipment developments, 480
- Exhibition, International (Earls Court) exhibits at, 480
- Permanent residential, B.S., 480
- Carbide wheels, range of (Inslay Industrial Ltd.), 570
- Carbon, by J. M. Adams, 502
- Dioxide casting process, breakdown agent for, Dexil 34 (BNF), 666
- Cylinders, Autoflo changeover valve for, 814
- Oxygen generation from (Westinghouse Research Laboratories), 411
- Carburettor, quadrajel, Rochester, for Oldsmobile Toronado motor car, 431
- Cardiff, iron ore import terminal project, 35
- Careers Encyclopedia, 1965-66, by P. J. Edmunds (book), 382
- Carey, E. D., regional commercial manager, ICI, 16
- Cargo decks, ferry, descaling of, 789
- Dewpointer system, Cargoaire (Honeywell), 123
- Discharge system for tankers, Cargomaster, 132
- Liner, *Cannanore*, Pilgrim nut fitted on, 260
- Services, Containerization in, 322
- Motor vehicle, PATA (pneumatic all-terrain amphibian), 442
- Refrigeration system for American President Lines (Chrysler Corp.), 656
- Ship, refrigerated, *Port Huon*, 307
- Cargoaire cargo dewpointer system, *Benedict* cargo-passenger liner with, 123
- Dewpointer system (Honeywell), 123
- Cargomaster cargo discharge system for tankers, 132
- Cariflex K-101 thermoplastic rubber, 567
- Carimex Ltd., Export Consultancy Service, 753
- Carlton Brown & Partners Ltd., Adhaesium adhesive for machine tool fixing to floor,



- 724  
 Carlyle Air Conditioning Co., liquid chillers (trade publication), 798; air conditioning (trade publication), 822  
 Carr Fastener Co. Ltd., double pole rocker switch with neon illuminated knob, 24  
 Carriages, railway, 1830-1914, by H. Ellis (review), 732  
 — 1839-1939, by G. M. Kichenside (review), 94  
 — Construction research, 649  
 — See also *Railcar*  
 Carrier Engineering Co. Ltd., air conditioning system for Birmingham newspaper headquarters, 600; air conditioning equipment for weaving mill, 625  
 Carruthers, J. H., & Co. Ltd., Cargomaster cargo discharge system for tankers, 132; travelling cranes (trade publication), 574  
 Carruthers Ltd., in East Kilbride development, 619  
 Carter Thermal Engineering Ltd., Aquamiser Mark III universal evaporative cooling tower, 275; Airajust rooftop ductless air conditioning unit, 435; Gyra-Flo high pressure centrifugal fan, 667  
 Cartographical camera, Lee-Smith, 283  
 Cartrac automatic conveyor system, 819  
 Carver & Co. (Engineers) Ltd., clamps for machine tables and test beds, 85  
 Carving knife, electric (Ronson Products), 608  
 Cascade 17 grain drier (Alvan Blanch Developments), 744  
 Casco-MI adhesive sealant, 339  
 Case-making, board and (trade publication), 510  
 Casing, flameproof, for indicator/control thermometers (British Rototherm Co. Ltd.), 217  
 Cast iron, copper in, by J. G. Pearce and K. Bromage (review), 28  
 Castables, refractory, developments in, by T. D. Robson, 502  
 Castell key master control switch for radiographic equipment, 10  
 Casting, carbon dioxide process, breakdown agent for, Dexil 34 (BNF), 666  
 — of concrete wall panels, Chevron battery method (BRS), 566  
 — Continuous, of copper, study of (British Non-Ferrous Metals Research Association), 628  
 — Investment, core material for (S. Smith & Sons Ltd.), 371  
 — Machine, hydraulic semicontinuous, Lobeck-Mann, 628  
 — Market in Scotland, report on, 785  
 — Mine (trade publication), 413  
 — Optical marking out with GP500 camera system, 11  
 — Production of sound, seminar on (AFS), 96  
 — Radiation machine for testing of (Vickers Ltd.), 242  
 — Repairer, Pellet Welder, 117  
 — In welded fabrication, symposium on, 823  
 Castle Plant Co., Barduct busbar system for building sites, 339  
 Catenary, stitched, equipment for overhead electrification, 643  
 Cathedral, Salisbury, underfloor heating, 37; off-peak underfloor electric heating in, 819  
 Cathode-ray tube, rectangular, for split-beam oscilloscope (M-O Valve Co. Ltd.), 538  
 Cattermole, K. W., review of Data Transmission, 221  
 Cauce, F., applied science in schools conference, 516  
 C.A.V. Ltd., cryostatic metal processing equipment, 379  
 Cavaghan, N. J., review of Extractive Metallurgy, 796  
 Cavalier 2800 combine harvester, 404  
 Cavendish Laboratory, new radio telescope at Lord's Bridge, 106  
 — School, applied science activities, 239  
 Cavitation corrosion in diesel engines, symposium on, 319  
 Cavo Model 310, 320, and 330, pneumatic loaders, 54  
 Ceiling panels, asbestos secret fix, Turnall, 660  
 — Expanded polystyrene, Thermalux, 384  
 C-E-I-R Ltd., interest in Incendata Ltd., 721  
 Celcure Ltd., timber treatment, 259  
 Celdis Ltd., type MV1892 high power switching diode, 146  
 Cell, magnetic susceptibility (Distillers Co.), 598  
 — Photo-conductive, cadmium selenide, type NSL-364C (Hird-Brown Ltd.), 245  
 Cellulose enamel, urethanized, Uracel, 439  
 Cement and Concrete Assoc., car parking exhibition, 223; photographic exhibition (trade publication), 413; training courses in concrete technology, 486; organisation and activities of, 486; development of training courses, 487; new training centre for Wexham Springs, 487; senior staff course on bridge building, 487; course visit to Holland, 487-488; Accra-Tema Motorway, 708  
 — Plant, Swedish, automation systems for (International Systems Control Ltd.), 305  
 — Sealofrost anti-frost and plasticizing agent for, 691  
 — See also *Concrete*  
 Cementaktiebolaget, Skanska, automation of cement plant, 305  
 Cementation Co. Ltd., Sevenoaks by-pass limestone supplies, 337; foundation renewal work for St. Helier Hospital, 648; Titan paver-finisher machine for Sevenoaks by-pass, 745  
 CEN, radioactive effluent disposal, 392; removal of technical barriers to trade in Europe, 549  
 CENEL, removal of technical barriers to trade in Europe, 549  
 Centa-Form, Bryant, centreless grinding machine, 59  
 Central Electricity Generating Board, position and prospects of, 5; standardization on 500 MW generating sets for power stations, 13; shallow draught ship for transport of heavy electrical equipment, 13; research activities at Marchwood Laboratories, 142; nitrogen control system, 152; heavy load hover-vehicle for weak bridges and roads, 182; Myriad computer system installation at Leatherhead research laboratory, 307; 500 MW alternator sets for (AEL), 355; function of, 405; power supply for London Midland Region main line to Manchester and Liverpool, 455; power station coal deliveries by permanently coupled train, 529; Russian visits to power stations, 529; Overhead Line Training School, 561; transmission tower testing stations at Hereford and Wirksworth, 596; transmission tower testing station at Chelm's Coombe, 596-597; test plant for transmission towers, 715  
 — Research Laboratories, semi-ellipsoidal cooling towers, 578  
 — Office of Information, survey on labour mobility, 578  
 — Training Council, report of, 610  
 Centramatic 35 oil-fired boiler, 32  
 Centrifugal pump. See *Pump*  
 Centrifuges, symposium on (Moscow), 785  
 Centring and facing machine, Grob Type ZM, 378  
 Ceramic disc capacitors, type 13K, range of (London Electrical Manufacturing Co. Ltd.), 346  
 — Fuel element for Dragon reactor, 207  
 — Sintered polarized, magnetic angles of (Magnetic Handles (EET) Ltd.), 89  
 Ceramics, tubular and disc (trade publication), 286  
 Ceramics, engineering, recent developments in, by P. Popper, 501  
 — Hot pressing of, by A. G. Thomas and G. G. Deeley, 693  
 — Silicon nitride, 72. *Letter*, 229  
 Chad Valley toy plastic gun, 800; toy building sets, 800  
 Chain, conveyor, lightweight slat, Nysteel, 370  
 Chalmers, B. J., on Electromagnetic problems of a.c. machines (book), 446; (review), 508  
 Chamberlain Industries Ltd., Mark 44 and Mark 77 shock resistant hydraulic motors, 471  
 Chamberlain Parking Systems Ltd., Repark reusable multi-storey car park system in precast concrete, 25  
 Chambers, Sir Paul, on ICI expansion plans, 290; on ICI exhibition in China, 497  
 Channel Islands, helicopter service in, 368  
 Channel Tunnel (review), 30  
 — Geological survey progress, 450  
 Chantiers de l'Atlantique (Penhoet-Loire), tanker with electro-hydraulic steering gear, 243  
 Chapman & Smith Ltd., Supasafir lightweight dust respirator, 786  
 Charger counter insurgency aircraft, General Dynamics/Convair Model-48, 499  
 Charging machine, furnace, for tubes and forgings (Lectramatec (Furnaces) Ltd.), 344  
 Charleroi, conference on coke in iron and steel industry, 31  
 Charnley, C. J., case histories of numerical control, 393  
 Charrington, Gardner, Locket & Co., Charrold Autobagger, 234  
 Charrold Autobagger bulk carriage vehicle for solid fuels, 233-234  
 Chartered engineers, comment on. *Letter*, 261  
 — Implications of Royal Charter on, 674  
 Chassis, de Tomaso, for Ghia Vallengunga motor car, 484  
 — de Tomaso, for 5 litre model, 612  
 — Lamborghini motor car, with engine transverse mounted amidships, 612  
 Chaturvedi, H. C., on vacation training for overseas students, 356  
 Checkweigher weighing machine (Telomex Ltd.), 816  
 — Machine, general purpose, Driver Southall 0215, 423-424  
 Chelmsford County Technical School, applied science activities, 239  
 Cheltenham College, applied science activities, 239  
 Chemform system for typesetting of chemical formulae, 284  
 Chemical analysis. See *Analysis*  
 — Cleaning solutions, handling precautions, 60  
 — Energy, electrical energy storage as, 533  
 — Engineering practice, Vol. 8, by H. W. Cremer and S. B. Watkins (book), 350  
 — Practice Vol. 9, by H. W. Cremer (review), 444  
 — Scheme for degree course in, 802  
 — Formulae, Chemform system for typesetting of, 284  
 Chemical Industries Assoc., formation and activities of, 592  
 — Plants, computer control of, 208  
 — Control by ARCH 9000 computer, joint study of, 212  
 — Reactor theory, by K. Denbigh (review), 820  
 Chemistry, laboratory, measurement and automation techniques in, international exhibition and congress of (Basle), 824  
 — Physical, for metallurgists, by J. Mac-kowiak (book), 413  
 — Solid state, high temperature, grant for research on (Science Research Council), 304  
 Cherry, V. H., on Heat Transfer Notes (review), 795  
 Chesterfield Tube Co. Ltd., carbon steel tubes for hydraulic jacks, 13; steel bottles for air loading, 13; tubular steel rolls for newsprint machines, 241; plant improvements, 305  
 Chestnut, H., on Systems Engineering Tools (book), 638  
 Chevron battery casting method for concrete wall panels (BRS), 566  
 Chicago Bridge & Iron Co., penstocks for Volta River project, 364  
 Chillers, liquid (trade publication), 798  
 — Unit, packaged electric, for air conditioning or process cooling, Hydro-flo, 792  
 Chimney, double skin steel, Dribore, 59  
 — Four-flue, at Eggborough power station, 151  
 — Material, reinforced glass fibre, Boultfibre, 217  
 China, forging equipment for, 624  
 China Light & Power Co., 66 kV package substation for Hong Kong, 307; Tsing Yi power station, 465  
 Chloride Group, subsidiary of, 176  
 Chock, waste edge, standard or adjustable (W. E. & F. Dobson Ltd.), 56  
 Chofum portable radial drilling machine, model WRC25, 503  
 Choiceview Ltd., pay-television experiment abandoned, 130  
 Choosing and evaluating, by A. G. Pleydell-Pearce, 358  
 Chorlton Grammar School, applied science activities, 239  
 Chosen Hill Technical Grammar School, applied science activities, 239  
 Chow, Ven Te, on Handbook of Applied Hydrology (review), 60  
 Christen & Co. Ltd., drill grinding machines, 86  
 Christensen, N. A., on Ethical Problems in Engineering (review), 765  
 Christmas lectures for young people, 767-768  
 Christy & Norris Ltd., member of feed mill consortium, 721  
 Chromalog integration system for chromatographs, 248  
 Chromatographs, integration system for, Chromalog, 248  
 Chromium plating, micro-cracked, WB1200SL process for, 628  
 Chronometer, digital, transistorized, "Chronoseis CGG.33-01," 630  
 Chronoseis CGG.33-01 transistorized digital chronometer, 630  
 Chronostatigraph for motor vehicle road tests, 659  
 Chrysler Corp., marine refrigeration contract for Airtemp Division, 656  
 Chrysler-Cummins diesel engine plant, opening of, 112  
 Chubb & Son Ltd., activities of, 145  
 Chubb's Australian Co. Ltd., progress of, 145  
 Chucks and cutters (trade publication), 478  
 Chucking machine, automatic, single spindle, Type AC (Warner Swasey Asquith Ltd.), 271  
 — Automatic, 95N (BSA Tools Ltd.), 315  
 Chunnel, by C. A. Pequignot (review), 30  
 Churchill, Charles, & Co. Ltd., cooperation with David Brown, 48; centenary of, 157; centenary publications of, 412; manual appliances for food preparation, 840  
 Churchill, Charles, Group, Churchill Redman profile turning lathe with numerical control, 315; increased exports, 336; master ring gauges, 404; activities of subsidiaries, 657; machine tool order from China, 657; automated Link-Line system for gear production, 657  
 Churchill Gear Machines, temperature tests on CA9-10 automatic chucking lathe, 790  
 Churchill, J. J., Ltd., clamping and jacking system (trade publication), 254  
 Churchill Ltd., temperature tests on CA9-10 automatic chucking lathe, 790  
 Churchill Machine Tool Co., precision grinding machines, 314; grinding machine for large cranks, 438  
 Churchill-Redman Ltd., profile turning lathe with numerical control, 315; new office block, 657  
 Churchill-Sturm Ltd., variable speed hydraulic drives, 657  
 Churchman's, operator retraining, 518  
 Cimex programmed instruction for salesmen, 73  
 Cincinnati Milling Machine Ltd., Cintimatic six spindle turret drilling machine with numerical control, 315  
 Cincinnati Shaper Co. Ltd., Rigid-Reflex powder compacting press, 504  
 Cine system, Instamatic, 512  
 Cinema film. See *Film, cinema*  
 Cintimatic six spindle turret drilling machine with numerical control, 315  
 Circetch Ltd. See *Livingston Components Ltd.*  
 Circuit, bias, transistor (trade publication), 446  
 — Breaker. See *Switchgear*  
 — Building machine with numerical control (Standard Telephones & Cables Ltd.), 271  
 — Cards, plug-in, Minicard, 276  
 — Efficiency, service for checking (Aircraft-Marine Products (GB) Ltd.), 307  
 — Rectifier: theory and design, by J. Schaefer (book), 254; (review), 604  
 — Theory analysis, by J. Mittleman (review), 604  
 — Unified, in electronics and engineering analysis, by J. W. Head and C. G. Mayo (review), 252  
 Circulator, cryogenic stripline (Marconi Co.), 277  
 Cistern, dual flush high level, Fabula, 320  
 — Water storage, in plastics, Aspect, 128  
 Citroen motor cars at Paris Salon, 483  
 — Pallas motor car, 399  
 City and Guilds of London Institute, International Apprentice Competition (Glasgow), 162  
 — in the World economy, by W. M. Clarke (review), 317  
 Civil engineers, management for, by E. A. Parsons, D. M. O'Herlihy and R. H. Rowe (review), 348  
 — Engineering, computers in, 721  
 — Research Association, first annual general meeting, 67  
 Clacton to Margate barrage scheme, 513  
 Clad, coinage materials, new (Texas Instruments Inc.), 209  
 Cladding panels on multi-storey flats, glass-fibre reinforced plastics for (Greater London Council), 690  
 — Stainless steel, prefabricated wall panel with (Hawthorn Leslie (Buildings) Ltd.), 660  
 — Wall (trade publication), 318  
 Clamp grip for handling bricks (Bennett Mechanical Handling Ltd), 818  
 — Hose, worm-drive, stainless steel (J. C. S. Hi-Torque Ltd.), 472  
 — for machine tables and test beds, Tee-slot, 85  
 — Pliers-type, self-locking, Destaco Model-453, 694  
 — Tube, Rota-Lock, 569  
 — Wire rope, JF Strong-Grip, 87  
 Clamping and jacking system (trade publication), 254  
 Clapham Junction, signal box failure at, 674, 678-679  
 Clarendon Laboratory, inauguration of Mullard Cryomagnetic Laboratory, 33  
 Clarifier, coolant (Philips Filtration), 377  
 Clark Equipment Ltd., shovel loaders, 794  
 Clark, J., VISA simulation apparatus, 458  
 Clarke, Chapman & Co. Ltd., activities of electronics division, 208  
 Clarke-Power Ltd., Tenasco 900 heavy gauge weather sheeting, 115  
 Clarkson, H., jobs for the boys?, 69. *Letter*, 199; on tax the long car?, 103. *Letter*, 137  
 CLASP prefabricated structural steelwork, 617  
 Claude Rye Bearings, transmission equipment (trade publication), 254  
 Clausen, H., on cam design, 356. *Letter*, 419  
 Clay, M. J., on Performance and Profitability (book), 670  
 Clay slope, house building on, research on, 256  
 Claymore Manufacturing Co., two way transistorized intercom system, 448  
 Clayton Aniline Co. Ltd., new plant, 657; Churchill-Sturm variable speed hydraulic drives, 657  
 Clayton Dewandre, load-sensitive brake for commercial vehicles, 429  
 Clayton Equipment Co. Ltd., battery electric motor vehicle, 631  
 Clayton, H. R., light alloys for engineering applications, 502  
 Clayton, Reginald, Ltd., low voltage heated toilet seat, 576; bath side heating panel, 576  
 Clean Air, Fuel Efficiency and Domestic Heating Exhibition (Eastbourne), 416  
 — Year Book (1965-66), 636  
 Cleaner for metals, Mark I (General Engineers Supply Co. (1937) Ltd.), 402  
 — Vacuum, early history of, 840  
 — Model TH92W, for wet or dry pick-up (British Vacuum Cleaner & Engineering Co. Ltd.), 731  
 Cleaning equipment, ultrasonic, Pulsatron series type KG850, 21  
 — Solutions, chemical, handling precautions, 60  
 — Unit, high pressure cold water, Kleen King, 792  
 Clearway thermometer (trade publication), 702  
 Cleco Tools, impact wrenches (trade publication), 190; screwdrivers and nutrunners (trade publication), 446; air tools (trade publication), 798  
 Cleveland Bridge & Engineering Co. Ltd., failure of jib on Coles 15 ton mobile crane, 425  
 Clifford & Snell Ltd., Superplug electronic delay units, 815  
 Climatic conditions in factory, 145  
 Climax Rock Drill & Engineering Ltd., activities of, 305  
 Clumber, raise, Alimak HBL, for collieries, 56  
 Clinometers, levels and (trade publication), 254  
 Clips, hose, stainless steel (Bell's Asbestos & Engineering Ltd.), 435  
 — Pipe, boltless, Instaclip range of, 346  
 — Plastic, for copper pipes (Camfast Clips Ltd.), 608  
 Clipper air handling units, 409  
 Clock for Crawley town centre, 724  
 — Single decade digital, 59026-420 (Perfection Parts Ltd.), 472  
 Clutch, drawn cup roller (Torrington Co.), 371  
 — Electromagnetic (Warner), 179  
 — Electromotive, and couplings, by T. M. Vorob'yeva (review), 349  
 — See also *Coupling*  
 Clyde Hover Ferries, hovercraft ferry services, 169  
 Clyde Rubber Co. floating tyre for Cargo-master tanker discharge system, 133  
 Clywedog reservoir, in Wales, 526  
 CNS Instruments Ltd., Sirect Mark II temperature controller with current limiting facilities, 117; Type 710 eddy current test equipment, 569; SR2 transistorized temperature controller, 631  
 CO<sub>2</sub>. See *Carbon dioxide*  
 CO<sub>2</sub> welding. See *Welding*  
 Coachwork, motor car, exhibits at Turin Motor Show, 652  
 Coal bagging vehicle, Charrold Autobagger, 233-234  
 — Board, National. See *National Coal Board*  
 — Cutting machine, CU43 Low Seam Minor, 54  
 — Machine, Lorse Miner CM48, 56  
 — Machine, Minimatic and Maximatic, 55  
 — Machine, ROLF, 76  
 — Machine, Short Face Minor, 54  
 — Depot, land-sale, at Bilston Glen Colliery, 121  
 — Gas. See *Gas*  
 — Industry, finances of, 610  
 — Lord Robens on, 5  
 — Position and prospects of, 385  
 — White Paper on, 610  
 — Mine. See *Colliery*  
 — Mining, electronics in, 41  
 — Industry. See *Coal Industry*  
 — Stable hole cutting operation research, 41  
 — Telecommade system for remote control in, 41  
 — Plough project, automatic, 41  
 — Seams, North Sea coast, 528  
 — Storage in bulk, 531  
 Coalfields, coastal, Durham, 528  
 Coating, aluminium, of steel by vacuum deposition, 181  
 — Epoxy, solventless, for pig slug lining of pipelines (Lewis Berger (Great Britain) Ltd.), 152  
 — Machine, roller solder (Technograph & Telegraph Ltd.), 153



- Coating, plastic metal, Galvapas, 346  
 — XPI150 corrosion resistant, by flame spraying 563 (Metco Ltd.), 563  
 Cobex pvc corrugated sheeting in reservoir baffle wall, 210  
 COC/Time-O-Light portable microfilm reader (Industrial Timer Corp.), 282  
 Cockaday, R. E., zirconium alloy pressure tubes, 501  
 Cockenzie power station, constructional details and progress, 492  
 Codd, P., Fildes medal award, 432  
 Code generator, automatic (trade publication), 222  
 Cohen, George, Machinery Ltd., Pingo P600 tower crane with rail mounted mast, 411  
 Cohen, J., on Oosterschelde bridge, 488  
 Coilaway, Top-Dog nylon coiled hose, 345  
 Coiled hose, nylon, Top-Dog, range of, 345  
 Coin production, powder metallurgy process for, 112  
 Coinage materials, new clad (Texas Instruments Inc.), 209  
 Coke in iron and steel industry, conference on (Charleroi), 31  
 Colani RS motor car, Heinkel, 399  
 Colburn, Z., founder of ENGINEERING, 828; birth in Saratoga, N.Y., 828; early life of, 828; *Monthly Mechanical Tracts*, 829; early literary works, 829; employment with Concord Railroad, 829; Tredegar Locomotive Works, 829; *Railroad Advocate*, 829; tour of Europe, 829-830; *The Permanent Way and Coal-Burning Locomotive Boilers of European Railways*, 830; employment with *The Engineer* (UK), 830; founding of *The Engineer* (USA), 830; return to *The Engineer* (UK), 830; founding of ENGINEERING, 830; activities with ENGINEERING, 830-831; return to America, 831; death of, 831; other literary activities, 831-832  
 Colchester Lathe Co., Mascot 1600 centre lathe, 551; Mascot 1600 8½ in. centre lathe, 694  
 Colchester Tillage, Harder "Hanseat" twin disc broadcaster for fertiliser distribution, 78  
 Colclough, J. R., on Construction Industry of Great Britain (review), 820  
 Cold extrusion. See *Extrusion*  
 — Forming process, magnetic pulse, Magnetform, 617  
 — Recent developments in, by H. L. D. Pugh (book), 382  
 — of steel, 617  
 — Heading machine, Malmedie, for tapered bearing production, 757  
 — Store for ice cream products (Newalls Insulation & Chemical Co. Ltd.), 337  
 Cole, Wardlaw & Co. Ltd., GP500 combined camera and projector for optical marking out, 11  
 Coles 15 ton mobile crane, jib failure, 425  
 Colcutt, R. H., on The First Twenty Years Operational Research (review), 540  
 Collieries, Alimak HBL raise climber for, 56  
 — Bevercotes, automation at, 75-76  
 — Bilston Glen, land-sale coal depot at, 121  
 — Breiby/Cowlishaw Walker overhead monorail in, 41  
 — Closure of, F. Lee on, 546  
 — Conveyor belting, spliceable Fenoplast Diamond, 119  
 — Mechanization progress (NCB), 41  
 — Rothes, growth and closure of, 654  
 — See also *Mine; Coal*  
 Collins, C., market research seminar, 681  
 Collis, J., & Sons Ltd., MotaVeyor conveyor belt as hospital exerciser, 59; RolaVeyor and TransVeyor conveyor equipment, 113  
 Collision. See *Accident*  
 Colombia, hydroelectric power scheme for, 808  
 Colorcap key location system, 762  
 Colortron Miniprinter Model M4/8 automatic photographic printer, 699  
 — Model 150/69 photographic enlarger, 699  
 Colour Coated Steel, coloured steel sheet (Richard Thomas & Baldwins Ltd.), 664  
 — Minerals sorting machine by, Sortex 621M, 535  
 Colourmatic variable speed drill, 384  
 Colson, G., on motor vehicle safety trophy, 656  
 Colt Ventilation & Heating Ltd., FR automatic ventilators, 215; Turbo-Static TS800 oil fired space heater, 436; Gold Seal variable-pole induction motors for ventilation equipment, 722; Turbo-Static 300 oil-fired heater, 761  
 Column structures, beam and, numerical analysis of, by W. G. Godden (book), 542  
 Colvilles Ltd., Ducol QT higher strength low alloy steel, 217; steel plates (trade publication), 734  
 Combinatorial mathematics, applied, by E. F. Beckenbach (review), 92  
 Combine drill, MF34 (Massey-Ferguson), 78  
 — Harvester, Cavalier-2800, 404  
 — Massey-Ferguson, 743  
 — New Holland Claydon M140, 743  
 — Ransomes, Sims & Jefferies, 743  
 — S950 (Bamfords Ltd.), 743  
 Combustion chamber for De Tomaso motor car engine, 612  
 — Engineering Association, conference on energy conversion, 287; annual conference (Harrogate), 607  
 — Institute, conference of Western States Section, 32  
 — of methane in diffusion flames, by Dr. J. E. Garside, 725  
 — Processes research (CEGB), 142  
 — Systems, diesel engine (Perkins), 653  
 Comitato Nazionale per l'Energia Nucleare, Italian participation in Halden Project, 529  
 Commercial Oceanology Study Group, formation of, 80  
 Committee of Directors of Research Associations, working party on building materials, 752  
 — on Manpower Resources for Science and Technology, 577  
 Common Standards of Electronic Parts Committee, 97  
 Commonwealth Development Corp., Guma Dam, 622  
 Commonwealth Development Finance Co., Guma Dam, 622  
 Commonwealth Edison Co., generating station system of unit railway train operation, 25  
 Commonwealth. See also *Australia; etc.*  
 Communication system, wire-loop induction, for railways, 649  
 — Terminal, portable microwave, Pico, 506  
 — Within Industry, conference on (Institution of the Rubber Industry), 31  
 Communications and Aeronautical Exhibition, International (Genoa), 127  
 — in the building industry, by G. Higgin and N. Jessop (book), 190; (review), 382  
 — Network, microwave, London-West Country, 241  
 — Receiver, transistorized, type R408 (Redifon Ltd.), 311  
 — Transport and, International exhibition (Munich), exhibits at, 202-203  
 Compact activated carbon air filters, 343  
 Compact deadweight fire valve, 598  
 Compact folding bicycle, 104  
 Compactor, sheepfoot, type 454 triple-drum (Southwest Welding & Manufacturing Co.), 504  
 Compactors Engineering Ltd., slipform paver, 232  
 Compagnie Auxiliaire de Navigation, tanker with electro-hydraulic steering gear, 243  
 Compania Telefonica Nacional Espana, submarine telephone cable from Canary Islands to Spain, 273  
 Company boards, research into, 272  
 Comparator, Millionth, Model 136B-3 (Federal Products Corporation of America), 404  
 Compatibles/400, De La Rue Bull, computer (Bruce Peebles & Co. Ltd.), 177  
 Complex variable methods in science and technology, by J. Cunningham (book), 286  
 Component board unit, plug-in (trade publication), 190  
 Composite materials, course on (Institution of Metallurgists), 287  
 — Metals, filament-reinforced, study of (Battelle Memorial Institute), 530  
 Compositions at thermodynamic equilibrium, handbook of, by C. R. Noddings and G. M. Mullet (book), 446  
 Compressed air set, Air Master, 54  
 — Storage, energy storage considerations, 533  
 — See also *Pneumatic*  
 Compression testing machine for civil engineering and building specimens (Denison), 761  
 Compressor, centrifugal, basic design for 5,000 to 50,000 cu. ft per min range (Richardsons Westgarth), 228-229  
 — Industrial, development of, 228-229  
 — Four cylinder oil-less air (Bell & Cosset Ltd.), 599  
 — Hydrovane, 789  
 — Portable (trade publication), 702  
 — Radial-vaned, development of, 228-229  
 — Rotary, automatic oil free, with water lubrication (Sulzer Bros.), 697  
 — Production at new factory at High Wycombe (Broom & Wade Ltd.), 587  
 — Screw-type, for liner *Queen Elizabeth* (J. and E. Hall), 784  
 — for small volume requirements, Motivair LD, 87  
 — Turbines and, aerodynamics of, by W. R. Hawthorne (book), 94; (review), 636  
 Compressor, vacuum-pump, motor mounted, Gast model 0822 (John Hinton Ltd.), 537  
 Computability, decidability, enumerability, by H. Hermes (book), 734  
 Computational methods in crystallography, conference on, 352  
 Computer advisory centre, Ministry of Technology, 770  
 — Airborne, navigation system and, Marconi AD 560 Doppler, for Boeing 707 airliners, 464  
 — Analogue, 231 R-V (Electronic Associates Ltd.), 209  
 — Analysis of plasma light (NBS), 628  
 — ARCH on-line process control, 145  
 — ARCH 9000, for chemical plant control study, 212  
 — Argus 100, for soaking pit on-line control, 124  
 — Atlas General Survey Program and computing service, 149  
 — Centre, Birmingham, Midland Bank, 49  
 — in civil engineering, 721  
 — Control of chemical plants, 208  
 — for soaking pits, 124  
 — De La Rue Bull Compatibles/400 (Bruce Peebles & Co. Ltd.), 177  
 — in design, 358  
 — in design offices, by K. C. Parton, 358  
 — Development projects (NRDC), 741  
 — Digital, in action, by A. D. Booth (book), 734  
 — Light weight, ALERT, 311  
 — EELM System 4, for North West Electricity Board, 753  
 — Elliott 503, for Czechoslovak State Computing Centre, 113  
 — Elliott 803 digital, for John Dalton College of Technology, 419  
 — Elliott MCS 920M general purpose, 562  
 — Ferranti Argus 308, for research problems (Manchester College of Science and Technology), 208  
 — Gamma 10, for ship repairing firm, 241  
 — Honeywell 200, printed circuit boards for (Honeywell Controls Ltd.), 273  
 — Honeywell 200, for typesetting of newspapers, 244  
 — ICT 1900 series, orders for, 336, 753  
 — ICT 1900 series, systems program package for inventory management, 181  
 — ICT-1901, 417, 421  
 — Industry, position and prospects of, 417, 770  
 — ISC series 90 equipment, 760  
 — Jensen type KTTS plug-in capacitors for, 178  
 — KDF9, program for, 563  
 — Language, Nicol, 421  
 Computer Leo 360, orders for, 465  
 — Low cost, 903 for engineering programs (Elliott-Automation Ltd.), 505  
 — Mechanism assessment (ICT), 754  
 — Myriad system for CEBG research laboratory, 307  
 — NCR-Elliott 4100, 4130 central processor and memory unit for, 217; for aircraft research applications, 369  
 — in offices, 812  
 — Programme, PERT network analysis, symposium on, 105  
 — Railway vehicle movement simulation by, 650  
 — Sales, Arch, 289, 304  
 — for Surface Tactical and Blind Pilotage Trainer, 389  
 — System 4 (English Electric-Leo-Marconi Computers Ltd.), 417, 422  
 — Tracing of shapes for (D-Mac Ltd.), 149  
 — Traffic control by, in London, 642  
 — Transistorized module analog, Meda T Series of, 694  
 — Typesetting, research grant for, 81  
 — for water resources assessment, 276  
 — Wiring, coincidence check for (International Computers & Tabulators Ltd.), 338  
 Computing science courses (Staffordshire College of Technology), 806  
 — Service for surface milling (ICT), 475  
 Conch Methane Services, plans for liquefying Nigerian natural gas, 257-258  
 Concorde supersonic airliner, electronic equipment for, 177; future of, 194  
 Concrete building block production (Lignacite Group), 624  
 — "Calweld" piling rigs for pile driving through, 466  
 — Construction of Accra-Tema Motorway, 708  
 — Creep in, at 105 and 110°C, 122  
 Concrete Drilling Co. Ltd., diamond core drilling (trade publication), 382  
 Concrete inserts, C. G. range of (Anthony Pratt & Co. Ltd.), 815  
 Concrete Ltd., activities at Winsford, 463; Bison Wall Frame system, 465; plastics cladding for London flats, 690; "Bison" preferred dimension frame for system built hospital block, 698  
 — Mixer, tractor mounted (Alvan Blanch Development Co. Ltd.), 507  
 — Panels for Jaspersen I2M system, 591  
 — Sparlite, for extension walls, 384  
 — Plane, EDCO CD10, for removing road markings, 183  
 — Precast, international congress on (London), advance notice of, 736  
 — Joint seal for, Servicoer, 661  
 — Panels, mobile moulds for, 240  
 — Re-usable multi-storey car park system, Repark, 25  
 — Prestressed, bridge building course for senior staff, 487  
 — Introduction to (Vol. 1), by P. W. Abeles (review), 93  
 — for Oosterschelde road bridge construction, 728  
 — Pressure vessels, conference on (March 1967), 159  
 — for reactor pressure vessel, 172  
 — Test frame for simulation of flight loads, 620-621  
 — Reinforced, bridge building course for senior staff, 487  
 — Football stand at Galashiels, 466  
 — Roads, slipform paver for construction of, 232  
 — Roofs, non-planar, design of, by J. S. Terrington and F. H. Turner (review), 125  
 Concrete Sawing Equipment Ltd., wall sawing unit, 410  
 — Shrinkage in, at 105 and 110°C, 122  
 — Shuttering and moulds, glass fibre reinforced polyester for (BIP Chemicals Ltd.), 724  
 — Structures, thin shell, by D. P. Billington (book), 318  
 — Surface planing machine (Errut Products Ltd.), 434  
 — Technology, training courses in (Cement and Concrete Association), 486  
 — Wall panels, Chevron battery casting method for (BRS), 566  
 — Panels, mortar spraying process for (BRS), 566  
 — Panels, press for (BRS), 566  
 Condensed phase high pressures and, physics of, by A. Van Isterbeek (review), 669  
 Condenser heat transfer, research in (AML), 72  
 — Tube heat transfer, research in (AML), 72  
 — Silt prevention for, 475  
 — for Tuft Cove No. 1 power station, 528  
 Conditions, climatic, in factory, 145  
 Conductive, photo, cell, cadmium selenide, type NSL-364C (Hird-Brown Ltd.), 245  
 Conductivity controllers (Electronic Switchgear (London) Ltd.), 375  
 — Measuring set, portable, type MC3 (Electronic Switchgear (London) Ltd.), 116  
 Coney, J. E. R., vacation training for overseas students. *Letters*, 261, 356  
 Confederation of British Industry, formation and officers of, 209; cooperative research study group visit to Denmark, 337; presentation of charter, 353; *CBI Industrial Trends Survey*, 546; university/industry liaison development, 771  
 Conference, annual, BACIE (Loughborough), 319, 391, 420  
 — (Eastbourne) (National Society for Clean Air), 546  
 — (Institute of Directors), 641  
 — Sales (Tenerife) (SGS-Fairchild Group), 561  
 — Applied science in schools, 481, 515  
 — Apprenticeship trends, BACIE (Eastbourne), 781, 807, 809  
 — Assembly, jointing and fastening techniques (PERA), 255  
 — British Automation (1965), 31, 576; report of, 651  
 — Electrical Power Convention, speculation on future fuel policy, 3; report of, 5  
 — Coke in iron and steel industry (Charleroi), 31  
 Conference, Combustion Engineering Association (Harrogate), 607  
 — Communication Within Industry (Institution of the Rubber Industry), 31  
 — Computational methods in crystallography, 352  
 — Design Criteria and Equipment for Transmission at 400 kV and Higher Voltages (IEE), 191  
 — Electrification of Euston to Liverpool and Manchester main line trunk route, 63  
 — Electron and ion beam science and technology (New York), 63  
 — "Electron Microscopy in Metallurgy", 127  
 — Energy conversion, 287  
 — Engineering education, proposal for, 206  
 — Engineering Institutions of British Commonwealth, 609  
 — Engineering materials (IME), 501-502  
 — European Cooperation in Advanced Technology (London), 225  
 — and exhibition, automatic laboratory techniques, 799  
 — and exhibition, engineering materials and design (Olympia), 357, 360, 370-371  
 — Fire prevention in industry, 161  
 — Gas boards sales and service, 223  
 — High Pressures, International (France), 433  
 — Highway practice, 607  
 — Industrial fastening, report on (book), 542  
 — Inspection and quality control of manufactured goods, 95  
 — International, on Cold Extrusion of Steel (Eastbourne), 383  
 — of electrical engineers (Berlin), 223  
 — on electron and ion beam science and technology, by R. Bakish (book), 318  
 — Pressure die casting (London), 799  
 — Soil Mechanics (Montreal), 223  
 — on Ultra-High-Frequency Television, 576  
 — of women engineers and scientists, 191  
 — Joint International, on creep (book), 222  
 — Materials handling (London 1966), 255  
 — Mathematics for engineers, 351  
 — Microwave behaviour of ferrimagnetics and plasmas, 159  
 — Molecular sieves (Society of Chemical Industry), 95  
 — Noise control (PERA), 320  
 — Physical basis of yield and fracture, 223  
 — Productivity, technology and change (British Productivity Council), 607  
 — Rare earths, 288  
 — Rubber in engineering applications, 823  
 — Sanitary engineering (Urbana, Ill.), 255  
 — Stresses in structures and machinery, 823  
 — Technology and Society (Bath), 31  
 — Transportation engineering, report of (ICE), 8, *Letter*, 261  
 — Ultrasonics for industry, 223-224  
 — World Power (Tokyo), advance notice, 799  
 Conflict and power in organizations, by R. L. Kahn and E. Boulding (review), 636  
 Congress, Foratom (Frankfurt), report of, 627  
 — International, on Metallic Corrosion (Moscow), 287  
 — of the precast concrete industry, international (London), advance notice of, 736  
 — Steel (Luxembourg), report of, 616-617  
 Connectors, electrical, multi-gauge for inspection of, by F. R. Tolmon, 341  
 Conover, D. W., on Human Engineering Guide for Equipment Designers (review), 477  
 Conran Design Group, Falks showroom for lighting fittings and heating units, 96  
 Consaire pneumatic differential pressure transmitter, 787  
 Conservative opportunity: fifteen Bow Group essays on tomorrow's Toryism (review), 285  
 Conservative Party, election of new leader, 129-130  
 Consett Iron Co., iron production records, 592  
 Consolidated Edison, atomic power station at Indian Point, 721  
 Consolidated Electrodynamics, PlasmaVac thin film depositor, 85; Type 5-124 oscillograph recorder, 464  
 Consolidated Pneumatic Tool Co. Ltd., power tools for mining, 54; Model 535REM electric coal drill, 54  
 Consolidated Vacuum, PlasmaVac thin film depositor, 85  
 Consort Mark 2 atomic reactor (Imperial College of Science and Technology), 12  
 Consortium of Local Authorities Special Programme system, 206  
 Construction, engineering drawing and, Vol. 1, by L. C. Mott (book), 798  
 — Industry of Great Britain, by J. R. Colclough (review), 820  
 — Manpower in, 259  
 — National Plan impact on, 388  
 — Training Board, new agreement for electrical apprenticeships, 206; developments in, 717; *CITB Guide—No. 1*, 717; activities of, 717  
 — Material, Slagceram, from blast-furnace slag (BISRA), 18  
 — Practice, critical path methods in, by J. M. Antill and R. W. Woodhead (book), 638  
 — Safety and, codes USA states and cities, directory of, by K. O. Siemon (book), 158  
 — Sites, accidents on, inquiry into, 688  
 Constructors John Brown Ltd., effect of corporation tax, 272; pipeline for River Derwent scheme, 369; Thirsty Cities (film), 369  
 Contactors, ac operated (trade publication), 190  
 — dc operated (trade publication), 158  
 — Heavy duty (Keyswitch Relays Ltd.), 23  
 — Moulded block, Benedikt and Jager K12, 633  
 — for night storage heating systems, Q60 (B & R Relays Ltd.), 24  
 — Reversing, triple pole (Donovan Electrical Co. Ltd.), 439  
 — Vacuum, for electric motor starters (Associated Electrical Industries Ltd.), 665  
 Containers, glass (trade publication), 62  
 — Nylon collapsible bulk storage, Big Bag, 792  
 — Storage, Rocbord, of corrugated fibre-board, 762  
 Containerization in cargo liner services, 322



- Continental Electronic Systems Inc., aerial masts for NATO station near Carlisle, 339
- Continental Oil Co., gas exploration in North Sea, 641
- Shelf, drilling production licences, 194
- Continuous casting. See *Casting*
- Contour depth recorder, 276
- Contractor's plant (trade publication), 126
- Control, automatic, of aircraft and missiles, by J. H. Blakelock (book), 574
- Chemical plant, by ARCH 9000 computer, joint study of, 212
- and data logging system, automatic, Westronic, 442
- Engineering, position and prospects of, 97
- Equipment, digital, ISC series 90 centralized, 760
- Gear (trade publication), 158, 190
- Instruments (trade publication), 62
- Pneumatic, components for, by L. A. Zalmanzon (book), 126
- Solid state calibrated (modular version) (Kent Precision Electronics Ltd.), 470
- Modules, plug-in, K-Pac, 539
- and monitoring equipment, electronic remote, for surface conveyor system, 113
- Panel for gas-fired furnaces, 560
- Photoelectric (trade publication), 350
- Pneumatic, Mexalog system, 135
- Solid-state, 135
- Relay, solid state, K-Pac, 24
- Remote, of ship steering gear, 243
- Variator (trade publication), 734
- Scheme, electronic, for paper mill (George Kent Ltd.), 276
- and sensing equipment, ultrasonic, Sonac, 54
- and signalling system, R2 fail safe (John Davis & Son (Derby) Ltd.), 153
- Supervisory remote, equipment, Selectronic 701, 83
- Systems, electronic, for industry, symposium on, 127
- for hot water and heating, Prefect, 544. *Correction*, 640
- Theory, modern, by C. T. Leondes (book), 286; (review), 637
- Unit for lighting, Econotrol, 51
- Controllers, electric motor, Sandrive, 247
- Indicating, thyristor power for, 120
- Indicator, miniaturized, Model 65 Dialset, 787
- Pneumatic, model 43A (Foxboro-Yoxall Ltd.), 726
- Precision, for air gauging, Series 11-018 fail safe (C. A. Norgren Ltd.), 22
- Programme, plug, Miller-Matic 3AX, 314
- Recorder, combined, for textile industry (Veeder-Root Ltd.), 178
- Three term analogue output, 153A (George Kent Ltd.), 726
- Transdata 153 series, 276
- Conversion tables, International, by S. Naft and R. De Sola (book), 350
- Converter, analogue to digital (trade publication), 702
- Electropneumatic, Electrostep, for soaking pit on-line control, 124
- Magnetic flow, Transdata, 276
- Up-converter, solid state for 4 Gc/s (Standard Telecommunication Laboratories Ltd.), 115
- Wave-form, 438A Squareshaper, 470
- Conveyancer Fork Trucks Ltd., Hy-Drive fork truck, 731
- Conveyors (trade publication), 126
- Belt, hinged steel, Model 870 Rapistan, 154
- as hospital exerciser, MotaVeyor, 59
- Nylon (trade publication), 222
- Belting, colliery, spliceable, Fenaplast Diamond, 119
- Rubber, BS, 753
- Chain, lightweight slat, Nysteel, 370
- Dished slat, for film rolls (Gramac Mechanical Handling Ltd.), 568
- Equipment, RolaVeyor and TransVeyor (J. Collis & Sons Ltd.), 113
- Narrow belt, Automation (Shipton Automation (Sales) Ltd.), 730
- Sealed belt (Numecl Ltd.), 186
- System, automatic, Cartrac and Liftrac, 819
- Surface, electronic remote control and monitoring equipment for, 113
- UHDE vibrating tube (Locker Industries (Sales) Ltd.), 568
- Cook, H., on Freehand Technical Sketching (book), 766
- Cooke, C. W., association with ENGINEERING, 837
- Cooking fats and oils, fire risks from, 672
- Cookson, R. A., on nationalization of steel, 99
- Coolant clarifier (Philips Filtration), 377
- Pressure unit (Machine Shop Equipment Ltd.), 759
- Coolblast portable cooling fans (trade publication), 254
- Coolers hydrogen, for 500 MW alternators, 355
- Cooling, process, Hydro-flo chiller unit for, 792
- Towers, collapse at Ferrybridge, 578
- Critical frequency of, 578
- Evaporative, Aquamiser Mark III universal, 275
- Semi-ellipsoidal form (CERL), 518
- Cooper, C., association with ENGINEERING, 836; war service, 838; appointed Joint Editor of ENGINEERING, 839
- Cooper-Deeley beam harrow, 78
- Cooper, M. J., tantalum and its alloys, 501
- Cooper, W. J., & Sons, Cooper-Deeley beam harrow, 78; spring-time cultivator, 78
- Cooperative industrial research in Europe, 337
- Cope's Regulators, activities at Winsford, 463
- Copier, electrostatic, Anstat (Bell & Howell), 731
- Copper alloy, free-machining, Boltomet-917, 370
- and its alloys, by E. G. West, 502
- in cast iron, by J. G. Pearce and K. Bromage (review), 28
- Continuous casting of, study of (British Non-Ferrous Metals Research Association), 628
- Pipes, electric jointing tool for, Solder-master, 155
- Plastic clips for (Camfast Clips Ltd.), 608
- Copper plating solution, Cuproglo 6 (Forestal) — 539
- Copper World Survey*, 220
- Copperad Ltd., annual report, 401
- Copying equipment for high duty lathes (Hepworth Iron Co. (Engineering) Ltd.), 245
- Infra-red, Thermo-Fax (trade publication), 638
- Photographic film, De Oude Delft, 699
- Machine, Bridgeport, for thread rolling dies, 594
- Copyright by Copinger and Skone James, 444
- Cords, flexible, high temperature (trade publication), 702
- Core material for investment casting (S. Smith & Sons Ltd.), 371
- Cornet precision cylindrical grinding machines, 377
- Corning Glass Works, regenerative glass ceramic heat exchangers, 68
- Cornish beam engine, by D. B. Barton (review), 765
- Coromant Ejector drill for deep holes, 758
- T-MaX close-pitch facemill, 816
- Corona, Toyota motor car, description of, 772
- Coronas, electrical: their basic physical mechanisms, by L. B. Loeb (review), 821
- Corrosion, boiler, research at AML, 71
- Cavitation, in diesel engines, symposium on, 319
- Corrosion Ltd., Polyzinc zinc spraying system for bright steel, 242
- Metallic, International Congress on (Moscow), 287
- and Protection Association, symposium on cavitation corrosion in diesel engines, 319
- Research (BRS), 256
- of steel overbridge at Clapham Junction, 678
- Stress. See *Stress corrosion*
- Corrugated sheeting, Cobex pvc, in reservoir baffle wall, 210
- Corsair motor car with V4 engine, new version of (Ford Motor Co. Ltd.), 428-429
- Coryton refinery, field erection of boiler for, 723
- Cosil cold-sealing adhesives, 304
- Cost control, management and, in the metallurgical industry, by E. F. L. Brech, J. H. Spooner, Lord Geddes and R. L. Berry (book), 638
- Costain, Richard (Civil Engineering) Ltd., investigation into ocean resources, 80; El Cadillal earth fill dam and hydro-electric power scheme, 91; Balderhead reservoir, 526
- Costain, Richard (Construction) Ltd., factory extension for Fafnir Bearing Co., 720
- Costing scheme, uniform (Metal Finishing Association), 592
- Cottam atomic power station, economic assessment of, 171
- Council of Engineering Institutions, Royal Charter granted to, 197; activities and aims of, 197-199; relationship with Engineers' Guild, 197-199; syllabus for Common Part I Examination, 225; Royal Charter for, text of, 291-292; future role of, 545; presentation of Royal Charter, 609; implications of Royal Charter, 674; activities in Yorkshire. *Letter*, 741
- of Industrial Design, exhibition on design in engineering, 480, 550-551
- and National Academic Awards, policy statement and functions of, 706
- Counters (trade publication), 222
- Measuring, electronic (Elesta Electronics Ltd.), 247
- Miniature open frame, Minicounter, 726
- 6-digit electrical impulse, with key reset, Series 442 (English Numbering Machines Ltd.), 50
- Timer, digital, type TC4 (Advance Electronics Ltd.), 185
- Totalising (trade publication), 542
- Counting Instruments Ltd., miniature digital display unit, 147
- County Commercial Cars Ltd., agricultural tractors, 78; Super-4 and Super-6 four-wheel drive tractor, 493; cooperation with Ford, 493; Hi-Drive high-clearance tractor, 494; Sea Horse tractor for use through water, 494; Forward Control 654 tractor, 494
- Couplings, chain-type, Diplex, 691
- Electromagnetic clutches and, by T. M. Vorob'yava (review), 349
- Fluid, glands (trade publication), 702
- Turbomotor, 371
- Hose, in "Delrin" acetal resin, Dunlop 3 in, 567
- Hydrokinetic, for automatic transmission, 523
- Needle control banjo (Simplifx Couplings Ltd.), 89
- Self-sealing, flexible hose and (trade publication), 318
- Sub-miniature high-pressure, Tektro-Bruning, 634
- See also *Clutch*
- Courier AM and Courier FM transistorized pocket radio-telephones, 569
- Course, automation, low-cost (PERA), 615
- Business management (Industrial Education International), 391
- Composite materials (Institution of Metallurgists), 287
- Computing science (Staffordshire College of Technology), 806
- Low-cost automation (PERA), 615
- On-site, in welding appreciation, 580
- PERT technique (EELM), 529
- Postgraduate, for engineers and technologists, enquiry into, 577
- Radioisotope techniques, industrial liaison officers, 209
- Sandwich, in training of draughtsmen, 614
- Skills analysis training, 136
- Value engineering (PERA), 615
- Courtaulds Ltd., new subsidiary, 368
- Cousins, F., activities as Minister of Technology, 642
- Coutant Electronics Ltd., EM50 strain gauge tension link, 148; CE26 pressure transducers, 470
- Coventry Climax Engines Ltd., Godiva UHP fire pump, 375
- Cowan, P. J., war service, 838; appointed Joint Editor of ENGINEERING, 839; resignation of, 839
- Cowbridge by-pass viaduct progress of, 112
- Cox & Danks Ltd., demolition of Lydbrook railway viaduct, 240
- Cox, E. S., Locomotive Panorama, Vol. 1 (review), 763
- Cox, H. L., on The Design of Structures of Least Weight (review), 795
- Crabtree, J. A., & Co. Ltd., ceiling switches (trade publication), 318; 13 A socket-outlet with more room in box, 448
- Crabtree "Viceroy" rotary newspaper presses, 600
- Crack detection (trade publication), 670
- Cracking, stress corrosion, of martensitic stainless steel, by J. E. Truman, 691
- Cracow airport, Plessey Type 424 radar for, 812
- Craig & Derricott Ltd., type PL padlock attachment for rotary switches, 218
- Craigellachie road bridge, rebuilding in steel, 268
- Crane, American 999C High-Lift, 249
- Cable reeling drum for (Malcolm Cross Ltd.), 216
- for Capper Pass solder refining plant (Mattersons Ltd.), 82
- Carrier, Foden Low-Line, 662
- Crane Fruehauf Trailers Ltd., progress of, 176
- Crane, Goliath gantry, sale for scrap, 209
- Crane Group, central research and development station at Burgess Hill, 720
- Jib failure at Brent Cross, 425
- Jones KL3-7 Fleetmaster, mobile, 111
- KL11-7M, 111
- KL-15, 110
- KL 15-25, 110, 111
- KL 15-30, 111
- KL15-30L, 111
- KL-44, 110
- KL-55, 110
- KL-65, 111
- KL-65 M, 110
- KL-66, 110
- KL-77, 110, 111
- KL-77 M, 110
- Range and development, 109-11
- Light, 405C mobile slewing (Whitlock Bros. Ltd.), 598
- Crane Ltd., research and development centre at Burgess Hill, 689
- Crane, mobile, Coles 15 ton, jib failure, 425
- Diesel-mechanical, Neal NS45 Mk. 2, 312
- Crane Packing Ltd., type 300 split seals for large diameter shaft, 786
- Range (trade publication), 94
- Shunter, and fork lift truck, Unilok combined, 58
- Tower, 763 (Record Tower Cranes Ltd.), 536
- Pignon P600, with rail mounted mast, 411
- Travelling (trade publication), 574
- Truck, T35 (Thomas Smith & Son (Rodley) Ltd.), 662
- See also *Gantry; Transporter*
- Cranfield Advanced School of Automobile Engineering, grant of £70,000 by Science Research Council, 16
- Cranfield College of Aeronautics, open day at, 39; department of aircraft design, 39-40; design projects, 40; A-60 aircraft project, 40; S-64 aircraft project (variable sweep-back), 40; one-year postgraduate course in welding technology, 73; on-site course in welding appreciation, 580
- Cranfield Society, symposium on technological fall-out, 100
- Crankshafts, large, grinding machine for (Churchill Machine Tool Co. Ltd.), 438
- Crates, shell plastics for, 403
- Cravens Ltd., activities of, 272
- Crawler drill, self-propelled, I-R CM-150 Crawl-IR, 155
- Track rollers, reconditioning machine for (Bob Anderson (Engineers) Ltd.), 530
- Crawley town centre, clock for, 724
- Cray Valley Technical High School, applied science activities, 238
- Creators Ltd., cable trunking (trade publication), 318
- Credit squeeze effect on automation, 289
- Creep in concrete at 105° and 110° C, 122
- Joint International conference on (book), 222
- Stress distribution in beams, by A. E. Johnson and J. Henderson, 571
- "Creeping Weasel" for measuring atomic reactor bores (English Electric Co. Ltd.), 550
- Cremer, H. W., on Chemical Engineering Practice (Vol. 8) (book), 350; (Volume 9) (review), 444
- Cresta motor car. See *Vauxhall Motors Ltd.*
- Crew, P. R., review of Hydrodynamics in Theory and Application, 445
- Crewe, reconstruction of railway workshops at, 337
- Crichton, Sir Andrew, on Overseas Containers Ltd., 322
- Crimp rigidity testing machine for nylon yarn, 380
- Crimping equipment, UNICrimp, 55
- Critchley Bros. Ltd., Lamflex corrugated plastic drain piping, 790-791; Mole plough for laying plastics drain piping, 791
- Critical path methods in construction practice, by J. M. Antill and R. W. Woodhead (book), 638
- Crittall, Richard, & Co. Ltd., automatic boiler-house installation for hospital, 49
- Crofts (Engineers) Ltd., power transmissions (trade publication), 126
- Cromack, Benjamin, Ltd., Econheat range of suspended oil fired space heaters, 435
- Crompton Parkinson (Instruments) Ltd., formation and activities of, 688
- Crompton Parkinson Ltd., power instruments (trade publication), 62; diesel-electric locomotive equipment (trade publication), 510
- Crompton Parkinson (Stud Welding) Ltd., non-destructive stud weld tester, 118
- Cromwell, road construction by slipform paver on A1, 232
- Crosfield, Joseph, & Sons Ltd., new process for calcium silicate thermal insulation, 121
- Crosland, A., on higher education institutions, 34
- Cross, Malcolm, Ltd., cable reeling drum for cranes, 216
- Crossland, Prof. B., review of Physics of High Pressures and the Condensed Phase, 669
- Crossley Bros. Ltd., order position, 656
- Crouch, Derek (Contractors) Ltd., Kings Lynn quay pile driving operations, 466
- Cruachan hydroelectric power station, 489
- Crusader web-fed offset printing press for newspapers, 84
- Crushing and grinding mills, Aerofall range of, 56
- Cryogenic operation, ac electric motor for (Globe Industries Inc. (UK) Ltd.), 597
- Stripline circulator (Marconi Co.), 277
- Cryostatic metal processing equipment (Harris Manufacturing Co.), 379
- Crypton Equipment Ltd., Atracta audible direction flasher warning device for motor cars, 633
- Crystallography, computational methods in, conference on, 352
- Cultivator, spring-time (W. J. Cooper & Sons), 78
- Cultivator/tractor, F30, powered by G1130 petrol engine (Honda (UK) Ltd.), 727
- Cummins Diesel Sales & Service Ltd., formation of, 15
- Cummins Engine Co., growing influence of diesel engines, 15; Darlington factory, 15; Shotts plant, 15; Cummins-Jaguar plant, 15; NT400 turbo-charged diesel engines for diesel hydraulic locomotives, 26; Darlington factory opened, 112
- Cunard liner Q4 steering gear for (Brown Bros. & Co. Ltd.), 243
- Tank tests on hull design of, 380
- Tests for propellers for (Newcastle University), 380
- Cunningham, J., on Complex Variable Methods in Science and Technology (book), 286
- Cuproglo 6 copper plating solution, 539
- Curtain unit, warm air (Mercian Electric Co. Ltd.), 214
- Curve display 8100, transistor, for semi-conductors (Elliott Automation Ltd.), 213
- Cusset, F., on Vocabulaire Technique (book), 822
- Cuthbertson, James A., Ltd., hydraulic pontoon rig for pile driving, 441
- Cutter, asphalt, rotary, Roto-Cut, 20
- and chucks (trade publication), 478
- Cutting, coal. See *Coal*
- Flame, powder injection equipment for (British Oxygen Co. Ltd.), 183
- Fluids (trade publication), 94
- Machine, coal, CU43 Low Seam Minor, 54
- Coal, Minimatic and Maximatic, 55
- Coal, Short Face Miner, 54
- Coal-face, Lorse Miner CM48, 56
- Flame, Binumat, numerical control for (Messer Griesheim Ltd.), 794
- MH25 portable electric, for plastics (Trend Industrial Equipment Ltd.), 473
- Plastic sheet (John Holroyd & Co. Ltd.), 186
- Wall, Trend Wall Chaser Mark 4, 344
- Cutting-off machines, abrasive wheel, Type 261 (A. and S. Osmond Ltd.), 409
- Cutting oil for machining of stainless steel, Rocol RTD, 500
- Tools. See *Tools*
- Cyanides of aminotriphenylmethane dyes for dosimetry, 342
- Cylinders, carbon dioxide, Autoflo changeover valve for, 814
- Heads, aluminium alloy, 780
- Liners, hard chrome plated wet-type seamless steel tube, 780
- Pneumatic, S range of (Desoutter Lang Pneumatic Ltd.), 634
- Czechoslovak State Computing Centre, Elliott 503 computer for, 113
- Czechoslovakian State Railways, Leo 360 computer for, 465

## D

- D-SCALE Paste DS 25 weld scale removal for stainless steel, 379
- Daffin (UK) Ltd., Farmhand tanker beet harvester, 744
- Daimler Fleetline double-decker buses, 368
- Dakota aircraft accident, 67
- Daleman, Richard, Ltd., prismatic diffuser for fluorescent tubes, 470
- Dally, J. W., on Experimental Stress Analysis (review), 572
- Dam, Ajena, Volta River project, 363
- Akosombo, Volta River project, 363
- Arch, theory of, by J. R. Rydzewski (book), 413
- Aswan, by T. Little (review), 637
- Backwater, opening of diversion tunnel for, 600
- Balderhead, description of, 526
- El Cadillal earth fill, 91
- Guma, earth and rock fill construction, 622-623
- Kariba, effect of Rhodesian independence declaration, 770
- Mattmark, avalanche near, inquiry into, 329; review of project, 329
- Miraflores, construction of (Taylor Woodrow (Overseas) Ltd.), 808
- Tryweryn, description of, 526
- Danckwerts, Prof., on professional engineer, 198
- Dancy, J. C., on technology in a liberal education, 324. *Letter*, 391
- Daniel Construction Co. International, factory extension for Fafnir Bearing Co., 720
- Daniels, F., on Direct Use of the Sun's Energy (book), 62



- Daniels, T. H. & J., Ltd., epoxy encapsulator, 793
- Danish Machine Co., Cornet precision cylindrical grinding machines, 377
- Danish Welder Co. Ltd., multi-spot welding machine for panel radiators, 211
- Dansk Svejsemaskine Fabrik, A/S, projection welding machine, 569
- Darchem Engineering Ltd., prefabricated wall panel with stainless steel cladding, 660
- Darling, A. S., platinum metals and rhenium, 501
- Darling, G., Simms Group research centre, 720
- Darnalloy hose fitting tools, 53
- Dart R.Da7 turboprop aircraft engines (Rolls-Royce), 688
- Data and control logging system, automatic, Westronic, 442
- Links, high speed (trade publication), 94
- Logging equipment, Drayton Southern, acquisition of manufacturing and marketing rights for (Richardsons Westgarth (Instrumentation and Controls) Ltd.), 81
- System for London Midland Region electrification, 456
- Processing, electronic, in management, 449
- Serial printer (Electronic Machine Control Ltd.), 344
- Recorder for Electricity Council (Data Recording Instrument Co.), 465
- Data Recording Instrument Co., data recorder for Electricity Council, 465
- Sampled, control systems, theory of, by D. P. Lindorff (review), 284
- Transmission, by W. R. Bennett and J. R. Davey (review), 221
- for shaft horsepower measurement system, 330
- Timplex time-division-Multiplex system (SGE), 46
- Dauntsey's School, applied science activities, 237
- Davey, A. B., on Rubber in Engineering Design Practice (review), 93
- Davey, Paxman & Co. Ltd., safety standards for X-ray radiographic equipment, 10; marine engines (trade publication), 254; history of, 778; Ventura series of diesel engines, 778-780
- Davidge, Dr., on dislocations in lithium fluoride, 338
- Davies, D., review of Handbook of Applied Hydrology, 60; review of Water Resources Development—Planning, Engineering and Economics, 797
- Davies, J., on Confederation of British Industries, 353
- Davies, J. B., on standards storm around the water tap, 37
- Davies, J. E. H., British Electrical Power Convention, 5
- Davies, K., on Ionospheric Radio Propagation (book), 30; (review), 413
- Davis, Dr. A. W., unitised reheat steam turbine, 521; specialized ships of the nuclear age, 750
- Davis, Dr. D. E., RAE prizewinning author, 81
- Davis, John, & Son (Derby) Ltd., R2 fail safe signalling and control system, 153
- Davy, J. R., on Data Transmission (review), 221
- Dawe Instruments Ltd., Type 1412 impact noise analyser, 187; 438A Squareshaper wave-form converter, 470; Sonodur Type 1850 non-destructive hardness tester, 663; continuous vibration monitor, 729
- Dawes, B. H., quality and reliability officer for British Crane and Excavator Corp., 785
- Dayton Perforators (UK) Ltd., Any-sizer V-roll grinding device for precision diameters, 816
- De operated contactors (trade publication), 158
- Deaerator and feed pumps, TWP type, for liner *Queen Elizabeth* (G. & J. Weir Ltd.) 784
- Dean Close School, applied science activities, 239
- Debnam, R. C., thermo-elastic effect in force measuring devices, 156
- Decade pulse generator, solid-state, PG101 (Aveley Electric Ltd.), 630
- Decidability, computability, enumerability, by H. Hermes (book), 734
- "Decision on Housing," cinema film on industrialized housing, 561
- Decks, ferry cargo, descaling of, 789
- Decking, troughed metal, voluntary standards for, 593
- de Dion rear suspension for Marcos sports cars, 44
- Dedrick, J. H., light alloys for engineering applications, 502
- Deeley, G. G., hot pressing of ceramics, 693
- Defence, Ministry of, 621 hp diesel-hydraulic locomotive, 26; Textbook of Topographical Surveying (book), 318; railway wagon for, 563
- Dega, R. L., hydrodynamic shaft seals, 565
- Degenhardt & Co. Ltd., Spectrophotometer (trade publication), 62; vertical microscope (trade publication), 638
- Degrees, Council for National Academic Awards' statement on, 706
- de Klerk, D., on The Construction of High-Field Electromagnets (book), 798
- Delaney Gallay Ltd., shock-proof ambulance bed, 26; Vibrashock mounting, 586
- De La Rue Bull, Compatibles/400 computer (Bruce Peebles & Co. Ltd.), 177; Gamma 10 computer for ship repairing firm, 241
- De Laval Turbine Inc., Super Pumper high powered fire pump, 568
- Delay lines, quartz ultrasonic (MEL Equipment Co. Ltd.), 338
- Units, electronic, Superslug, 815
- Dell Quay Sales Ltd., unsinkable dory, 704
- Delrin acetal resin, Dunlop 3 hose coupling in, 567
- Moulding for copper pipe clip, 608
- Delta Metal Co. Ltd., activities at Winsford, 463
- Delta Plan, Holland, 488
- Delta Z Drive for small boats, 347
- Deltasonics Inc., Pulsatron series type KG850 ultrasonic cleaning equipment, 21
- Demag-Lauchhammer, bucket wheel excavators (trade publication), 413
- Denbigh, K., on Chemical Reactor Theory (review), 820
- Denham & Morley Ltd., BEHA Aston Gyro recirculating forced-air heater, 576
- Denis, A., Steel Congress (Luxembourg), 617
- Denison, Samuel, & Son Ltd., T60CT testing machine for civil engineering and building specimens, 761
- Dennis, W. H., on Extractive Metallurgy: Principles and Application (book), 94; (review), 796
- de Normanville type 230 overdrive, Auto-Range version of, for automatic transmission, 558
- Density gradient unit, Tecam, 19
- Denver Equipment Co. Ltd., vibrating and separation equipment (trade publication), 574
- De Oude Delft photographic film copying equipment, 699
- Department of Economic Affairs, reports on regional surveys, 162; progress report on National Economic Plan, 257
- of Education and Science, changes in management diploma, 74; mobile exhibition, "Technology Today," 749
- of Scientific and Industrial Research, final report, 80
- Dependatherm temperature sensors for office buildings, 218
- Depth recorder, Contour, 276
- Derby, reconstruction of railway workshops at, 337
- Deriaz water turbines, 91
- Derwent River scheme, inauguration of, 369
- Desalination research centre, proposed at Troon, 530
- Water, AGR reactor plants, 451
- International symposium and exhibition on (Washington), 272, 383, 451
- Descaling of ferry cargo decks, 789
- Tool, rotary, Sabo Universal, 789
- Design, aircraft. See *Aircraft design*
- Computer in, 358
- Consultants, directory of, 220
- Elements of, by S. A. Gregory, 358
- by R. D. Watts, 358
- Engineering, and engineering, introduction to, by E. V. Krick, (review), 541
- in engineering, exhibition on, 480
- in engineering, exhibition on, review of exhibits (CoID), 550-551
- Engineering materials and, conference and exhibition (Olympia), 357, 360, 370-371
- System, concepts of, by W. E. Wilson (review), 541
- Ergonomics and, by B. Shackel, 358
- Facts required in, by J. E. L. Farradane, 358
- Function of creativity in, by G. H. Broadbent, 358
- and human satisfaction, by W. H. Mayall, 358
- Industrial, steel and, discussion on, 616-617
- Invention, and market research, by A. F. Stobart, 358
- and maintenance, 674
- as management function, by W. H. Mayall, 360
- Mechanical system, by I. W. E. Eder and W. Gosling (review), 93
- Methods by J. C. Jones, 357
- Symposium on (Birmingham College of Advanced Technology), 357-360
- of non-planar concrete roofs, by J. S. Terrington and F. H. Turner (review), 125
- Offices, computer in, by K. C. Parton, 358
- Policy formulation, by B. T. Turner, 359
- in Prefabricated Constructional Steelwork, 617
- Process in USA, by R. J. McCrory, 357
- Product, business of, by J. Pilditch and D. Scott (review), 381
- Rubber in engineering practice, by A. B. Davey and A. R. Payne (review), 93
- Service for electrical services (British Insulated Callender's Cables Ltd.), 594
- for the 70s, by E. McEwen, 360
- Sociology and, by A. M. Penny, 358
- of structures of least weight, by H. L. Cox (review), 795
- Study group service (Liverpool University), 561
- See also *Engineering Materials and Design Exhibition*
- Designers, equipment, human engineering guide for, by W. E. Woodson and D. W. Conover (review), 477
- Systematic method for, by L. Bruce Archer (book), 702
- Training of, F. Metcalfe on, 420
- De Sola, R., on International Conversion Tables (book), 350
- Desouter Lang Pneumatic Ltd., "S" range of pneumatic cylinders, 634
- Destaco Model 453 self-locking pliers-type clamp, 694
- de Tomaso, chassis for Ghia Vallenga motor car, 484; chassis for 5 litre model, 612
- Devon Ltd., steel-epoxy resin compound, 268; epoxy resin wear resisting materials, 371
- Developing countries, technological aid to, 321
- Development of Inventions Act (1965), 97; provisions of, 740
- and training of top management, symposium on, 73
- Devlin report on dock labour problems, 193
- Dewar flasks, helium (MEL Equipment Co. Ltd.), 727
- Dewpointer system, Cargaire cargo, *Benedi* cargo-passenger liner with, 123
- Cargaire cargo (Honeywell), 123
- Dexil 34 (BNF) breakdown agent for carbon dioxide casting process, 666
- Dexion Ltd., PASE power assisted storage equipment, 58; New Speedlock adjustable storage racking, 436
- Dialling, telephone, all-figure system, 130
- Dialset miniaturized indicator controller, — Model-65, 787
- Diamond core drilling (trade publication), 382
- Industrial applications of the, by N. R. Smith (review), 603
- Diamond, Prof. J., applied science in schools conference, 516, 517
- Diamonds, metalworking (trade publication) 286
- Tools (trade publication), 126
- Wheel with single layer surface (Norton), 409
- Diatom water filters, 792
- Diavite Microtester surface finish tester, 761
- Dick, R. & J., Ltd., Dilex chain-type couplings, 691
- Dictabelt plastic recording belt for Time-Master dictating machine, 505
- Dictaphone Co., Ltd., dictating machines, 505
- Dictating machines (Dictaphone Co. Ltd.), 505
- Pocket-size, IBM 224 (IBM United Kingdom Ltd.), 88
- Time-Master TA-6-50, 505
- Travel-Master, 505
- Dictionary of chip-forming machine tools, by H. G. Freeman (review), 61
- of metal-cutting machine tools: English-German, by H. G. Freeman (book), 126
- of metal cutting tools, by T. Heiler (review), 61
- of Metallurgy, by D. Birchon (book), 254
- Didcot power station, circulating pumps and motors for, 465
- Die casting machines (Burton Griffiths & Co. Ltd.), 662
- Pressure, international conference (London), 799
- Design handbook, by F. W. Wilson, P. D. Harvey and C. B. Gump (review), 252
- Drawing (trade publication), 574
- Handling, trucks for (Greenwood & Batley Ltd.), 694
- Die Prüfung elektrischer Maschinen und die Untersuchung ihrer magnetischen Felder, by W. Nürnberg (review), 733
- Die sinking machines (Strojimport), 437
- Spray unit, Moto, 666
- and taps (trade publication), 605
- Thread rolling, Bridgeport copying machine, 594
- Dielectric fluid, non-flammable, Pyroclor, 441
- Dielectrics, progress in, by J. B. Birks and J. Hart (book), 62
- Diesel engine. See *Engine, diesel*
- Engineers and Users Association, non-destructive testing, by C. Campkin, 444
- Generator. See *Generator*
- Manual, railwayman's, by W. F. Bolton (review), 94
- Differential pressure transmitter, pneumatic, Consair, 787
- Diffuser, prismatic, for fluorescent tubes (Richard Daleman Ltd.), 470
- Diffusion furnace (Royce Electric Furnaces Ltd.), 535
- Digger, trencher, barge mounted, for riverside maintenance (T. Harrison Chaplin Ltd.), 312
- Digital clock. See *Clock*
- Computer. See *Computer*
- Converter, analogue to (trade publication), 702
- Display unit, miniature (Counting Instruments Ltd.), 147
- Techniques, applied, Logikit Basic Logic Trainer for teaching, 89
- Voltmeter, ac/dc, Model 355 (Livingston Laboratories Ltd.), 20
- Dilatometer for high temperatures (Spemby Technical Products Ltd.), 344
- Dimensional checking of workpieces, optical system for, 11
- Dimensioning and strength calculations, proceedings of the second conference on, by L. Kisbooskoi (book), 822
- Dinkeloo, J., weather-resisting steel for architectural purposes, 617
- Diodes, avalanche, by direct bonding (G.E. Electronics (London) Ltd.), 475
- Semiconductor, automatic machinery for production of (Bader Machinery Co. Ltd.), 262-263
- Silicon (trade publication), 350
- Switching, high power, type MV1892 (Celdis Ltd.), 146
- Tunnel, at microwave frequencies (Mullard Ltd.), 506
- Dilex chain-type couplings, 691
- Diploma in management studies, changes in course, 74
- Diplomat gas-fired boilers, range of, 32
- Dipping and stoving plant, automatic double-decker (Automatic Equipment Ltd.), 410
- Direction finder, automatic, type AD370, to Arinc 550 specification (Marconi), 457
- Flasher warning device, audible, for motor cars, Atracta, 633
- Indicator relay unit for motor vehicle trailers (Joseph Lucas & Co. Ltd.), 246
- Directory of British Associations, 92
- of Northern Special Library Resources, 603
- of Safety and Construction Codes USA States and Cities, by K. O. Siemon (book), 158
- Disa Elektronik AIS, universal oscilloscope indicator (trade publication), 638
- Disc ceramics, tubular and (trade publication), 286
- Discharge cavities microwave (NBS), 723
- Dislocations in lithium fluoride, course on, by Dr. Newey and Dr. Davidge, 338
- Dispersion hardening research grant for, 113
- Display 8100, transistor curve, for semiconductor (Elliott Automation Ltd.), 213
- Display unit, digital, miniature (Counting Instruments Ltd.), 147
- Display systems, Head-up, 241
- Distillation column, electric surface heating for (A. Boake Roberts & Co. Ltd.), 785
- Distillers Co. Ltd., joint study of chemical plant control by ARCH 9000 computer, 212; installation of ARCH computer system, 289; new subsidiary, 368; carbon dioxide welding in reconditioning civil engineering equipment, 530; magnetic susceptibility cell, 598; Autoflo change-
- over valve for carbon dioxide cylinders, 814
- Distington Engineering Co. Ltd., Huntrider underground transporter for men and materials, 55; equipment for automatic inspection of billets, 819
- Distortion measuring equipment, type 74834-A (Standard Telephones & Cables Ltd.), 599
- Distress signal, personal (Draeger Normalair Ltd.), 53
- District heating. See *Heating*
- Dividing and engraving machine, Tabre, 569
- Dixon, E., appointed to Board of Engineering Ltd., 839
- Dixon, G. H., 839
- Dixon, J. A., appointed manager and publisher of *ENGINEERING*, 839; appointed Chairman and Governing Director, 839
- D-Mac Ltd., tracing of shapes for computer, 149
- Dneiper hydro-electric power station, extension plans, 624
- Do It Yourself, Handicrafts and Exhibition, International (Olympia), exhibits at, 384
- Dobbie-McInnes, Teledip tank remote ullage measurement, 133
- Dobson, W. E. and F., Ltd., standard or adjustable waste edge chock, 56
- Docks, casual labour in, 227
- Dry, Belfast project, 698
- for Eriksberg shipyard, 784
- Grangemouth, improvement plan, 305
- Labour, decasualization and over-manning of, 227
- Problems of, 193
- London, road traffic to, 8. *Letter*, 261
- Document copier (trade publication), 638
- Dodge Bros. (Britain) Ltd., 500 series range of trucks and tractors, 431
- Dodge KL600 low-loader motor vehicle, 431
- Dolphin, J., Compact folding bicycle, 104
- Domayer, R., on Maschinenelemente Einfuhrung, Normung, Industriewerte, Vol. 1 (book), 574
- Domestic appliances of the past, 840
- Electrical Appliances, testing of electric blankets, 160
- Doncaster Technical Grammar School, applied science activities, 238
- Donovan Electrical Co. Ltd., triple pole reversing contactor, 439
- Door, fire access, for ventilation ducting (James Green Developments Ltd.), 439
- Warm air curtain and, for foundry, 594
- Doppler navigation system, Marconi AD 560, and airborne computers for Boeing 707 airliners, 464
- Dora portable typewriter, 505
- Dorman Long (Steel) Ltd., Silbestos protection for factory inspection platforms, 144
- Dorman Smith Holdings Ltd., trading report, 304
- Dormer, A., on Sheffield Twist Drill & Steel Co. Ltd., 49
- Dormer Series 2 Helimatic screwed shank tool holder, 154
- Dory, unsinkable (Dell Quay Sales Ltd.), 704
- Dosimetric techniques for intense-beam radiation technology, 342
- Douglas, A., Co. Ltd., exhibition of machine tools, 560
- Douglas, A., Co. Midlands Ltd., Chofum portable radial drilling machine model WRC25, 503
- Douglas DC-9 airliner, comparison with One-Eleven, 673
- Douglas, R. M., Construction Ltd., Tempark steel-framed demountable car park, 27
- Douglas Rowson Ltd., formation of, 368
- Douglas, William, & Sons (Engineering) Ltd., merger with Rowson Conveyors Ltd., 368
- Douglass, Sir Harry, manpower utilization and automation, 651
- Doulton Industrial Porcelains Ltd., silicon nitride ceramics. *Letter*, 229
- Dounreay Fast atomic reactor, output progress, 226
- Dounreay Materials Testing Atomic reactor, Boiling Water Irradiation Loop, 563
- Dover Engineering Works Ltd., annual report, 144
- Dow-Mac (Plant & Transport) Ltd., Akerman pile driver model 700-4P, 20
- Dowling & Doll Ltd., Accuratool automatic turret lathe, 269; turret punch presses (trade publication), 542
- Downton Mini Cooper S motor car at Goodwood, 554
- Dowty Mining Equipment Ltd., automated marshalling yard at Tinsley, 626
- Doxford diesel engine, position of, 460, 461
- Doxford and Sunderland Shipbuilding & Engineering Co. Ltd., annual statement, 337; manpower problems, 337; Doxford and Sunderland Shipbuilding & Engineering Group, tanker *North Sands* with "J" type diesel engine, 812
- Doxford, William, & Sons (Engineers) Ltd., tanker *North Sands* with "J" type diesel engine, 812
- Doyle, G. N., John Bull's other island?, 7
- Doyle, M. D. C., applied science in schools conference, 517
- Dracone flexible barge, progress on, 741
- Draeger Normalair Ltd., mine safety equipment, 53; multi-gas detector, 53; personal distress signal, 53
- Drafting film, polyester, for high quality drawings, Texpol, 24
- Drage, D. B., market research seminar, 682
- Dragon atomic reactor, progress report on, and details of, 207; Winfrith Heath, 392
- Drain channels, prefabricated glass-fibre, with acid resistant lining (Turner & Brown Ltd.), 307
- Drain piping, corrugated plastic, Lamflex, 790-791
- Plastics, Mole plough for laying, 791
- Drainage piping, polypropylene (Key Terrain Ltd.), 471
- Drake & Gorham Ltd., merger with Arthur Scull & Son Ltd., 112
- Drake & Gorham, Scull Ltd., trading report, 112



- Drake, R. H. M., on Drake & Gorham, Scull Ltd., 112
- Drallim Industries Ltd., type-1010 valve for operator control of liquids and gases, 148
- Draper, L., offshore oil rig design, 124
- Draught excluder, Nail Kwik, 352
- Draughtsmen's and Allied Technicians' Association, activities, organisation and politics of, 137
- Training of (Mather & Platt Ltd.), 614
- Dravid, Dr. P. S., on Analysis of Continuous Beam and Rigid Frames (book), 734
- Draw benches, KVM range of, 51
- Drawing dies (trade publication), 574
- Engineering and construction, Vol. 1, by L. C. Mott (book), 798
- High quality, polyester drafting film, Texpol, 24
- Office, new ideas in, by P. McMullen, 359
- Numerical control effects on, 393
- Supplies and equipment (trade publication), 382
- Paper, Super Permatrace, 52
- Drawn and Rolled Sections Ltd., window frames for prefabricated wall panels, 660
- Drayton Controls Ltd., Model 65 Dialset miniaturized indicator controller, 787
- Drayton Southern data logging equipment, acquisition of manufacturing and marketing rights for (Richardsons Westgarth (Instrumentation and Controls) Ltd.), 81
- Dredge, J., early association with ENGINEERING, 830-831; biographical note on, 833, 836-837; activities with ENGINEERING, 833-834; consulting engineer, 834
- Dredge, non-propelled tin-mining, Bangka I, 433
- Pump, Amsco, 537
- Simonacco-Warman, 21
- "Drehblitz" quick changing tool holder (trade publication), 766
- Dreyfus, H. B., transmission of electrical power, 372-374
- Dribore double skin steel chimney, 59
- Drier. See *Dryer*
- Drill, Adapt-o-drill gun-type, for high-precision holes, 758
- Combine, MF34 (Massey-Ferguson), 78
- Coromant Ejector, for deep holes, 758
- Crawler, self-propelled, I-R CM-150 Crawl-IR, 155
- Electric coal, Model 535REM (Consolidated Pneumatic Tool Co. Ltd.), 54
- Grinding machines, Christen, 86
- Machine, Model 88 (Caledonian Grinding Machine Tool Co. Ltd.), 186
- Machine, Rotacone, 314
- Pneumatic, anti-vibration device for (Moscow Mining Institute), 440
- Rock, heavy duty, Yak, 410
- Rotary percussion (trade publication), 798
- Drill Service (Horley) Ltd., Holdridge radius turning device, 90; Tyna Mite, air-turbine hand grinding tool, 793
- Silenta, with air bearings and air turbine drive, 265
- Variable speed, Colourmatic, 384
- Drilling device for small holes, Schweizer, 86
- Diamond core (trade publication), 382
- High-speed, development of (Westwind Turbines), 266-267
- Machine, automatic (Vero Machine Tool Co. Ltd.), 280
- for breakable materials, Matheys Optiver, 503
- CD33 single spindle portal, with Airmec tape control equipment (BSA Tools Ltd.), 271
- Chofum portable radial, model WRC25, 503
- Cintimatic six spindle turret, with numerical control, 315
- Mark 2 TH (Wadkin Ltd.), 313
- Numerical control of (trade publication), 822
- Numerical control of, 627
- Numerical control of (Vero), 280
- Numerically controlled high speed, NC100 Speedrill, 154
- Numerically controlled, Turr-e-Tape AB118, 376
- Numerically controlled model 70 (Giddings & Lewis), 269
- Positional control of, 394
- Special purpose, from standard units (W. J. Meddings (Sales) Ltd.), 89
- Turret, Veromatic, with programme control, 116
- Program, automated industrial (ICT), 627
- Rig, tracked mobile, Mustang, 472
- Drinkwater, J. W., remote recording torsion meter without slip rings, 330
- Drive, belt, Poly-Vee, for checkweighing machine, 424
- Hydraulic, variable speed (Churchill-Sturm Ltd.), 657
- Units, final, for diesel hydraulic locomotives (Self-Changing Gear Co.), 26
- Servo (Vactric Control Equipment Ltd.), 278
- Z, for boats, 347
- Driver, George & Son, Driver Southall 0215 general purpose Checkweigher weighing machine, 423-424
- Driver Southall 0215 general purpose Checkweigher weighing machine, 423-424
- Driving, winter, learn (trade publication), 446
- Drop-forging hammers. See *Hammers*
- Drop Forging Research Association, new laboratory, 500; research programme, 500
- Drucquer, L., on electrical manufacturing industry, 481
- Drum stacker, mobile (Barron & Shepherd Ltd.), 472
- Dry dock. See *Dock*
- Reed insert, gold plated (Hivac Ltd.), 667
- Dryad, HMS, Surface Tactical and Blind Pilotage Trainer, 389
- Dryer, air visible change containers for (Silica Gel Ltd.), 694
- Fluidized bed (trade publication), 574
- Gas, exothermic (Pall (UK) Sales Ltd.), 344
- Holmes Monovalve, 344
- Hand, electric, Freco Perfect, 216
- Drying, spray (trade publication), 798
- Drysys Equipment Ltd., air conditioning equipment for weaving mill, 625
- Ducas, R., on Winget Gloucester Ltd., 432
- Duckworth, J. C., on National Research Development Corporation, 97; on NRDC, 740
- Ducol QT higher strength low alloy steels, 217
- Ducol QT steel plate (trade publication), 734
- Duct, flexible (trade publication), 94
- Duff, J. T., Transportation Engineering Conference, 8
- Dummer, G. W. A., review of Mathematical Theory of Reliability, 285; on European Miniature Electronic Components and Assemblies Data 1965-66 (book), 510
- Dump truck, Caterpillar 769, 817
- Dumper for coupled railway wagons (Link-Belt Co.), 25
- for iron ore concentrate handling, 134
- Truck, motor vehicle, Dumpruk (AEC), 91, 279
- Dumpruk motor vehicle dumper truck (AEC), 91, 279
- Dunell, G. R., association with ENGINEERING, 835, 836
- Dunellen Ltd., removal to Northern Ireland, 48
- Dunford Fire Protection Services Ltd., SC square cover fire hose reel, 215
- Dungeness A atomic power station, comparison with Dungeness B, 171; design, construction and operating details, 299-302; commissioning time, 301
- Dungeness B atomic power station, comparison with Dungeness A, 171; details of tenders, 171; novel features of, 171; reactor details, 171
- Dunlop Aviation Division, numerical-control applications, 326-328
- Dunlop Rubber Co. Ltd., inflatable gas holders, 152; Roadtrak Major and Powergrip tyres for Dumpruk dumper truck, 279; Cosil cold-sealing adhesives, 304
- Dunlop 3 in hose coupling in "Delrin" acetal resin, 567
- Dunston power station, trials of AEI flue dust monitor, 564
- Duodec Development & Construction Co. Ltd., member of feed mill consortium, 721
- Duplex beading machine for semiconductor diode production, 262
- Milling machine, 86
- Mixer of 220 gal. capacity, 144
- Du Pont Co. (United Kingdom) Ltd., materials exhibited at Interplas '65, 90; Mylar polyester film for insulation, 370; Teflon FEP fluorocarbon film, 370
- Du Pont de Nemours, E.I., Co. Inc., Tedlar polyvinyl fluoride film, 660
- Duraflex Ltd., Nail Kwik draught excluder, 352
- Duralumin for lightweight suspended platform (James Booth Aluminium Ltd.), 149
- Durant Manufacturing Co., 59026-420 single decade digital clock, 472
- Durham coastal coalfields, 528
- Durlacher, Oldham, Mordaunt, Godson & Co., Leo 3 computer system for, 273
- Dursley Grammar School, applied science activities, 239
- Durst U70C photographic enlarger with colour filter head, 699
- Dust collector, Sturdee unit, 570
- Wet (trade publication), 190
- Dust Control Equipment Ltd., research and development block, 753
- Extraction plant, Imp Airmaster, 472
- Monitor, flue, electrostatic (AEI Electronics Group), 564
- Respirator, lightweight, Supasafir, 786
- Dutton, J., on Association of Scientific Workers, 386
- Dye systems for radiation detection (NBS), 342
- Dyeing equipment for textiles (Longclose), 139
- of textiles, 139-140
- Dymar Electronics Ltd., type 705 AF micro-voltmeter, 663
- Dynamaster, Bristol, X-Y plotter, 790
- Dynamic systems analysis, by S. Seely (review), 28
- Dynamics of a changing technology, by P. J. Fensham and D. Hooper (review), 540
- Dynamics Corp., tropospheric scatter radio system for RAF in Malaysia, 812
- of linear and non-linear systems, by P. Naslin (book), 286; (review), 700
- of motor vehicles, study of, 16
- Dynamometer, portable (Engineering Laboratory Equipment Ltd.), 246
- Dynapak high-energy rate forming machine, 755-756

## E

EAGLE Ironworks, Oxford, by P. W. S. Andrews and E. Brunner (book), 158

Ealing Grammar School, applied science activities, 239

Ealing Scientific Ltd., optical instruments (trade publication), 798

Early Bird, new exchange for transatlantic telephone service, 66

Earth-Moving Machinery (book), 638

East African Railways and Harbours, 90 class diesel-electric locomotives for, 528

East Kilbride, industrial development position and prospects, 618-619

Eastern Electricity Board, experiments with cable bedding materials, 658

Eaton Axles Ltd., expansion of, 369

Eaton Manufacturing Co., subsidiaries expansion programme, 369

Eaves, P. S. K., energy storage in bulk, 531-534. Letter, 613

Ebcross General Engineering Co. Ltd., Ebostat water level, 695

Ebostat water level, 695

Echoes from underwater shapes, 58

Econheat range of suspended oil fired space heaters, 435

Economic Development Committee for the Movement of Exports, study on export delays, 721

Economy, World, City in the, by W. M. Clarke (review), 317

Econotrol control unit for lighting (Sonotrol Devices Ltd.), 51

Edbro B and E model 15DN twin-ram, three-stage tipping gear, 279

EDCO CD10 concrete plane for removing road markings, 183

Eddy current test equipment, Type 710 (CNS Instruments Ltd.), 569

Eder, I. W. E., on Mechanical System Design (review), 93

Edge & Sons Ltd., load indicator for ropes, 57; mine cage gear (trade publication), 222

Edge trimming machine, type BSO (Ludwig Widani Werkzeugmaschinen), 314

Edinburgh, H.R.H. The Duke of, president, EIJC, 4; founder president, CEI, 197

Edinburgh University, research on Flexal heating system, 192; Fram system for Ellor Street housing project, 528

Edmonds, P. J., on 1965-66 Careers Encyclopedia (book), 382

Edmonton County Grammar School, applied science activities, 239

Education of engineers, by Sir Denning Pearson, 675

— Engineering, international conference proposal, 206

— Higher institutions, A. Crosland on, 34

— Liberal, Technology in a, by J. C. Dancy, 324

— Management, D. L. Marples on, 615

— of professional engineers in West Germany, by Dr.-Ing. G. Brenken, 74

— Technical, position and prospects of, by F. Metcalfe, 420

— See also *Course: Teaching; Training*

Educational and Scientific Developments Ltd., teaching machine and programme writing activity, 518

Edwards, G. D., review of BMC Minis, 158

Edwards High Vacuum Ltd., vacuum measuring instruments (trade publication), 318

Edwards, Prof. Jack, on nuclear ships, 750

Edwards, Sir Ronald, British Electrical Power Convention, 5, 7

Efco-Stuart Electrolyser Co. Ltd., hydrogen separators (trade publication), 638

Effluent disposal developments, 482

— Radioactive disposal at CEN, Mol, 392

— Sampler, portable (Watson-Marlow Ltd.), 118

— Treatment at Cinderford factory, 80

Eggborough power station, four-flue chimney at, 151; turbo-alternators for, 151; testing of 500 MW alternator, 355

1860s, engineers and society in, by Prof. A. Briggs, 826-828

Eimco (Great Britain) Ltd., FLP all-wheel-drive hopper loader, 56

Ejector springs (trade publication), 798

Ekco-Ensign Electric Ltd., fluorescent lighting (trade publication), 605; lighting fittings (trade publication), 670

El Cadillal earth fill dam and hydroelectric power scheme, 91

Elastic complexes, theory of, by A. I. Rousopoulos (review), 188

Elastohydrodynamic lubrication, symposium on (Leeds University), 63

Elastomers, non-corrosive acrylic, research on (General Motors Corp.), 338

Eldo, European satellite launch vehicles, electronic equipment for, 177

Electautom Ltd., extrusion testing machine, 570; cable conductor eccentricity corrector (trade publication), 574

Electric blankets, testing of, 160

— Furnace. See *Furnace*

— Generator. See *Alternator; Generator; Turbo*

— Locomotive. See *Locomotive, electric*

— Mains, typical cost of, 406

— Motor. See *Motor, electric*

— Oven for large plastic sheets (AEW Ltd.), 662

— Power. See *Electrical power; Power*

Electrical accessories 1966 (trade publication), 702

— Analogues of pin-jointed systems, by K. K. Keropyan (review), 412

— Connectors, multi-gauge for inspection of, by F. R. Tolmon, 341

— Contacts, inlaid bi-metal for (Johnson, Matthey & Co. Ltd.), 180

— Coronas: their basic physical mechanisms, by L. B. Loeb (review), 821

— Development Association, "Electricity Farm" exhibit at Royal Show, 79; electricity for heating flats and houses (trade publication), 94; thermal storage heating (trade publication), 94

— Distribution systems, planning of, 406

— Energy storage in bulk, 531-534

— Engineers, graded problems for, by D. W. Hinde and K. M. Smith (book), 286

— International conference of (Berlin), 232

— Engineering industry, National Plan impact on, 387

— Fittings, smells from, 320

— Machines, testing of, by W. Nürnberg (review), 733

— Thermalastic insulation system, 629

— Manufacturing industry, comments by L. Drucquer, 481

— Measurements, precision, in industry, by J. R. Thompson (book), 446

— Power convention, British. See *British Electrical Power Convention*

— Distribution, amenity problem, 408

— Distribution, live line working, 407-408

— Distribution, overhead lines, design and siting of, 408

— Distribution, overhead lines, faults on, 407

— Distribution, by H. T. Ransley, 405-408

— Distribution systems for new towns, 407

— See also *Power; Electricity*

— Research Association, research on off-peak electrical heat storage methods, 36; study of cables and cable bedding materials, 658; temperature cycles for paper-insulated

cable, 658; electrical stress analysis, 658; thermal behaviour of soil, 658

— Rotating machines, rolling bearings for, meeting on (Hoffmann Manufacturing Co. Ltd.), 42

— Services, design service for (British Insulated Callender's Cables Ltd.), 594

— Trades Union, new agreement for electrical apprenticeships, 206; proposals on strikes in motor industry, 386

Electricity Commission of New South Wales, Liddell power station 500 MW turbo-alternator sets, 528

— Council, new research centre at Capenhurst, 162; annual report, 451; planning future requirements, 451; consumer load pattern equipment, 464

— for heating flats and houses (trade publication), 94

— Industry, position and prospects of, 385

— and magnetism, essentials of, by O. M. White (review), 412

— Meter, maximum demand register for (Landis & Gyr Ltd.), 120

— Storage considerations, 532

— Supply Area Boards, 405

— Consumer-hours lost due to faults, 407

— Declared voltage at consumers' premises, 406

— Faults occurrence, 407

— Industry, energy storage considerations, 532

— Industry, history and growth of, 405

— Industry, position and prospects of, 5-7

— Industry, research in, 162

— Industry, summer courses for schoolboys on, 419

— Industry Training Board, developments in, 717

— Network design, 407

— to new towns, 406

— Operation and maintenance, 407

— in Scotland, 737

— in Scotland, position and prospects of, 489-492

— Security standards, 406

— System in West Indies, contract for (English Electric Co. Ltd.), 241

— Tariff policy, 545

— Trust of South Australia, boilers and boiler cleaning plant for Adelaide power station, 560

Electro-Agricultural Centre, 79

Electrochemical machining, advantages of, 468-469

— Calculations for, 468

— Economics of, 469

— Electrodes for, 467

— Electrolytes for, 467

— Metal-removal rates in, 467, 468

— Methods of, 467

— PERA 5000 A universal unit, 784

— Scope of the process, 467

— Shaped electrode method, 467

— Temperature of working area, 469

— of turbine blades, 469

— Marking machine (Lectroetch (Great Britain) Ltd.), 816

Electrodes for electrochemical machining, 467

— Tinning in semiconductor diode production, 263

Electrographic, Electrolyte illumination unit, 817

Electroheating (London) Ltd., generator for induction heating, 85

Electro-Hydraulics Ltd., remotely controlled longwall face roof supports, 55

Electrolite illumination unit, 817

Electrolux Ltd., record exports of domestic refrigerators, 49; Automatic-36 refrigerator with automatic defrosting, 824

Electrolytic capacitor. See *Capacitor*

Electromagnets, high-field, the construction of, by D. de Klerk (book), 798

— for neutron diffraction (Mullard Ltd.), 500

Electromagnetic clutches and couplings, by T. M. Vorob'yeva (review), 349

— Problems of ac machines, by B. J. Chalmers (book), 446; (review), 508

— Theory, by A. O'Rahilly (book), 446

Electromagnetism, variational techniques in, by L. Caio and T. Kahan (review), 60

Electron beam welding machine (Sciaky Electric Welding Machines Ltd.), 213

— and ion beam science and technology, conference on (New York), 63

— and ion beam science and technology, international conference on, by R. Bakish (book), 318

— Microscope, scanning, Stereoscan, 747-748

— Scanning (Westinghouse Electric International Co.), 306

— Microscopy in metallurgy, conference on, 127

Electronic alarm system, Krotos, 434

Electronic Associates Ltd., 231 R-V analogue computer, 209

Electronic Bibliographer, Minsk-22, 188

— Cam system for television recording on film, 175

— Components (trade publication), 30

— European miniature, and assemblies data 1965-66, by G. W. A. Dummer and J. M. Robertson (book), 510

— Standardization for, 97

— Symposium and exhibition on (Ferranti Ltd.), 529

— Control scheme for paper mill (George Kent Ltd.), 276

— Systems for industry, symposium on, 127

— Delay units, Superslug, 815

Electronic Equipment for Industrial Systems (BEAMA), 476

Electronic Machine Control Ltd., transistorized photo-electric equipment, 213; data processing serial printer, 344

— Measurement in internal-combustion engines, symposium on, 544

— Multimeter, Philips type PM2401, 729

Electronic Switchgear (London) Ltd., type MC3 portable conductivity measuring set, 116; conductivity controllers, 375

— Transformers, by H. M. Nordenberg (review), 764



- Electronics in coal mining, 41  
 — Industrial, International Exhibition of (Basle), 95-96, 191  
 — Industry, Eurolec 1965 Pocket Guide, 348  
 — National Plan impact on, 387  
 — Instruments, Controls and Components Exhibition (advance notice), 63  
 — Introduction to (book), 62  
 Electroplating power unit (PMD Chemicals Ltd.), 312  
 Electropolishing (trade publication), 286  
 Electrostep electropneumatic converters for soaking pit on-line control, 124  
 Elements of industrial organization, by T. H. Burnham and G. O. Hoskins (book), 190  
 Elesta Electronics Ltd., electronic measuring counter, 247  
 Eley, Sir Geoffrey, Dust Control Equipment Ltd., research block, 753  
 Elhygen electrolytic hydrogen generator, 185  
 Elkonite D54L silver-cadmium oxide for bi-metal contacts, 180  
 Ellams Duplicator Co. Ltd., multi-colour ribbons for temperature recording, 52  
 Elliott-Automation Group, Atomat nucleonic tin-coating width gauge, 790  
 Elliott-Automation Ltd., blending system for refinery, 25; Elliott 503 computer for Czechoslovak State Computing Centre, 113; ARCH on-line process control computer, 145; joint study of chemical plant control by ARCH 9000 computer, 212; transistor curve display 8100 for semi-conductors, 213; 4130 central processor and memory unit for NCR-Elliott 4100 computer, 217; Head-up display systems, 241; take-off and overshoot director for aircraft, 244; ARCH computer sales, 289; ARCH computer sales, 304; Elliott 803 digital computer for John Dalton College of Technology, 419; 903 low cost computer for engineering programs, 505; E5 inertial navigation system for commercial airlines, 562  
 Elliott-Automation Nuclonics Ltd., control and safety arrangements for Consort Mark 2 atomic reactor for Imperial College, 12  
 Elliott, B., Machinery Ltd., visit of German industrialists, 17; expanding overseas markets, 17  
 Elliott Bros. (London) Ltd., liquid-metal flowmeter, 89  
 Elliott School, applied science activities, 238  
 Elliott Traffic Automation Ltd., automated car park information system for Stevenage, 272  
 Ellis, F. L., symposium on design, 359  
 Ellis, H., on Railway Carriages in the British Isles from 1830-1914 (review), 732; on The Splendour of Steam (review), 732  
 Ellis, Prof. J. R., study of dynamics of motor vehicles, 16  
 Ellison, George, Ltd., overseas manufacturing agreement, 368  
 Ellison, George, SA (Pty) Ltd., acquisition of Vanrow Engineering (Pty) Ltd., 368  
 Elquench quenching process (BISRA), 18  
 ELSIE transistorized signalling system, 55  
 Eltromet Ltd., acquisition by George Kent Ltd., 17  
 Elu, MH25 portable electric cutting machine for plastics, 473  
 Embo Ltd., safety casement window stay in moulded nylon, 64  
 EMI Electronics Ltd., community television system (trade publication), 62  
 Employees, information for, 35  
 Employers, negotiating machinery in engineering, 737  
 Employment officer, youth, activities of, 807  
 — Service, youth, Albemarle Report on, 807  
 Emulsion, Bituseal bituminous rubberized waterproofing, 23  
 Enamel, cellulose, urethanized, Uracel, 439  
 Enamelled Iron and Steel, expansion of vitreous enamel interests, 400  
 Encapsulator, epoxy (T. H. and J. Daniels Ltd.), 793  
 Encoder, Beacon Model ADC-ALT-4, for automatic altitude reporting systems, 179  
 End mills, tipped (trade publication), 254  
 Energy conversion, conference on, 287  
 — Storage in bulk, economic principles of, 531. *Letter*, 613  
 — in bulk, by Dr. A. B. Hart, and P. S. K. Eaves, 531-534  
 Engelhard Industries Ltd., effluent treatment at Cinderford factory, 80  
 Engine, aero. See *Aircraft engine*  
 — Diesel, air-cooled, PAZ1, 551  
 — AO 12,800 bhp, with space frame modular construction (Ruston & Hornsby), 550  
 — Cavitation corrosion, symposium on, 319  
 — Chrysler-Cummins, 112  
 — Combustion systems (Perkins), 653  
 — Comparison with steam turbine for ship propulsion, 459-461. *Letter*, 613  
 — Cummins NT400 turbo-charged, for diesel hydraulic locomotives, 26  
 — Doxford, position of, 460, 461  
 — Ford 592 Series E, for railway inspection cars, 251  
 — "J" type, tanker *North Sands* with, 812  
 — Lubricating oils, spectrographic analysis of, 440  
 — Marine, licensing agreements for, 461  
 — Marine, maintenance costs, 460  
 — Marine propulsion (trade publication), 254  
 — Modern smaller, by A. W. Judge (book), 190  
 — 170 bhp V8510 (Perkins Group), 347  
 — Pumpless injection. *Letters* 103, 137  
 — Rolls-Royce, for railcars, 625  
 — Series-251 16-cylinder for locomotives (Alco Products Inc.), 250  
 — Six-cylinder, type 2AV690, for Dump-truck dumper truck (AEC), 279  
 — Thermal loading of (book), 350  
 — Type SS spring starter for (Simms Motor Units Ltd.), 404  
 — Ventura series of (Davey Paxman & Co. Ltd.), 778-780  
 Engines, internal-combustion, electronic measurement in, symposium on, 544  
 — Internal-combustion, by F. A. F. Schmidt (review), 316  
 — Marine (trade publication), 254  
 — Motor-car. See *Engine, petrol; Motor-car engine*  
 — Oil. See *Engine, diesel*  
 — Petrol, G1130 F30 cultivator/tractor powered by (Honda (UK) Ltd.), 727  
 — Honda, conversion kits for LP gas fuel, 119  
 — See also *Aircraft engine; Motor-car engine*  
 — Rotary, Wankel, at Frankfurt Motor Show, 399  
 — Steam, Cornish beam, by D. B. Barton (review), 765  
 — by R. J. Law (book), 822  
 Engineer, chartered, definition of, 225  
 — Implications of Royal Charter, 197, 674  
 — Professional training in mechanical engineering practice for (book), 257  
 — in 1860s, by Prof. A. Briggs, 826-828  
 — Gallup Poll survey of public image, 390. *Letter*, 453  
 — German for, by N. C. Reeves (book), 734  
 — Guild, relationship with Council of Engineering Institutions, 197-199; on behalf of individual members, 198-199; need for membership of chartered engineers, 261; relationship with CEI, 609; activities of, 609; change of name proposal, 609  
 — Interphone, kits (Philips Electrical Ltd.), 800  
 — Mathematics for, conference on, 351  
 — Modern, training of, 257  
 — Professional, definition of, 225  
 — Effect of Royal Charter on, 197. *Letter*, 261  
 — Leading engineers' views on, 198  
 — Status of, 636  
 — in West Germany, education of, by Dr.-Ing. G. Brenken, 74  
 — Radio, kits (Philips Electrical Ltd.), 800  
 — in society, by Sir Denning Pearson, 675  
 — as teachers, 101  
 — as teachers in schools, survey of, 235  
 — and technologists, post-graduate courses for, enquiry into, 577  
*Engineer, The*, Pendred century, 771  
 ENGINEERING, editorial planning for 1966, 325; note on adoption of A4 form at, 825; review of hundred years of, by J. Foster Petree, 828-839; facsimile copy of first issue, between 832-833  
*Engineering Among the Schools* (survey), by G. T. Page, 101, 235, 236, 237, 481, 515, 675  
 Engineering apprentice. See *Apprentice*  
 — Concepts curricula program for schools in USA, 559  
 Engineering Coordinated Ltd., temperature controller for moulding machines, 247  
 — Education. See *Education*  
 — and engineering design, introduction to, by E. V. Krick (review), 541  
 — Ethical problems in, by P. L. Alger, N. A. Christensen and S. P. Olmsted (review), 765  
 — Industries Association, industrial training grants, by H. Longden, 580; Manchester exhibition of engineering products, 607; trade mission to North America, 689  
 — Industry, Europe, attitude to technical barriers to trading, 549  
 — Index of orders and deliveries, 1  
 — Order position and prospects, 1  
 — Training Board, 2½ per cent payroll levy approved, 2. *Letters*, 69, 199; training levy procedure, 38; levy on firms, 418; grants for qualifying firms, 418; present and future activities of, 420; levy policy, 580; activities of, 609; developments in, 717; regional training officers' induction course, 717; regional offices, 717; activities of, 717, 781  
 — Institutions of British Commonwealth, conference of, 609  
 — Joint Council, Brig. J. R. G. Finch full-time secretary, 4; office premises of, 4; H.R.H. The Duke of Edinburgh as first president, 4; position and prospects of, 4; see also *Council of Engineering Institutions*  
 — Laboratories. See *Laboratories; National Engineering; National Physical Engineering Laboratory Equipment Ltd., portable dynamometer*, 246  
 — Materials. See *Materials*  
 Engineering Materials and Design, conference and exhibition (Olympia), 357, 360, 370-371  
 — Outlines, proposals for 1966, 325  
 — Products, Manchester Exhibition of, 607  
 — Profession, effect of Royal Charter on, 197  
 — in schools, by N. Allen, 545  
 — in schools, conference on (IME), 515  
 — in schools (survey), by G. T. Page, 101-103  
 — in schools, survey of position and requirements, 235, 236, 237-239  
 — Science in secondary schools, pilot development project proposal, 515  
 — Standards. See *British Standards Institution; Standards*  
 — Statistics, introductory, by I. Guttman and S. S. Wicks (book), 382  
 — Systems analysis, by C. M. Haberman (review), 822  
 England, strength of, by Dr. B. N. Wallis, 293-297  
 Engler, Hubodometer, driverless hub-mounted odometer, 696  
 English Electric Automation Ltd., orders for computers by Czech railways and steel-works, 465  
 English Electric Co. of Australia Pty. Ltd., diesel-electric locomotives for Mount Goldsworthy, 251  
 English Electric Co. Ltd., 2,000 rail traction diesel engines in service, 15; auto transformer contract for Pacific Intertie transmission scheme, 80; gas turbine generating plant contract for Johannesburg, 80; Deriaz water turbines, 91; El Cadillal earth fill dam and hydroelectric power scheme, 91; contract for electricity supply system for West Indies, 241; diesel equipment for Mount Goldsworthy, 251; inorganic polymers for high temperatures, 264; power equipment for 25 kV ac trains for LMR suburban services, 274-275; DP2 diesel-electric locomotive prototype, 336; generating machinery for Cruachan power station, 489; generating machinery for Cockerzie power station, 492; low speed wind tunnel for Hawker Siddeley Aviation, 495; 90 class diesel-electric locomotives for East African Railways and Harbours, 528; 500 MW turbo-alternators for Liddell power station, 528; "Creeping Weasel" for measuring atomic reactor bores, 550; symposium on design of steam turbines and alternators, 552; senior management seminar on market research, 681-682; automatic warehouse with keyboard control, 762  
 English Electric-Leo-Marconi Computers Ltd., KDF 8 computers for Midland Bank, 49; symposium on PERT computer program, 105; PERT (trade publication), 190; transistorized analogue timer, 245; Leo 3 computer systems, orders for, 273; Myriad computer system installation at Leatherhead research laboratory, 307; System 4 computer, 417, 422; System 4/30 computer for Stewarts and Lloyds Ltd., 465; courses in production evaluation and review techniques (PERT), 529; programs for KDF9 computer, 563; computing science courses, 807  
 English Glass Co. Ltd., ground glass balls (trade publication), 638  
 English Numbering Machines Ltd., Series 442 6-digit electrical impulse counter with key reset, 50  
 Engraving and dividing machines, Tabre, 569  
 Enlargers, inspection, projectors and (trade publication), 702  
 — Photographic, Colortron Model 150/69, 699  
 — with colour filter head, Durst U70C, 699  
 Enumerability, decidability, computability, by H. Hermes (book), 734  
 E.N.V. Engineering Co. Ltd., expansion of, 369  
 Environmental testing machine, convention on, 63  
 Enzyklopädisches Fachwörterbuch Spanende Werkzeugmaschinen, by H. G. Freeman (review), 61  
 Epoxy coating, solventless, for pig slug lining of pipelines (Lewis Berger (Great Britain) Ltd.), 152  
 — Encapsulator (T. H. and J. Daniels Ltd.), 793  
 — Resin powders (trade publication), 190  
 — Wear resisting materials (Devcon Ltd.), 371  
 EPR. See *Ethylene Propylene Rubber*  
 Ergonomics and design, by B. Shackel, 358  
 — in industry, 145  
 Ericsson Telephones Ltd., Bretelphone loud-speaking telephone for mines, 55; automatic telephone exchange at Euston Station, 401  
 Erie Resistor Ltd., tubular and disc ceramicons (trade publication), 286  
 Eriksberg shipyard, drydock for, 784  
 Errut Products Ltd., EDCO CD10 concrete plane for removing road markings, 183; concrete surface planing machine, 434; Sabo Universal rotary descaling tool, 789  
 ESAB, A2 Automat welding machine for submerged arc welding, 249; development of, 400; acquisition of Aseasvets, 400  
 Escobar, P. R., on Methods of Orbit Determination (book), 670  
 Escritt, L. B., on Sewerage and Sewage Disposal (book), 670  
 Esel Automation Ltd., Transmatic battery-operated lifting magnet, 816  
 Espie, J., "Isaac Newton" telescope, 165  
 Essen Welding Fair, 127  
 Eссо Petroleum Co. Ltd., cutting fluids (trade publication), 94; reheat marine steam turbine installation, 426; feasibility study on unitted reheat steam turbine, 520-521  
 EST (Gauges) Ltd., master ring gauges, 404  
 Estimates Committee criticisms of Ministry of Technology study teams, 129  
 Ether Ltd., type 15AS pressure operated flow control valve, 309; Series 18-90 precision thermocouple temperature controllers, 506  
 Ethical problems in engineering, by P. L. Alger, N. A. Christensen and S. P. Olmsted (review), 765  
 Ethylene Propylene Rubber (EPR) cable insulation, 345  
 — Shipping, all-welded aluminium alloy cargo tanks for (Gloster Saro Ltd.), 81  
 ETS (Lonertia) Ltd., Turbomotor fluid couplings, 371  
 Etzel, F., Steel Congress (Luxembourg), 616  
 Euclid TS 14 cu. yd. scrapers, 808  
 Eurochem, atomic fuel reprocessing plant at Mol, 392  
 Eurolec 1965 Pocket Guide to the Electronics and Instruments Industry, 348  
 Europa Engineering Co. Ltd., Atlas range of diaphragm type manometers, 88; Matheys Optiver drilling machines for breakable materials, 503  
 Europe, cooperative industrial research in, 337  
 — Engineering industry, attitude to technical barriers to trading, 549  
 — Nuclear energy in, congress on (Frankfurt), 255  
 — Research in, comment on, 225  
 — Technical barriers to trade in, 548  
 European Coal and Steel Community, grants for technical research, 113; report of Steel Congress (Luxembourg), 616-617; steel house design competition, 624  
 — Community for Coal and Steel, congress on progress in steel progressing, 95  
 — Cooperation in Advanced Technology (London), conference on, 225  
 — Economic Community, crisis with France, 66; Britain's position for entry, 66; removal of technical barriers to trade in Europe, 548  
 — Free Trade Area, removal of technical barriers to trade in Europe, 548  
 European Honda Motor Trading GmbH, Honda petrol engines conversion kits for LP gas fuel, 119; Honda E300 portable ac generator, 375  
 — Machine Tool Exhibition (Brussels), 64, 313-315, 376-378  
 — Miniature electronic components and assemblies data 1965-66, by G. W. A. Dummer and J. M. Robertson (book), 510  
 European Nuclear Energy Agency, Halden Reactor Project programme, 529  
 Europort motorway link with Ruhr, 98  
 Euroswitch, hermetically sealed 25A relay, 114  
 Eurotherm Ltd., Euroswitch hermetically sealed 25A relay, 114; temperature controller for loads up to 6 kW, 569  
 Euston Station, automatic telephone exchange at, 401  
*Evening Independent*, computer typesetting for, 244  
 Events recorder, Amprobe, 345  
 Evershed & Vignoles Ltd., acquisition by George Kent Ltd., 17  
 Eversure Accessories Ltd., BJ150 hydraulic car jack for BMC mini motorcars, 311  
 Excavators, bucket wheel (trade publication), 413  
 — Hydraulic (Winget Poclair Ltd.), 410  
 — Mechanical, small, all-purpose, Smalley 360, 631  
 Excitation system of 500 MW alternator (AEI), 355  
 Executive and professional register (Ministry of Labour), 432  
 Exercices d'Organisation et de Recherche Operationnelle, by Y. Muller (review), 284  
 Exeter University, symposium on two-phase flow, 73  
 Exhaust valves. See *Valves*  
 Exhausters for diesel hydraulic locomotives (Westinghouse), 26  
 Exhibition of agricultural machinery and equipment (Moscow), 256  
 — Assembly, jointing and fastening techniques (PERA), 255  
 — British Columbia International Trade Fair (Vancouver 1967), 159  
 — British (Tokyo), advance notice, 63; exhibit at, 347  
 — Trade Centre (New York), 464  
 — Building, International (Olympia), exhibits at, 597, 598  
 — Business Efficiency (Olympia), exhibits at, 505  
 — Car parking, 223  
 — and conference, automatic laboratory techniques, 799  
 — and conference, engineering materials and design (Olympia), 357, 360, 370-371  
 — and Congress, international, of laboratory, measurement and automation techniques in chemistry (Basle), 824  
 — Design in engineering, 480  
 — Design in engineering, review of exhibits (CoID), 550-551  
 — Electronics, Instruments, Controls and Components (advance notice), 63  
 — Engineering Materials and Design (Olympia), exhibits at, 370  
 — Engineering products (Manchester), 607  
 — Essen Welding Fair, 127  
 — European Machine Tool (Brussels), 64; exhibits at, 313-315  
 — FASEX 66, 191  
 — Federation of Sussex Industries (Brighton), 400  
 — Filtration (Earls Court), exhibits at, 22  
 — Foodpack '66 food industry, 95  
 — Frankfurt International Motor Show exhibits at, 397-399  
 — Fuel, Power, Process Control and Automation (Leeds), 255  
 — German Aviation Show (Hanover, 1966), 159  
 — Hanover Fair (1966), advance notice of, 823  
 — Hong Kong, British Week (1966), 160  
 — ICI products (Tientsin, China), 497  
 — Industrial Photographic and Television (Earl's Court), exhibits at, 699  
 — Industrial process heating equipment, 255  
 — International Building (Olympia), on programme of, 607; exhibits at, 660; warm air heating equipment, 736  
 — Caravan (Earls Court), exhibits at, 480  
 — Communications and Aeronautical (Genoa), 127  
 — Fire (London), 161; exhibits at, 215  
 — Handicrafts and Do It Yourself (Olympia), exhibits at, 384  
 — of Industrial Electronics (Basle), 95-96, 191  
 — Industrial Equipment and Services, 191  
 — Inventors and New Products (New York) (advance notice), 290  
 — Plastics, exhibits at, 90, 118  
 — for Surface Treatment (Basle 1966), 127  
 — and International Symposium on Water Desalination (Washington), advance notice, 272  
 — Leipzig Fair, 95; wider scope of, 191  
 — London Motor Show (Earls Court), review of exhibits at, 555-558, 584-586  
 — Machine tools (A. Douglas Co. Ltd.), 560  
 — Tools (Mexico City), 823  
 — Tools at Brno Fair, 437  
 — Tool, European (Brussels) exhibits at, 376-378  
 — Meat Industry (Earls Court), 824  
 — Mining Machinery (Olympia), exhibits at, 53-57, 88, 118, 119, 120  
 — Paris Salon, motor car exhibits at, 483-485  
 — Photographic (trade publication), 413  
 — Poznan International Fair, exhibits at, 80  
 — Precision grinding machines (A. A. Jones and Shipman Ltd.), 319  
 — Pumping (Earls Court), exhibits at, 21  
 — Royal Show (1965), exhibits at, 78-79  
 — Royal Smithfield Show of agricultural machinery, 743



- Exhibition, Scientific Instrument Manufacturers' Association (Roumania), 223
- Storage (advance notice), 159
  - (London), exhibits at, 762
  - and symposium on electronic components (Ferranti Ltd.), 529
  - Technology Today, mobile, for schools, 749
  - Turin Motor Show, exhibits at, 611-612; coachwork exhibits at, 652-653
  - World Transport (Munich), exhibits at, 202-203
- Expanded Piling Co., Kings Lynn quay pile driving operations, 466
- Expanded Rubber & Plastics Ltd., Plastazote expanded polyethylene by vacuum forming 181; Nuliner roof insulation with Polyzote expanded polystyrene, 815
- Expanding towns scheme, 9
- Experimental data, statistical analysis of, by J. Mandel (book), 413
- Exports to Canada, Canextour drive for, 592
- Consultancy service (Carimex Ltd.), 753
  - Council for Europe, report on markets for marine components, 449
  - Delays, research study on factors influencing, 721
  - Document, simpler (BOT booklet), 752
  - to Germany, agreement on loans for (Board of Trade), 496
  - Machine tool, 17
  - Management, training for, by G. Sharman, 580
  - Opportunities for Shipbuilding Components in Scandinavia (booklet), 449
  - Trade, Board of Trade assistance in, 738
- Exporting, philosophy of, by Sir Donald Stokes, 641
- Express Lift Co., packaged lifts for flat construction, 698
- Extraction equipment, vacuum (Universal Industrial Appliances Ltd.), 731
- Extractive metallurgy: principles and application, by W. H. Dennis (book), 94; (review), 796
- Extrusion, Cold, of steel, international conference on (Eastbourne), 383
- Hydrostatic, development position and prospects, 811
  - Press. See *Press*
  - Testing machine (Electautom Ltd.), 570
- ## F
- FABULA dual flush high level cistern, 320
- Face mask, air line (Spembly Technical Products Ltd.), 278
- Facemill, close-pitch, Coromant T-MaX, 816
- Facing and centring machine, Grob Type ZM, 378
- Factories Act, new requirements for power presses, 209
- Climatic conditions in, 145
  - Planning model system (Modulex 3-Dimensional Planning Ltd.), 371
- Fada/Fionn hydroelectric power scheme, position and prospects of, 706; cancellation of, 737
- Fafnir Bearing Co. Ltd., factory extension, 720
- Failures in foundation, by Dr. J. Feld (booklet) 496
- Fair, trade. See *Exhibition*
- Fairey Engineering Ltd., Perspex model of outlet header for reactor research, 244; plain man's guide to atomic energy (trade publication), 254; NRE test reactor, 561
- Fairey Surveys Ltd., Lee-Smith cartographical camera, 283; printed circuit strain gauge, 403; printed circuit force transducer, 403; packaged hydraulic vibration test system, 793
- Fairfield Shipbuilding and Engineering Co. Ltd., proposal for Government/private enterprise management arrangement, 769; shipbuilding industry's proposal for, 802
- Fairhurst, W. A., & Partners, survey of Craigieachie road bridge, 268
- Fairview Caravans Ganges mobile home, award of NCC badge, 480
- Falconer, W. H., unitised reheat steam turbine, 521
- Falks Ltd., Guardian and Keystone outdoor wall lanterns, 64; showroom for lighting fittings and heating units, 96; lighting fittings (trade publication), 638
- Fall-out, technological, fact or fantasy, symposium on, 100
- Fan, centrifugal, high pressure, Gyra-Flo, 667
- Fan-cooled equipment, Klixon 2ST system of overheating protection for, 218
- Fans, cooling (trade publication), 254
- Propeller, ring mounted (Turner & Brown Ltd.), 375
- Fantom forced draught open fire, 608
- FAO, investigation of water resources in Saudi Arabia, 560
- Faraday Society, discussion meeting on intermolecular forces, 31
- Farmhand tanker beet harvester, 744
- Farmhouse, central heating for, Unit-plan system, 37
- Farming. See *Agriculture; Tractor*
- Farradane, J. E. L., facts required in design, 358
- Farthing, T. W., beryllium technology, 501
- FASEX 66 exhibition, 191
- Fastening and assembly processes, exhibition of, 191
- Conference, industrial, report on (book), 542
  - Techniques, conference and exhibition (PERA), 255
- Fats and oils, cooking, fire risks from, 672
- Fatigue failure of laminated springs in wagons, 650
- Life of aluminium alloys, by T. R. G. Williams and M. T. Lowcock, 571
  - Miner's Rule prediction of, 571
- Fawley Foundation lecture by Sir Denning Pearson, 675
- FEANI. See *Federation Europeenne d'Associations Nationales d'Ingenieurs*
- Fearn's Calculators, inertia calculator (trade publication), 286
- Federal Products Corporation of America, Model 136B-3 Millionth comparator, 404
- Federation of British Industries, conference on fire prevention in industry, 161; termination of, 209
- Europeene d'Associations Nationales d'Ingenieurs, 197, 198; meeting of executive committee in London, 609
  - of Sussex Industries, exhibition (Brighton), 400; activities of, 400
- Feed mill engineering consortium, 721
- Pneumatic, for friction saw (Trennjaeger (Great Britain) Ltd.), 503
  - Pump. See *Pump*
- Feedback control for checkweighing machine (Southall and Smith), 424
- Feedback Ltd., TPO 229 variable frequency three-phase power source, 50; Logikit Basic Logic Trainer for teaching applied digital techniques, 89
- Feeders, Sherwen Shearline, for coal bagging plant, 121
- Feeding equipment, vibratory, with plastic springs (Burgess and Associates Inc.), 277
- Feedstock control, automatic, of papermaking machine (Bowaters UK Pulp and Paper Mills Ltd.), 276
- Feilden, G. B. R., on university/industry liaison, 771
- Feintool Ltd., Osterwalder fine blanking presses, 376
- Fel-Electric Ltd., crack detection (trade publication), 670
- Feld, Dr. J., on failures in foundations, 496
- Felvic air purifier with ozone lamp, 114
- Felvic Marketing and Sales Co. Ltd., Felvic air purifier with ozone lamp, 114
- Fenaplast Diamond spliceable colliery conveyor belting, 119
- Fenner, A. J., Mechanical Testing of Materials (review), 700
- Fenner, J. H., & Co. Ltd., Fenaplast Diamond spliceable colliery conveyor belting, 119; Hainsworth geared speed reducers, 551
- Fensham, P. J., on Dynamics of a Changing Technology (review), 540
- Ferodo France, semi-automatic transmission for Simca-1000 motor car, 584
- Ferranti Ltd., computer control for soaking pits, 124; design agreement with SAGEM, 177; equipment for ELDO and Concorde, 177; Argus 308 computer for research problems (Manchester College of Science and Technology), 208; SCOPE coordinate positioning equipment, 315; production and testing unit for transformer bushings, 440; single-phase and polyphase statistical impulse meters for Electricity Council, 464; transformers for Cruachan power station, 489; symposium and exhibition on electronic components, 529; Multilin constructional technique of micro-miniaturization, 529; activities in Scotland, 618
- Ferrari Dino motor car, 484-485
- Ferrimagnetics and plasmas, microwave behaviour of, conference on, 159
- Ferrositics Ltd., history and development, 176
- Ferrovolt high speed drum camera, 794
- Ferrocube nylon coated toroids, 633
- Ferry cargo decks, descaling of, 789
- Lord Warden, descaling of cargo decks, 789
- Ferrybridge C power station, collapse of cooling towers, 578
- Fertiliser distribution, Harder "Hanseat" twin disc broadcaster (Colchester Tillage), 78
- Ffestiniog pumped storage hydroelectric power scheme, 374, 533
- Fibreglas AW glass-fibre insulating material, 64
- Fibre optics, light switch based on (Bausch & Lomb Optical Co.), 187
- Mass production of (Rank Taylor Hobson Division), 209
- Fibreboard, corrugated, Rocbord storage containers of, 762
- Fibreglass Ltd., fibreglass products, 371; plastics cladding for London flats, 690
- Field, A. J., tax the long car?, 7, 137. *Letters* 69, 103, 199
- Field & Grant Ltd., Unicenter modular rack system of standard motor control centres, 179; motor starter boards (trade publication), 190
- Field intensity analyser, type LF-SHF-2T (Aveley Electric Ltd.), 153
- Fielding & Platt Ltd., range of packaged type hydraulic extrusion presses, 19; Dynapak high-energy rate forming machine, 755-756; type 1600/80 hydrostatic extrusion press, 811
- Fiennes, Sir Maurice, on cooperation between plant makers and users, 514
- Fife industrial development in, 654
- Files, flexible, Manhattan, 402
- Filing and storage equipment (trade publication), 382
- Fillder, M., on Railroads of the Black Hills (review), 732
- Filling machine, weigh, Transfil-Torbal, 435
- Film, cine, colour, photographic, Super 8 Kodachrome II, 512
- Industrial training (Rank), 206
  - on industrialized housing, "Decision on Housing," 561
  - on railways (National Film Theatre), 384
  - Depositor, thin, PlasmaVac, 85
  - Fluorocarbon, Teflon FEP, 370
  - Polyester drafting, for high quality drawings, Texpol, 24
  - Mylar, for insulation, 370
  - Ready-to-project (Metro-Kalvar Inc.), 699
- Film-Wire flexible encapsulated printed circuit, 692
- Filters, air (trade publication), 222
- Activated carbon, Compact, 343
  - Automatic, for small air flows, Z-Mat, 631
  - Expendable, oil mist and particle and sterile, ranges of (Filter Plants Ltd.), 22
  - Intake (trade publication), 574
  - Cartridge type compressed air and gas, Ultipor 2 Type SU, 22
  - Electric wave, the equation of the mean line of surface texture found by an, by D. J. Whitehouse and R. E. Reason (book), 766
- Electrostatic sub-micron, for oils and other liquids, Type PE7102 (MEL Equipment Co. Ltd.), 22
  - Hand pump, for potable water, PFO/DOM (British Berkefeld Filters Ltd.), 473
  - Lightweight, for fuel oils (Landon Kingsway Ltd.), 538
  - and networks (trade publication), 190
  - Oil, centrifugal GF3 (Glacier Metal Co. Ltd.), 23
  - Terminals, cabinet for Kingsway Fillpoint, 119
  - Pack, portable oil, for hydraulic systems (Tower Bros. (Patents), 116
  - Pads, activated carbon, for plating solutions, Zonax, 539
- Filter Plants Ltd., ranges of expendable, oil mist and particle, and sterile air filters, 22
- Swimming-pool, Hi-Rate, with permanent media, 768
  - Volumetric (trade publication), 222
  - Water, Diatom, 792
- Filton Technical High School, applied science activities, 239
- Filtration Exhibition (Earls Court), exhibits at, 22
- Finance for industrial projects, 177
- Finch, Brig. J. R. G., secretary of EIJC, 4
- Finishing machines, OVEX, 343
- Plant (trade publication), 446
- Finnis, S., on nuclear ships, 751
- Finnish foreign trade directory (1964-65) (book), 254
- Finucane Island, port developments, 251
- Fire access door for ventilation ducting (James Green Developments Ltd.), 439
- Appliances (trade publication), 574
  - Marquis Series Seven range of, 402
  - Exhibition, International (London), 161; exhibits at, 215
  - Fighting, foam inlet box for, Kingsway, 343
  - Hose reel (Merryweather & Sons Ltd.), 215
  - Reel, SC square cover (Dunford Fire Protection Services Ltd.), 215
  - Open, forced draught, Fantom, 608
  - Prevention in industry, conference on, 161
  - Protection Association, conference on fire prevention in industry, 161
  - Protection equipment for railcars (Graviner (Colnbrook) Ltd.), 625
  - System, spray, ProtectoSpray, 215
  - Pump, high powered, Super Pumper, 568
  - Research Station, fire risks from cooking fats and oils, 672
  - Risks from cooking fats and oils, 672
  - Firefighting and rescue unit, SS85 Snorkel, 215
- Firestone Tyre and Rubber Co. Ltd., PATA (pneumatic all-terrain amphibian) cargo motor vehicle, 442; vacuum contactor for electric motor starters, 665
- Firth Cleveland Fastenings Ltd., Nyloc self-locking nut with nylon inset, 742
- Firth Vickers Stainless Steels Ltd., Staybrite FMB stainless steel, 660
- Fischer, flexible nylon cable saddle, 310
- Fischer, E., & Co., extrusion testing machine, 570
- Fischer, Georg, A-G, formation of George Fischer Plastics Ltd., 144; Grob Type ZM facing and centring machine, 378
- Fischer, George, Plastics Ltd., formation of, 144
- Fischer & Porter Ltd., river level recording instruments, 276
- Fisher, Dr. D., review of Chunnel, 30
- Fisher, F. M., on Supply and Costs in the United States Petroleum Industry (book), 766
- Fisher, James, & Sons, shallow draught vessel for heavy equipment transportation, 13
- Fisher & Ludlow Ltd., Peco-Loewy 20/90R 2,000-ton injection moulding machine, 77
- Fisher, P. A., light alloys for engineering applications, 502
- Fishlock, D., on New Ways of Working Metals (book), 254; (review), 701
- Fisons Fertilisers Ltd., remote controlled brushless turbine generator set, 306
- Fisons Ltd., trading report, 529
- Fissore Atuanda town motor car, 653
- Fix Equipment Ltd., Big Bag nylon collapsible bulk storage container, 792
- Fixing tool, trigger operated cartridge, Komet, 661
- Fizeau-type simple gauge interferometer for training departments (Hilger & Watts Ltd.), 21
- Flame cutting, powder injection equipment for (British Oxygen Co. Ltd.), 183
- Detector, Pyrocord continuous pyrotechnic, 625
- Flame Hardeners, Ltd., developments in Shorter process of flame hardening, 150; induction hardening shop, 150-151
- Hardening. See *Hardening*
  - Spraying, hard facing by, 563
- Flameproof casing for indicator/control thermometers (British Rothermo Co. Ltd.), 217
- Flash removal, turntable for, Powerblast Mark I, 535
- Stripper, weld, for butt welded tube (Burflex Ltd.), 794
- Flats, multi-storey, cladding panels on, glass-fibre reinforced plastics for (Greater London Council), 690
- Multi-storey, construction at Bramley Hill, 698
  - Tree-like multi-storey block, 728
- Flavia, Lancia, motor car, Kugelfischer fuel injection equipment for, 653
- Fleetline double-decker buses (Daimler), 368
- "Flex-wire" semi-automatic welding equipment with constant-voltage and constant current, 85
- Flexel electric central heating system, 192
- Elements, Salrad panel heater with, 192
- Flexibox Ltd., lapping machines (trade publication), 605
- Flexinox stainless steel hose clips, 435
- Flexprint flexible printed circuit for motor cars Lucas, 558
- Flexprint, Printed circuit, 433
- Flexwood Ltd., Industrial Flexwood industrial wood veneer, 345
- Flight loads, prestressed concrete test frame for simulation of, 620
- and maintenance recorder, Midas (Royston Instruments Ltd.), 624
- Flight Refuelling Ltd., DRVT-1 vacuum reed switch, 179; Relog logic elements, 597
- Test instrumentation, by M. A. Perry (book), 446
- Flip-flop element (trade publication), 190
- Floating table, magnetic-pneumatic, for machining operations, SMP, 503
- Flomat preimpregnated material, 371
- Floodlighting tower, transportable (Audax Ltd.), 695
- Floor heating, design service for (British Insulated Callender's Cables Ltd.), 224
- Off-peak systems research (ERA), 36
  - Scrubber and polisher (R. S. Stokvis & Sons Ltd.), 731
- Flooring, reinforced polyester (trade publication), 413
- Flotation process in fluorspar manufacture, 396
- Flow balancer, direct reading, Thermo-Flo, 146
- Converters, magnetic, Transdata, 276
  - Detector heads, magnetic, Veriflux, 276
  - Laminar, theory of, by F. K. Moore (book) 190; (review), 509
  - Measurement, radioisotope technique for, 442
  - Two-phase, symposium on, 73
- Flowmeter, Alvan Blanch A12, 153
- Gas bearing turbine (Westwind Turbines), 267
  - Liquid-metal (Elliott Bros. (London), Ltd.) 89
  - Oil, Micro-Oil, 119
  - Turbine (trade publication), 702
- Flue dust monitor, electrostatic (AEI Electronics Group), 564
- Fluids, cutting (trade publication), 94
- Logics (trade publication), 734
  - Mechanics, convention, thermodynamics and (book), 822
  - Seal Manufacturers Assoc., formation of, 592
- Fluidflow checkweigher machines, 423
- Fluidized bed dryer (trade publication), 574
- Fluorescent tubes, prismatic diffuser for (Richard Daleman Ltd.), 470
- Fluoride film, polyvinyl, Tedlar, 660
- Fluorocarbon film, Teflon FEP, 370
- Fluorspar manufacture, flotation process in, 396
- Mining and processing, 396
- Flux, spectrographic, JMC (Johnson, Matthey & Co. Ltd.), 180
- Fly-overs, temporary, in road construction, 98
- Flying shear, guillotine, for Australia, Model 76/92 Hallden-Robertson, 666-667
- Flymo Ltd., Toro Snow Pup and Snow Husky hand-propelled snow ploughs, 640
- Foa, Dr. Joseph, transport of the future, 33
- Foam inlet box for fire fighting, Kingsway, 343
- Self-adhesive (Tesa Tapes Ltd.), 370
- Foden Low-Line crane carrier, 662
- Foggo, P., on Loughborough College of Technology, 391
- Follisain-Wycliffe Foundries Ltd., mine castings (trade publication), 413
- Foods, animal, punched card system for mixing, 124. *Correction*, 183
- Industry exhibition, Foodpack '66, 95
  - Mixer, Kenwood Chef, design and development of, 804-805
  - Maxmatic automatic (Pye), 768
  - Preparation appliances (Charles Churchill & Co.), 840
- Foodpack '66 food industry exhibition, 95
- Football stand, reinforced concrete, at Galashiels, 466
- Forage harvester (Massey-Ferguson), 744
- Foratorm Congress (Frankfurt), 255; report of, 627
- Force measuring devices, calibration of large (NBS), 595
- Devices, thermo-elastic effect in, by R. C. Debnam and B. Swindells, 156
  - Transducer, printed circuit (Fairey Surveys Ltd.), 403
- Ford of Britain, areas for expansion, 321; studies on resistance welding, 474; resistance welding control equipment, 474; seam welding equipment, 474; welding gun design changes, 474-475
- Ford Motor Co. Ltd., position and prospects of, 353; new version of Corsair motor car with V4 engine, 428-429; Transit range of light commercial motor vehicles with V4 engine, 453; Kombi version of Transit light commercial motor vehicles, 453; cooperation with County Commercial Cars Ltd., 493
- Ford 592 Series E diesel engine, for railway inspection cars, 251
- Ford Mustang motor car, Bertone special bodied, 485
- Ford Select-O-Speed gearbox, 494
- Ford Super Major 5000 gearbox, 494
- Ford V4 motor car engine, 557
- Fordham Pressings Ltd., Acquasave Mark 2 diaphragm ball valve, 64; Fabula dual flush high level cistern, 320
- Forecasting in industry, by E. O. Jones and J. G. Morrell, 353
- Foremen's and Staff's Mutual Benefit Society, 230
- Forest and Sawmill Equipments (Engineers) Ltd., Forester 72 in heavy duty bandmill with travelling frame, 123
- Forestral Industries (UK) Ltd., D-Scale Paste DS 25 weld scale removal for stainless steel, 379; nickel and copper plating solutions, 539
- Forester Manufacturing & Supplies Co. Ltd., air grinding (trade publication), 510
- Forestier, M., tube bending machine, 617
- Forester 72 in. heavy duty bandmill with travelling frame, 123
- Forestry Commission, new road to Scottish Highland Forests, 368



- Forging, drop. See *Drop forging; Hammer*  
 — Hammer. See *Hammer*  
 — High-energy rate. See *High-energy rate forging*  
 — Machine, stretch, GFM, installation of (Hall & Pickles Ltd.), 627  
 — Plant for China (B. & S. Massey Ltd.), 624  
 — Press. See *Press*  
 Fork head assemblies, Springfix, range of, 90  
 — Lift truck (trade publication), 126, 798  
 — Truck, Hustler, with attachments, 409  
 — Truck, pneumatic tyred diesel, DP51 (Yale Materials Handling Equipment Division), 818  
 — Truck, shunter and crane, Unilok combined, 58  
 — Unit, Mark 3, for tractors (H. Cameron Gardner Ltd.), 346  
 — Truck, Hy-Drive (Conveyancer Fork Trucks Ltd.), 731  
 Forlife (C.H.) antifreeze for central heating, 544  
 Form grinding, Optidress, Projectoscope and Profoscope equipment for, 219  
 Forming, cold, recent developments in, by H. L. D. Pugh (book), 382  
 — High-energy rate. See *High-energy rate forging*  
 — by shockwave processes, by Dr. Mürtz, 617  
 Fort William pulp mill, 368  
 Forward Control 654 tractor (County Commercial Cars Ltd.), 494  
 Fosco (FS) Ltd., agreement with BNFMA, 666; Dexil 34 (BNF) breakdown agent for carbon dioxide casting process, 666  
 Foster Instrument Co. Ltd., temperature recorders, 52; exhibition of industrial process heating equipment 255  
 Foster, LeRoy E., on Telemetry Systems (book), 605  
 Foster Wheeler Ltd., ESRD boiler for MST-14 reheat steam turbine ship propulsion installation, 427; condenser for Tuft Cove No. 1 power station, 528  
 Fothergill & Harvey, Flomat preimpregnated material, 371  
 Fotocolor Automation Ltd., Colortron Model 150/69 photographic enlarger, 699; Colortron Miniprinter Model M4/8 automatic photographic printer, 699  
 Foundations, failures in, by Dr. J. Feld (booklet), 496  
 — Renewal work on St. Helier Hospital, 648  
 Foundry apprentice competitions, 615  
 — Joint committee, formation of (Industrial Training Boards), 432  
 — Plant, automatic, Hallsworth, for Czechoslovakia, 113  
 — Safety and health aspects of, 777  
 — Warm air curtain and door for, 594  
 — Workers' union, activities of, 777  
 — Workshop at apprentice training school (AEI), 718  
 — See also *Castings; Moulding*  
 Fox, Dr. R. H., on thermal comfort in industry, 145  
 Fox, Samuel & Co. Ltd., record steel production, 496; automatic billet inspection, 819  
 Foxboro-Yoxall Ltd., solid state pulse duration controller, 667; model 43A pneumatic indicator controller, 726  
 F. & R. Engineering Co. Ltd., temperature controller for moulding machines, 247  
 Fractionating plant, natural gas, for Russia (SNAM Progetti), 145  
 Fracture, brittle, by Prof. Dr. Ing. G. Bierrett, 617  
 — Yield and, physical basis of, conference on, 223  
 Fram Group Ltd., annual statement, 528  
 Fram and Russell, industrialized building, 528  
 Frames, rigid, continuous beams and, analysis of, by Dr. P. S. Dravid (book), 734  
 — Stability of, by M. R. Horne and W. Merchant (book), 605  
 France, motor car production in, 484  
 — Car sales in, 483  
 — Power transmission link with, 374  
 Frankfurt International Motor Show, exhibits at, 397-399  
 Fransson and Brantemo AB, FoB 4MVB pipe threading machine, 281  
 Fraser & Fraser Ltd., activities of, 177  
 Fraser, I., on BMC Minis: Maintenance, Tuning and Modification (book), 30; (review), 158  
 Fraser, T., Transportation Engineering Conference, 8; on traffic delays during road construction, 98; on government expenditure on transport, 194  
 Freco Perfect electric hand dryer, 216  
 Free-machining copper alloy, Boltomet-917, 370  
 Freeman Fox & Partners, Bow viaduct, 241  
 Freeman, H. G., on Enzyklopädisches Fachwörterbuch Spanende Werkzeugmaschinen (review), 61; on Dictionary of Metal-Cutting Machine Tools: English-German (book), 126  
 Freetown water supply, effect of Guma Dam, 622  
 Freeway safety belt, 431  
 Freezmaster, medical refrigeration unit, 80  
 Freidrich Wilh. Schwing, contractor's plant (trade publication), 126  
 Freke, A. M., review of Management of Radioactive Wastes, 668  
 Friction and wear, by I. V. Kragelskii (book), 254; (review), 573  
 — and wear in machinery (book), 702  
 — and wear of materials, by E. Rabinowicz (book), 94; (review), 509  
 Frischherz, A., on Maschinenelemente Einführung, Normung, Industriewerte Vol. 1 (book), 574  
 Frischmann, W. W., design for 850 storey tower block, 440  
 Fritzmeier, George, KG (England), tractor seat, 79  
 Frost, J., on The Elizabeth (book), 190; (review), 316  
 Frost, T., review of Aerodynamics of Turbines and Compressors, 636  
 Fry, T. C., on Probability and Its Engineering Uses (book), 382  
 Fuel cells development position and prospects, 533  
 — for diesel-electric locomotives, research on, 340  
 — Position and prospects of, 5  
 — Research programme (AML), 72  
 — Consumption factor in ship propulsion, 460-461  
 — Tests on motor vehicles, ISAM equipment for, 659  
 — Efficiency, see also *Clean Air, Fuel Efficiency and Domestic Heating Exhibition*  
 — Gauges for motor cars, Lodex, 276  
 — Industry, energy storage considerations, 531  
 — Position and prospects of, 5-7  
 — Injection, direct, in diesel engines (Perkins), 653  
 — Equipment, Kugelfischer, for Lancia Flavia motor car, 653  
 — Oils, lightweight filter for (Landon Kingsway Ltd.), 538  
 — Policy, comment on, 385  
 — Speculation on future, 3  
 — White Paper on, 545  
 — Power, Process Control and Automation Exhibition (Leeds), 255  
 — and power symposium (Cambridge) (British Association for the Advancement of Science), 323  
 — Pump. See *Pump, fuel*  
 — Solid, bulk carriage and bagging vehicle for (Charrold Autobagger), 233-234  
 — See also under specific types of fuel  
 "Fuji" lubricators (trade publication), 734  
 Fuller, J. A., engineering among the establishment, 741  
 Fulvia motor car, two-seat sport version of (Lancia), 611  
 Fulvia sport motor car, Zagato Lancia, 652  
 Fume cabinet for tall apparatus, Turbo, 599  
 Funditor Ltd., range of melting pots for soft metals, 186; Tabre dividing and engraving machines, 569  
 Funen Zealand traffic link international competition, 145  
 Furnace attachment for tensile tests (W. & T. Avery Ltd.), 214  
 — Channel type induction, 45 ton (AEI-Birlec Ltd.), 593  
 — Charging machine for tubes and forgings (Lectramatec (Furnaces) Ltd.), 344  
 — Diffusion (Royce Electric Furnaces Ltd.), 535  
 — Electric arc melting, 7,500 kVA (GWB Furnaces Ltd.), 380  
 — Induction, for high-energy rate forging, 775  
 — Laboratory (Johnson, Matthey & Co. Ltd.), 312  
 — McClary "7-in-1" gas-fired balanced flue, for warm air heating, 736  
 — Modernization at William Beardmore & Co., 560  
 — Miffie vacuum, Vaseal range of, 278  
 — Vacuum, VIA-VAC FV39 high temperature, 598  
 — See also *Blast furnace*  
 Furness Shipbuilding Co. Pilgrim nut for bulk carrier, 260  
 Furness Withy & Co. Ltd., formation of Overseas Containers Ltd., 322  
 Furniture kits, built-in, Space-fitta, series, 384  
 — Laboratory, modular (trade publication), 702  
 — Modular (Spencers Joinery Ltd.), 178  
 Futura Footwear, vinyl soled industrial boot, 51  
 Fyson, C. J. R., & Son Ltd., conveyors (trade publication), 126
- G**
- GALASHIELS, reinforced concrete football stand at, 466  
 Galbraith, Prof. J. K., on aid to developing countries, 321  
 Gallup Poll survey of public image of professions, 390. *Letter*, 453  
 Galvanising of metal windows, 367  
 Galvaplas plastic metal coating, 346  
 Gamma radiation machine, portable, with safety device (Gamma Rays Ltd.), 242  
 Gamma Rays Ltd., portable gamma radiation machine with safety device, 242  
 Gamma 10 computer for ship repairing firm, 241  
 Ganges mobile home award of NCC badge, 480  
 Gantry, beam placing, for Cowbridge viaduct, 112  
 Gardiner, P. S., Equipment, Trog battery-powered truck, 79  
 Gardner, H. Cameron, Ltd., Mark 3 fork lift unit for tractors, 346  
 Gardner, R. W., review of Electrical Analogues of Pin-Jointed Systems, 412  
 Garibaldi, market research seminar, 682  
 Garringtons Ltd., billet induction heater for China, 624  
 Garside, Dr. J. E., combustion of methane in diffusion flames, 725  
 Gas bearing turbine flowmeter (Westwind Turbines), 267  
 — Boards, sales-service facilities conference (Harrogate), 223  
 — Control, internal pilot, series 93 Basotrol, 246  
 Gas Council, commercial application of two-stage reheat process, 182; discussions on Nigerian natural gas supplies, 257-258; diffusion-flame burners for methane, 725; Engineering Research Station proposal, 818  
 — Discovery by Sea Gem oil drilling rig, 418  
 — Dryers, exothermic (Pall (UK) Sales Ltd.), 344  
 — Holmes Monovalve, 344  
 — Exploration in North Sea, 641  
 — GS, advantages of, 725  
 — Heater. See *Heater*  
 Gas holders, inflatable nylon, Nesprene coated, 152  
 — Industry, position and prospects of, 5-7, 385  
 — Installation, new town, at Newcastle upon Tyne, 182  
 — Liquefier, miniature, Minicooler MC8, 147  
 — Liquid petroleum, petrol engine conversion kits for Honda engines, 119  
 — and liquids, thermal conductivity of, by N.V. Tseberberg (book), 478  
 — Lubrication of bearings, by N. S. Grassam and J. W. Powell (review), 126  
 — Multi, detector (Draeger Normalair Ltd.), 53  
 — Plant units for Spain (Power-Gas Corp. Ltd.), 16  
 — Prospecting in North Sea, 418  
 — in North Sea, production licences for, 194  
 — Reforming plant, Seabank, 240  
 — Plants using ICI 500 process, 528  
 — Process, ICI 500, 528  
 — Storage in bulk, 531  
 — Turbine. See *Turbine*  
 — See also under specific gases  
 Gascoignes (Kee Klamps) Ltd., racks (trade publication), 222  
 Gascoyne, P. F., storage of energy in bulk, 613  
 Gast model 0822 motor mounted vacuum-pump/compressor (John Hinton Ltd.), 537  
 Gate section failure in crane jib, 425  
 Gateway School, applied science activities, 238  
 Gauges (trade publication), 638  
 — Fuel, for motor cars, Lodex, 276  
 — and Tool and Power Press Exhibition (Olympia, 1966), 799  
 Gayler & Hall Ltd., Rondec Universal Stage 5 machine for printing polythene bottles, 242  
 Gear grinding machine. See *Grinding machine*  
 — Production, automated Link-Line system for, 657  
 — Reduction unit, Motogear spur-gear F series, 786  
 — System, planetary, for precision motors (Globe Industries Incorporated (UK) Ltd.), 283  
 — Testing machine, SP60 (Maag Gear-Wheel Co. Ltd.), 376  
 Gearbox accessories, aviation (trade publication), 286  
 — Contact, for strip measurements (True-meter Co. Ltd.), 249  
 — Ford Select-O-Speed, 494  
 — Super Major 5000, 494  
 — Hydramatic epicyclic, in Oldsmobile Toronado motor car, 430  
 Geary, P. J., on New Materials and Processes in Instrument Manufacture (book), 798  
 GEC (Australia) Proprietary Ltd., skip winding plant, Newstan Collieries, 657  
 GEC (Electronics) Ltd., high speed data links (trade publication), 94; electronic remote control and monitoring equipment for surface conveyor system, 113; printed circuit boards, 273; page printers (trade publication), 350; Courier AM and Courier FM, transistorized pocket radio-telephones, 569  
 GEC Electronics (London) Ltd., avalanche diodes by direct bonding, 475  
 GEC (Engineering) Ltd., photoelectric lift door control switch (trade publication), 62; Sherwen Shearline feeders for coal bagging plant, 121; photoelectric switch (trade publication), 318; blade mills (trade publication), 413; test link and terminal blocks (trade publication), 446; mechanical plant (trade publication), 734  
 Geddes, Lord, on Management and Cost Control in the Metallurgical Industry (book), 638  
 Gemini-6 and Gemini-7 satellite rendezvous project, 810  
 Gemini system of television recording on film (MGM Teletudios Inc.), 175. *Letter*, 356  
 Gemini-Titan 5 spacecraft, flight of, 290  
 General Descaling Co. Ltd., pig slug lining of pipelines, 152; Mark 4 mobile bending machine for large pipe, 504  
 General Dynamics/Convair Model 48 Charger counter insurgency aircraft, 499  
 General Dynamics Corp., Magneform magnetic pulse cold forming process, 617; Dynapak high-energy rate forming machine, 755-756  
 General Electric Co. Ltd., Consort Mark 2 atomic reactor for Imperial College, 12; trial installation of mercury-iodide street lamps, 24  
 General Electric Co. (US), gas turbine agreement with John Brown & Co. (Clydebank) Ltd., 17; Lodex permanent magnets, 276; MST-14 reheat steam turbine ship propulsion system, 427  
 General Engineers Supply Co. (1937) Ltd., Mark I Blue marking-out fluid, 402; Mark I cleaner for metals, 402  
 General Mills Inc., formation of Nuclear Equipment Ltd., 152  
 General Motors Corp., motor cars with L6 engine, 196; research on non-corrosive acrylic elastomers, 338; Oldsmobile Toronado 7 litre V8 front wheel drive motor car, 430-431; helixseal and hydroseal hydrodynamic shaft seals, 565; Sealometer lip seal testing machine, 565; Sealrator and Sealctor seal testing machines, 565  
 General Post Office, radiophone service in London, 49; expansion of international telephone service, 66; Western District Sorting Office, 176, 200-201; London-West Country microwave communications network, 241; official opening of radio tower, 482; capacity in telephone circuits or television channels, 482; need for re-examination of services, 514; design and construction of Birmingham radio tower, 676-677; comparison of Birmingham and London radio towers, 676-677  
 General Steel Wares (UK) Ltd., McClary "7-in-1" gas-fired balanced flue furnace for warm air heating, 736  
 Generating machinery for Cockerzie power station (English Electric Co. Ltd.), 492  
 Generating machinery for Cruachan power station (English Electric Co. Ltd.), 489  
 — Station system of unit railway train operation, 25  
 — Units, steam, boiling heat transfer in, symposium on (IME), 95  
 Generator, ac, portable, Honda 300, 375  
 — Atmosphere (trade publication), 798  
 — Decade pulse, solid-state, PG101 (Aveley Electric Ltd.), 630  
 — Diesel, trailer mounted (Pelapone Ltd.), 311  
 — Gas turbine, for New Zealand, 753  
 — for induction heating (Electro-heating (London) Ltd.), 85  
 — Marine diesel, sound shield for (G and M Power Plant Co. Ltd.), 218  
 — Power station trends, 372  
 — Set, turbine, remote controlled brushless (AEI), 306  
 — Signal, high power, Type SLRC (Aveley Electric Ltd.), 375  
 — Thermalastic insulation system, 629  
 — Thermionic, development position and prospects, 741  
 — Thyristor controlled RF induction (Stanelco Industrial Services Ltd.), 570  
 — Turbine, 120 MW, for Hong Kong power station, 465  
 — Turbo, sets for Pickering atomic power station (C. A. Parsons & Co. Ltd.), 302  
 — Ultrasonic, for scaring vermin and birds, Soniscare, 786  
 — for Volta River hydroelectric power scheme, 363  
 — See also *Alternator; Turbo*  
 George, Dr. F., development of Bristol Tutor teaching machine, 518-519  
 German Aviation Show (Hanover, 1966), 159  
 — for engineers, by N. C. Reeves (book), 734  
 Germany, exports to, agreement on loans for (Board of Trade), 496  
 — Motor industry, 397  
 Gesellschaft für Anzeichen-Geräte mbH, GP500 combined camera and projector for optical marking out and dimensional checking of workpieces, 11. *Letter*, 199  
 GFM stretch forging machine, installation of (Hall & Pickles Ltd.), 627  
 Ghana National Construction Co., Accra-Tema Motorway, 708  
 Ghana, Volta River hydroelectric power scheme, 361-365  
 Ghia 3-litre Bugatti 101 motor car, 652  
 — 5-litre sports motor car, 612  
 Ghia Vallenga motor car, 484  
 Giannini exhibits at Turin motor show, 612  
 Giannini Controls Corp., hysteresis electric motors, 538  
 Gibbings, W. C., on machine tools for missionary societies, 137  
 Gibbons Bros. Ltd., water heater for Canvey Island methane terminal, 753  
 Gibeco (England) Ltd., vending machines (trade publication), 638  
 Gibson, A. F., on Progress in Semiconductors (Vol. 9) (book), 510  
 Gibson, J. E., on Linear Elastic Theory of Thin Shells (book), 190  
 Giddings and Lewis, Numercenter tape controlled Model 70 drilling machine, 269  
 Gilbert, K. R., on Portsmouth blockmaking machinery (book), 478  
 Gilkes, Gilbert & Gordon Ltd., Tryweryn reservoir, 527  
 Gilley Law estate project, Sunderland, 528  
 Gilliat, Dr., report on railway system between Boston and Washington, 33  
 Girder failure in steel overbridge at Clapham Junction, 678  
 — See also *Beam; Bridge; Floor*  
 Gissane, Dr. William, Safety Aspects of Motor Car Design, 769; on road injuries, 806  
 Giulia TI, Alfa Romeo, motor car, description of, 710-711  
 Giustina, range of self-aligning spherical roller bearings, 436  
 Gjerde circular saw, 598  
 GKN Screws and Fasteners Ltd., SPAT system double-action assembly gun and special screw, 634  
 Glacier fall near Mattmark Dam, 329  
 Glacier Metal Co. Ltd., GF3 centrifugal oil filter, 23; Glacier DX bearing material for minimal lubrication, 759; pre-lubricated bearings (trade publication), 798  
 Gladishefski, Dipl. Ing. cold-formed thin-gauge steel, 617  
 Gladwell, G. M. L., on Matrix Analysis of Vibration (book), 62  
 Glands, cable, Mark II series of (Hawke Cable Glands Ltd.), 539  
 — Fluid coupling (trade publication), 702  
 — Insulated (West Instrument Ltd.), 402  
 Glas, exhibits at Frankfurt Motor Show, 398; automatic transmission system, 584; self-levelling suspension, 586  
 Glasgow, rebuilding scheme position and prospects, 588-589  
 — Royal Infirmary Mota-Veyor conveyor belt as hospital exerciser, 59  
 Glass, armoured, inspection window of (Landon Kingsway Ltd.), 816  
 — Balls, ground (trade publication), 638  
 — Containers (trade publication), 62  
 Glass-fibre chimney material, reinforced, Boul-tofibre, 217  
 — Drain channels, prefabricated, with acid resistant lining (Turner & Brown Ltd.), 307  
 — Insulating material, Fiberglass AW, 64  
 — Insulator for overhead electrification system, 645  
 — Polyester resin, powered roof ventilation unit, Turbovent, 50  
 — Reinforced polyester for concrete shuttering and moulds (BIP Chemicals Ltd.), 724  
 Glass, industrial (trade publication), 62  
 — Manufacturers' Federation, glass containers (trade publication), 62  
 — Preheater tubes (trade publication), 638  
 — Ptf, fabric laminate (Tygadore Ltd.), 310  
 — Pyrex (trade publication), 605  
 — Reinforced polyester panels for prefabricated building, 790



- Glassware, laboratory (trade publication), 670  
 Glebe Mines Ltd., fluorspar mining and processing, 396  
 Glen, A. T., on marine component exports, 449  
 Glen Creston Ltd., type WAB tube pump, 729  
 Glenrothes, industrial development position and prospects, 654-655  
 Globe Industries Incorporated (UK) Ltd., planetary gear system for precision motors, 283; ac electric motor for cryogenic operation, 597  
 Gloster Saro Ltd., all-welded aluminium alloy cargo tanks for shipping ethylene, 81  
 Gloucester Railway Carriage and Wagon Co., railway wagon for Ministry of Defence, 563  
 Glove box, sterile, Bassaire, 311  
 G and M Power Plant Co. Ltd., sound shield for marine diesel generator, 218  
 Godber, Sir George, on medical technicians, 1  
 Godden, W. G., on Numerical Analysis of Beam and Column Structures (book), 542  
 Godfrey, Sir George, & Partners (Holdings) Ltd., review of activities, 720  
 Godiva UHP fire pump, 375  
 Gold plated dry reed insert (Hivac Ltd.), 667  
 — Printed circuits, 551  
 Gold Seal variable-pole induction motors for ventilation equipment, 722  
 Goldman, A. S., on Maintainability: A Major Element of System Effectiveness (review), 92  
 Goldsmith, K., review of Exercices D'Organisation et de Recherche Operationnelle, 284; review of Dynamics of a Changing Technology, 540  
 Goliath gantry crane, sale for scrap, 209  
 Goodman, J. E., on High-Intensity Ultrasonics (review), 220  
 Goodwin, R., & Son (Engineers) Ltd., annual report, 785; acquisition of Hoben Davis Ltd., 785  
 Goodyear BC12 face drainage snore pump (Holman Bros. Ltd.), 120  
 Goodyear Pumps Ltd., activities of, 305  
 Goodyear Tyre & Rubber Co., tyre building from woven strips, 339  
 Gorator pumps, vertical and horizontal, range of (Woods' Engineers (Ramsbottom) Ltd.), 21  
 Gordon & Gotch Marketing Ltd., Sinecarbon B self-copy paper, 309  
 Gordon, R. B., on Structure and Properties of Alloys (book), 126  
 Gordos Corp., MR203 dry reed switch, 282  
 Gosling, W., on Mechanical System Design (review), 93  
 Götaverken AB, formation of consortium, 433; *Beaugard* tanker, 433  
 Gothenburg Plant Construction Group, contract for work at BP refinery, 433  
 Government-sponsored scientific research, 97  
 Graco Bulldog 30: 1 Hydra spray pumps, 438  
 Graco Golden spray painting guns, 438  
 Graco Hydra-Clean air-operated pumps, 662  
 Grader, diesel motor, M-100 series B (Allis-Chalmers), 19  
 Grain drier, Cascade-17 (Alvan Blanch Developments), 744  
 — PU 2.5 (Matthews & Yates), 744  
 Gramac Mechanical Handling Ltd., dished slat conveyor for film rolls, 568  
 Gramophone records, Phonovid system of television recording on, 288  
 Grangemouth Docks, improvement plant, 305  
 Granular media, statics of, by V. V. Sokolovskii (review), 29  
 Grassam, N. S., on Gas Lubricated Bearings (review), 126  
 Grassland reseeding machine, development position, 741  
 Gravel pump, Simonacco-Warman, 21  
 — and sand map of England, 560-561  
 — and sand plants, closed circuit television for (Hardy & Padmore Ltd.), 594  
 Gravesend Technical High School, applied science activities, 239  
 Graviner (Colnbrook) Ltd., fire protection equipment for railcars, 625  
 Gray & Campling Ltd., general purpose paint spray gun, 119  
 Gray, R. H., why teach-in? 103  
 Greater London Council, expanding towns scheme, 9; industrial selection scheme, 9; approval of Bahco air extract valves, 144; glass-fibre reinforced plastics for cladding panels on multi-storey flats, 690  
 Green-Cubitts-Keir, High Wycombe by-pass progress of, 112  
 Green, James, Developments Ltd., fire access door for ventilation ducting, 439  
 Green, T. E., titanium, zirconium and niobium, 502  
 Green, W., & Son and Waite Group, Auto-flame Equipment model AFR12 brazing machine, 535  
 Greengross, A. D., review of Industrial Applications of the Diamond, 603  
 Greenwood & Batley Ltd., trucks for die handling, 694  
 Gregory, S. A., elements of design, 358  
 Gresham Lion Electronics Ltd., GLE 400 heavy duty combined power supply and battery charger, 20; seven track read-after-write magnetic recording head, 115  
 Grey, R. B., on radio plant in Zambia, 721  
 Griffith, N. V., off-peak heat storage research, 36  
 Grinders (trade publication), 94  
 Grinding, air (trade publication), 510  
 — and crushing mills, Aerofall range of, 56  
 — Device, Any-sizer V-roll, for precision diameters (Dayton Perforators (UK) Ltd.), 816  
 — Form, Optidress, Projectorscope and Profiloscope equipment for, 219  
 — Machine, angle, Super Stork Martin, 343  
 — BE21 (Strojimport) 437  
 — Bryant Centalign, 757  
 — Centreless, Bryant CentaForm, 59  
 — Centreless, for tapered bearing production (Birmingham Small Arms Co. Ltd.), 757  
 — Cylindrical, high precision (Norton Co.), 281  
 Grinding machine, cylindrical, RHU450 (Matchless Machines Ltd.), 473  
 — Drill, Christen, 86  
 — Drill, Model 88 (Caledonian Grinding Machine Tool Co. Ltd.), 186  
 — Drill, Rotacone, 314  
 — Electrolytic, 469  
 — Gear, OB16A (Strojimport), 437  
 — Heald Centri-Matic, 757  
 — for large crankshafts (Churchill Machine Tool Co. Ltd.), 438  
 — Large surface, Mattinson, 631  
 — Model 55 Profile Accurascope, 343  
 — Precision (Churchill Machine Tool Co.), 314  
 — Precision cylindrical, Cornet, 377  
 — Precision, exhibition of (A. A. Jones & Shipman Ltd.), 319  
 — Surface, Model V60/16 (Snow & Co. Ltd.), 313  
 — Twist drill point, Weedeåg WL1B, 473  
 — Machinery (trade publication), 446  
 — Spindles with air bearings (Westwind Turbines), 265-266  
 — Tool, hand, air-turbine, Tyna Mite, 793  
 — Wheel forms, Optidress, Projectorscope and Profiloscope equipment for, 219  
 Grob Type ZM facing and centring machine, 378  
 Ground glass balls (trade publication), 638  
 Grubb Parsons, description of "Isaac Newton" 98-in telescope, 165-168; low speed wind tunnel for Hawker Siddeley Aviation, 495  
 GS gas, advantages of, 725  
 Guards, machine, photoelectric (Photain Controls Ltd.), 409  
 — Machinery (trade publication), 222  
 Guardian outdoor wall lanterns, 64  
 Guerrero, Dr. Ing. U., Steel Congress (Luxembourg), 617  
 Guest Keen & Nettlefolds, SPAT system double-action assembly gun and special screw, 634  
 Guild of Motoring Writers, annual test day at Goodwood, 554  
 Guillotine flying shear for Australia, Model 76-92 Halden-Robertson, 666-667  
 Gullick Ltd., range of power advanced roof supports, 57; development of ROLF coal-cutting equipment, 76  
 Guma Dam, earth and rock fill construction, 622-623  
 Guma Valley Water Co., 623  
 Gummed paper tape, reinforced, Armourbond, 282  
 Gump, C. B., on Die Design Handbook (review), 252  
 Gun, soldering (Millers Falls Co. Ltd.), 85  
 Gunn effect devices, epitaxial and conventional, 244  
 Gunsons Sortex Ltd., Sortex 621M minerals sorting machine by colour, 535; Soniscare ultrasonic generator for scaring vermin and birds, 786  
 Guntert and Zimmerman slipform paver, 232  
 Guttman, I., on Introductory Engineering Statistics (book), 382  
 Guyson Industrial Equipment Ltd., Powerblast Mark I turntable for flash removal, 535  
 GWB Furnaces Ltd., factory extension, 48; dc operated contactors (trade publication), 158; isolators (trade publication), 158; AC operated contactors (trade publication), 190; control gear (trade publication), 190; 7,500 kVA electric arc melting furnace, 380  
 Gyra-Flo high pressure centrifugal fan, 667  
 Gyros (book), 702  
 — Autoneticas G.10A for inertial navigation system, 562  
 Gyroscopes, research grant for, 240
- ## H
- HABERMAN, C. M., on Engineering Systems Analysis (review), 822  
 Hackbridge & Hewitt Electric Co. Ltd., rectifiers (trade publication), 605  
 Haden, G. N., & Sons Ltd., ventilating equipment for Khormaksar power station, 144  
 Hadfields Ltd., trading report, 17; effect of proposed corporation tax, 17  
 Hadland, John (Photographic Instrumentation) Ltd., Ferrovolt high speed drum camera, 794  
 Hagglund Industrial Ltd., welding unit for reconditioning tractor wheels, 213  
 Haile Moor Mine, remotely controlled mine loader in, 818  
 Haines, W. R. R., on Plessey Radar Ltd., 496  
 Hainsworth geared speed reducers, 551  
 Halcrow, Sir William, & Partners, engineering studies for Volta River project, 362; Accra-Tema Motorway, 708  
 Halden, J., & Co. Ltd., Texpol polyester drafting film for high quality drawings, 24  
 Halden Reactor Project (ENEA), Italian participation in, 529  
 Hall & Hall Ltd., Hallite scraper seals to protect hydraulic rams, 57; Wheelabrator automatic mechanical machine for de-flashing rubber, 83; seals (trade publication), 702  
 Hall, J. & E., screw-type compressors for liner *Queen Elizabeth*, 784  
 Hall, Dr. P., Transportation Engineering Conference, 8  
 Hall & Pickles Ltd., installation of GFM stretch forging machine, 627  
 Halden-Robertson, Model 76/92, guillotine flying shear for Australia, 666-667  
 Hallite scraper seals to protect hydraulic rams, 57  
 Hallsworth automatic foundry plant for Czechoslovakia, 113  
 Halotec leak detector for vacuum systems, 281  
 Hamburger Flugzeugbau GmbH, 246  
 Hammers, DGH counterblow, and hydraulic forging presses (Burton Griffiths & Co. Ltd.), 473  
 — Plastics (trade publication), 222  
 Hammond, Prof. P., review of Dynamic Systems Analysis, 28; review of Graphische Methoden zur Lösung von Wechselstromproblemen, 157; review of electromagnetic Problems of AC Machines, 508; review of Die Prüfung elektrischer Maschinen und die Untersuchung ihrer magnetischen Felder, 733; review of Ethical Problems in Engineering, 765  
 Hamworthy Engineering Ltd., manufacturing agreement for Hydreco products, 81  
 Hamworthy Hydraulics Ltd., new works, 81; expanding exports to Europe, 81  
 Hand dryer, electric, Freco Perfect, 216  
 Handbook of applied hydrology, by Ven Te Chow (review), 60  
 — of compositions at thermodynamic equilibrium, by C. R. Noddings and G. M. Mullet (book), 446  
 — of electron beam welding, by R. Bakish and S. S. White (review), 253  
 — of Mathematical functions, by M. Abramowitz and I. A. Stegun (book), 62  
 Handicrafts and Do It Yourself Exhibition, International (Olympia), exhibits at, 384  
 Handling, die, trucks for (Greenwood & Batley Ltd.), 694  
 — Equipment, remote, type 150 (Nuclear Equipment Ltd.), 152  
 Hanger bracket, adjustable (SGB Building Equipment Division), 434  
 Hanover Fair (1966), advance notice of, 823  
 Hansa HFB 320 executive twin-jet aircraft, 246  
 Hansen, Knud E., bulk carrier design, 304  
 Harbour at Port Talbot for iron ore imports, construction of, 369  
 Harcostar Ltd., formation of, 176  
 Hard facing by flame spraying, 563  
 Hardebeck, G., apprenticeship trends conference, 781  
 Hardebeck, G. C. M., on Bemetel, 809  
 Hardening, dispersion, research grant for, 113  
 — Flame, Shorter process of, developments of, 150  
 — Induction, facilities at Flame Hardeners Ltd., 150-151  
 Hardness monitor, magnetic, for moving strip and continuous annealing lines (BISRA), 18  
 — Tester, non-destructive, Sonodur Type 1850, 663  
 — Testing on curved surfaces, 411  
 Hards, K. W., on New Ways of Working Metals (book), 254; (review), 701  
 Hardstem rock sealing compounds, 118  
 Hardestop rock sealing compounds, 118  
 Hardy & Padmore Ltd., closed circuit television for sand and gravel plants, 594  
 Hardy Spicer cardan shaft for diesel hydraulic locomotives, 26  
 Hargrave, D. P., molybdenum and tungsten, 501  
 Harland & Wolf Ltd., Norwegian contract for bulk carriers, 241; dry dock at Belfast Lough, 698  
 Harold Malley School, applied science activities, 239  
 Harris, K. P., designed obsolescence abused?, 328  
 Harris Manufacturing Co., cryostatic metal processing equipment, 379  
 Harrison, G., applied science in schools conference, 517  
 Harrison, T., Chaplin Ltd., barge mounted trencher digger for riverside maintenance, 312  
 Harrison, T. S., & Sons Ltd., centre lathes, 315  
 Harrow, beam, Cooper-Deeley, 78  
 Harshaw Chemicals Ltd., WB1200SL process for micro-cracked chromium plating, 628  
 Hart, Dr. A. B., energy storage in bulk, 531-534. *Letter*, 613  
 Hart, J., on Progress in Dielectrics (book), 62  
 Hartley, Sir Harold, on world needs of fuel and power, 323  
 Hartley and Sugden, oil-fired packaged boilers, 59  
 Hartwell Hillman Imp Stage 4 motor car at Goodwood, 554  
 Harvester, beet, tanker, Farmhand, 744  
 — Combine. See *Combine harvester*  
 — Forage (Massey-Ferguson), 744  
 Harvey Fabrication, low speed wind tunnel for Hawker Siddeley Aviation, 495  
 Harvey, G. A., Group, formation of Harcostar Ltd., 176  
 Harvey, G. A., Group Services Ltd., training scheme, *Letter*, 199  
 Harvey, G. A., Office Furniture Ltd., filing and storage equipment (trade publication), 382; storage shelving (trade publication), 702  
 Harvey, P. D., on Die Design Handbook (review), 252  
 Hastings aircraft crash, 67  
 Hawke Cable Glands Ltd., Mark II series of cable glands, 539  
 Hawker Siddeley Aviation Ltd., Hawker Siddeley 748 aircraft crash at Lympne, 67; Buccaneer aircraft with rocket boost, 107; Trident 1 and 2 medium-haul transport aircraft, 273; Trident aircraft for BEA, 273; Trident aircraft landing system, 334-335; low-speed wind tunnel for V-STOL aircraft research, 495; orders for Hawker Siddeley 748 aircraft, 688  
 Hawker Siddeley (Canada) Ltd., railcars for Toronto, 625; gas turbine generator for New Zealand, 753  
 Hawker Siddeley Dynamics Ltd., automatic voltage regulator for Brush type 4 diesel-electric locomotive, 441  
 Hawker Siddeley Group, investigation into ocean resources, 80  
 Hawkins, C. W., on Dover Engineering Works Ltd., 144  
 Hawthorn Leslie (Buildings) Ltd., prefabricated wall panel with stainless steel cladding, 660  
 Hawthorn Leslie (Engineers) Ltd., orders for liquefied-gas carrying vessel, 305; ship-builders and marine turbines, 613  
 Hawthorn Leslie (Shipbuilders) Ltd., orders for liquefied-gas carrying vessel, 305  
 Hawthorne, W. R., on Aerodynamics of Turbines and Compressors (book), 94; (review), 636  
 Hay & Smart (Projects) Ltd., development of Multipack articulated ship, 719  
 Hayden-Nilos Ltd., Darnalloy hose fitting tools, 53  
 Hayden W., on Structure and Properties of Materials, Vol. 3 (book), 413  
 Hayes County Grammar School, applied science activities, 239  
 Hayes Engineers (Leeds) Ltd., Tracemaster Type TM43D automatic profile milling machines, 378  
 Haymaker, Wispur, 79  
 Haynes, L. H., on tax for long car?, 137. *Letter*, 137  
 Hayward Tyler & Co. Ltd., 150th anniversary, 784; manufacturing activities, 784  
 Hazen, Dr. Harold, on re-education of engineers, 206  
 H.B. Fillers Ltd., acquisition by R. Goodwin & Sons (Engineers) Ltd., 785  
 HD.1 hovercraft (Hovercraft Development Ltd.), 169-170  
 Head, J. W., on Unified Circuit Theory in Electronics and Engineering Analysis (review), 252  
 Head losses in coiled pipes, by Dr. J. A. Sandover and J. A. Tallis, 156  
 Head, Wrightson & Co. Ltd., annual report, 15; wet dust collector (trade publication), 190; boiler shells for Dungeness A atomic power station, 300; grinding machinery (trade publication), 446; fluidized bed dryer (trade publication), 574  
 Head Wrightson Machine Co. Ltd. manufacturing agreement with Verson Allsteel Press Co., 497  
 Head Wrightson Stockton Ltd., autotransformer tanks in aluminium NP8, 210  
 Head-up display systems, 241  
 Heald Centri-Matic grinding machines, 757  
 Health at Work (TUC publication), 98  
 Heard, J. G., Royal Institution research day, 642  
 Hearing aid, Amplivox Minivox, 551  
 Heat consumption recorder for heating system, Norco Junior, 352  
 Heat exchanger discs for Rover BRM gas turbine motor car, 82  
 — Powell Duffryn WA-25D, 736  
 — Pyroceram, in Rover-BRM gas-turbine motor car, 68  
 — Small (Resco Engineers Ltd.), 281  
 — Warm-air heater, Housewarmer, 352  
 — Sinks, Lektrokit series of, 115  
 — Silicone, high conductivity DP 2623 (Midland Silicones Ltd.), 146  
 — Storage electrical energy storage and conversion considerations, 533-534  
 — Transfer, boiling, in steam generating units, symposium on (IME), 95  
 — in condensers, research in (AML), 72  
 — Industrial, by A. Schack (book), 574  
 — Notes, by L. M. K. Boelter, V. H. Cherry, H. A. Johnson and R. C. Martinelli (review), 795  
 Heater, air (trade publication), 446  
 — Automatic oil-fired, Pak-a-Way range of (Package Co. Ltd.), 278  
 — Wanson Thermobloc, 594  
 — and water, oil-fired, N400 (C. M. Hess Ltd.), 672  
 — Electric fan (Merican Electric Co. Ltd.), 814  
 — Off-peak storage, 24, 36, 37, 736  
 — Equipment for motor cars, 557  
 — Gas infra-red radiant, Site-Comfort LP, 249  
 — Overhead radiant, Satellite, 186  
 — Oil-fired, for cargo depot, Pak-a-Way, 564  
 — Oil-fired, Turbo-Static 300, 761  
 — Paint (Aerograph-DeVilbiss Co. Ltd.), 535  
 — Portable oil fired space, Master range of, 570  
 — Radiant, portable propane-fired, Porta-Radiant, 536  
 — Recirculating forced-air, BEHA Aston Gyro, 576  
 — Salad panel, with Flexel elements, 192  
 — Space, Jan-aire portable, 504  
 — for mobile theatres, Pak-a-Way, 790  
 — Oil fired, TS800, Turbo-Static, 436  
 — Suspended oil-fired, Econheat range of, 435  
 — Unit-plan electrical, for farmhouses, 37  
 — Warm-air heat exchanger, Housewarmer, 352  
 — Water, BM 30 W oil control valve (BM Control Valves), 224  
 — for Canvey Island methane terminal, 753  
 — Thermal storage, approval of, 640  
 Heath, E., elected leader of Conservative Party, 129-130  
 Heating, central, antifreeze for, Forlife (C.H.), 544  
 — Electric, Flexel system, 192  
 — Equipment retailers, catalogue of, 320  
 — for farmhouses, Unit-plan system, 37  
 — Heatmaster gas-fired small bore unit, 416  
 — Survey (NCB), 224  
 — District, Agesta project, 141  
 — Domestic. See also *Clean Air, Fuel Efficiency and Domestic Heating Exhibition*  
 — Electric surface, for distillation column (A. Boake Roberts & Co. Ltd.), 785  
 — Engineers' guide (trade publication), 702  
 — Equipment, industrial process, exhibition of, 255  
 — Flats and houses, electricity for (trade publication), 94  
 — Floor, design service for (British Insulated Callender's Cables Ltd.), 224  
 — Off-peak system research (ERA), 36  
 — Gas-fired WarmAir (Thomas Potterton Ltd.), 736  
 — and hot water, control system for, Prefect, 544  
 — Induction, generator for (Electroheating (London) Ltd.), 85  
 — Jackets, electric, Isojacket, 785  
 — Kinetic, for flight loadtest frame, 621  
 — Panel, bath side (Reginald Clayton Ltd.), 576



- Heating, radiant, air heated tube, Brightad, 660  
 — Systems, heat consumption recorder for, Norco Junior, 352  
 — Plenum, for London Zoo, 16  
 — Thermal storage (trade publication), 94  
 — Underfloor electric off-peak, in Salisbury cathedral, 819  
 — Units and lighting fittings, Falks showroom for, 96  
 — Warm air, Envoy fan powered convector unit for (Myson Heat Exchangers Ltd.), 736  
 — Air, equipment review for, 736  
 — Air, McClary "7-in-1" gas-fired balanced flue furnace for, 736  
 — Air, Model 60/11 oil-fired unit for (Potez Industries of Ireland Ltd.), 736  
 Heatmaster gas-fired small bore central heating unit, 416  
 Heavy Electricals (India) Ltd., Holroyd sheet cutting machine, 186  
 — Equipment, shallow draught ship for transportation of, 13  
 Hedges, E. S., on Technology of Tinplate (book), 702  
 Hedon Chemicals Ltd., reorganisation of, 368  
 Hedon Monomers Ltd., formation of, 368  
 Heightfinders, HF200 (Plessey-Radar Ltd.), 433  
 Heiler, T., on Illustrated Technical Dictionary of Metal Cutting Tools (review), 61  
 Heinemann type JA magnetic miniature switchgear circuit breaker, 403  
 Heinkel Colani RS motor car, 339  
 Hele's School, applied science activities, 239  
 Helicopter, Hughes Model-269, 601  
 — Hughes Model-269A, 601  
 — Hughes Model 500, 601  
 — Hughes OH-6A, 601  
 — Service in Channel Islands, 368  
 — Sikorsky S61N, 368  
 Helimatic, Dormer Series 2, screwed shank tool holder, 154  
 Helium Dewar flasks (MEL Equipment Co. Ltd.), 727  
 — Gaseous, refrigerator for testing atomic propulsion system components, 401  
 — Liquid, importation of (British Oxygen Cryoproducts), 17  
 — Purification unit for (British Oxygen Cryoproducts), 814  
 — Recovery unit (British Oxygen Cryoproducts), 794  
 — Refrigerator for bubble chamber (British Oxygen Cryoproducts), 553  
 Henderson, J., creep stress distribution in beams, 571  
 Henderson & Keay Ltd., eccentric tool holder (trade publication), 222  
 Hennessy, J., review of Conservative Opportunity: Fifteen Bow Group Essays on Tomorrow's Toryism, 285; review of Nation Not Afraid: The Thinking of Enoch Powell, 285; review of City in the World Economy, 317  
 Henocq, R. G., development of air bearings, 265  
 Henrici, P., on Elements of Numerical Analysis (review), 381  
 Henry, D., on Modern British Bridges (book), 94  
 Henshall, S. H., on facing up to more power for ships?, 613  
 Henshilwood, C. P., modification of domestic appliances for gases of high calorific value, 725  
 Henwick Hall, railway accident at, 547  
 Hepworth Iron Co. (Engineering) Ltd., copying equipment for high duty lathes, 245; annual statement, 336  
 Herbert & Sons Ltd., industrial weighing machine for continuous weighing and totalizing, 730  
 Herke, P. W., testing of heavy goods vehicles, 7  
 Hermes, H., on Enumerability, Decidability, Computability (book), 734  
 Herzbi Ltd., flexible nylon cable saddle, 310  
 Heslop, J., on advanced nickel-chromium base alloys, 501; nickel-chromium alloys, 501  
 Hess, C. M., Ltd., N400 oil-fired air and water heaters, 672  
 Heteroatomic polymers in high temperature material studies, 264  
 Heurteux, B., review on Aerodynamics of Turbines and Compressors, 636  
 Heyman, Horace (Overseas Services) Ltd., battery discharge indicator (trade publication), 766  
 Heywood, J., applied science in schools conference, 517  
 Hickson's Timber Impregnation Co. (GB) Ltd., Vac-Vac process for treating timber, 660  
 Hiduminium-48 aluminium alloy, 370  
 Hield Bros., air conditioning equipment for weaving mill, 625  
 Higgin, G., on Communications in the Building Industry (book), 190; (review), 382  
 Higgs Motors Ltd., three phase squirrel cage induction electric motors, 311  
 High Duty Alloys Ltd., Hiduminium-48 aluminium alloy, 370; high-energy rate forging, 774  
 High-energy rate, forging, 500  
 — Rate forging costs, 775  
 — Rate forging, development position and prospects, of 739, 774-775  
 — Rate forging, Petro-Forge system of, 775  
 — Rate forging, USI-Vickers joint production project on, 774  
 — Rate forming machine, Dynapak, 755-756  
 — Rate forming, parts made by, 756  
 — Rate forming process, 755  
 — Rate forming, tool design, 756  
 — Rate forming, turbine wheel made by, 756  
 High-frequency measuring instruments, modular (United States National Bureau of Standards), 788  
 High Precision Equipment Ltd., numerical control of machine tools, 269  
 — Pressures and condensed phase, physics of, by A. Van Itterbeek (review), 669  
 High Pressures International Conference on (France), 433  
 — Research, 433  
 High Standard Manufacturing Corp., Adapt-o-drill gun-type drill for high-precision holes, 758  
 High-strength materials, by V. F. Zackay (book), 670  
 High voltage equipment (trade publication), 670  
 High Wycombe by-pass, progress of, 112  
 Highland Electronics Ltd., Series O1 range of miniature illuminated push button switches, 282; alarm annunciators (trade publication), 542  
 Highway practice, conference on, 607  
 — See also Road  
 Hilger & Watts Ltd., Fizeau-type simple gauge interferometer for training departments, 21; micrometer water level gauge, 249; levels and clinometers (trade publication), 254; projectors and inspection enlargers, 702  
 Hill Equipment Ltd., high speed brake testing machine, 216  
 Hillier, J. A., Transportation Engineering Conference, 8  
 Hillman Super Minx and Minx de luxe motor car, improved versions, 332  
 Hilmer, Hermann, multibladed frame saw for stone, 51  
 Hilti (Gt. Britain) Ltd., rotary percussion drill (trade publication), 798  
 Hilton, Dr. W. F., on Manned Satellites (review), 445  
 Hinckley Grammar School, applied science activities, 239  
 Hinde, D. W., on Graded Problems for Electrical Engineers (book), 286  
 Hinton, Lord, British Electrical Power Convention, 5, 7; on professional engineer, 198; on conventional and nuclear power generation, 323  
 Hinton, John, Ltd., Gast model 0822 motor mounted vacuum-pump/compressor, 537  
 Hi-Rate swimming-pool filter with permanent media, 768  
 Hird-Brown Ltd., type NSL-364C cadmium selenide photo-conductive cell, 245  
 Hirst Electric Industries Ltd., new name for Hirst Electronic Ltd., 657  
 Hirst Electronic Ltd., renamed Hirst Electric Industries Ltd., 657; SC-P12-A automatic magnetizing equipment, 663  
 Hirst (Microwave Heating) Ltd., activities of, 657  
 Hitachi Ltd., turbines and governors for Volta River project, 364  
 "Hi-Top" electrolytically-chromated steel, 617  
 Hivac Ltd., gold plated dry reed insert, 667  
 HNP Industrial Sales Ltd., loading boom, 86; stainless steel convoluted hose, 634  
 Hoare, W. E., on Technology of Tinplate (book), 702  
 Hobart Bros. Co., "Flex-wire" semi-automatic welding equipment with constant-voltage and constant current, 85  
 Hobart Bros. (Great Brothers Co.) "Flex-wire" semi-automatic welding equipment with constant-voltage and constant current, 85  
 Hoben Davis Ltd., acquisition by R. Goodwin and Sons (Engineers) Ltd., 785  
 Hoe, R., and Crabtree, Ltd., Crusader web-fed offset printing press for newspapers, 84  
 Hoesch Ltd., hydraulic roof support for mines, 88  
 Hoffmann Manufacturing Co. Ltd., meeting on rolling bearings for electrical rotating machines, 42; Bryant Centa-Form centreless grinding machine, 59; range of self-aligning spherical roller bearings, 436; production of tapered roller bearings, 757  
 Holcroft, H., on Locomotive Adventure, Vol. 2 (review), 763  
 Holdridge radius turning device, 90  
 Holford, Lord, on design of new London Bridge, 130; Teesside industrial estate, 776  
 Holland, Delta Plan, 488  
 Holland, E. D., review of Business of Product Design, 381; review of Bullnose Morris, 701; review of The Production and Competition History of the Pre-1939 Riley Motor Cars, 796  
 Holland and Hannen and Cubitts Ltd., Barduct busbar system for building sites, 339; "Decision on Housing," cinema film on industrialized housing, 561  
 Holland, Hannen and Cubitts (North Western) Ltd., Birmingham Post and Mail headquarters, 600  
 Hollingsworth, A. T., activities with ENGINEERING, 832, 834; partnership, 834; post-war activities, 838-839; death of, 839  
 Hollingsworth, J. G., killed at Gallipoli, 838  
 Holloway, L., creep in concrete at higher temperatures, 122  
 Holman Bros. Ltd., annual trading report, 49; increased exports, 49; Sinex mine car shake-out, 57; Goodyear BC12 face drainage snore pump, 120  
 Holman Group, rising productivity, 305; activities of subsidiaries, 305  
 Holman, J. F., on Holman Bros., Ltd., 49  
 Holmes Monovalve gas dryers, 344  
 Holmes, W. C., & Co. Ltd., Holmes Monovalve gas dryers, 344; air blowers (trade publication), 446  
 Holroyd, John, & Co. Ltd., Duplex milling machine, 86; plastic sheet cutting machine, 186  
 Holst & Co. Ltd., four-flue chimney at Eggborough power station, 151; reinforced concrete football stand at Galashiels, 466  
 Holt, Alfred, & Co., formation of Overseas Containers Ltd., 322  
 Home Fittings (Great Britain) Ltd., Brockhouse mono-cord venetian blind, 597  
 Homoatomic polymers in high temperature material studies, 264  
 Honda (UK) Ltd., F30 cultivator/tractor powered by G1130 petrol engine, 727  
 Honda E300 portable ac generator, 375  
 Honda sports 600 cc motor car, UK market for, 258  
 Honeywell Controls Ltd., pushbutton switches with alternate action, 52; Servotronik temperature indicating controller with thyristor power, 120; Cargoaire cargo dewpointer system, 123; Honeywell 200 computers for typesetting of newspapers, 244; liquid level controller, 248; printed circuit boards for H200 computer, 273; alarm scanning system for ships, 306; ALERT light weight digital computer, 311; control panel for gas-fired furnaces, 560; control system for Titan paver-finisher machine, 745  
 Honeywell Footwear Ltd., vinyl soled industrial boot, 51  
 Hong Kong, British Week (1966), 160  
 Hong Kong Electric Co. Ltd., boiler equipment for Ap Lei Chau power station, 721  
 — 66 kV package substation for, 307  
 — Power station at Ap Lei Chau, 240  
 — Tsing Yi power station, 120 MW turbine generators for, 465  
 Honing machines, 24/24 dry, for critical surfaces (Vacu-Blast Ltd.), 535  
 — Internal (Perfection Engineering Ltd.), 376  
 "Hook-Tooth" bandsaws (trade publication), 94  
 Hooper, D., on Dynamics of a Changing Technology (review), 540  
 Hope, Henry, & Sons, development of standard metal window, 366-367; module 4 standard windows, 366; reversible windows, 367; draught ventilators, 560; manufacturing agreement with Western Engineering & Manufacturing Co., 560  
 Hopper for iron ore concentrate handling, 134  
 Hopwood, H., on nuclear ships, 751  
 Horger, O. J., on ASME Handbook: Metals Engineering Design (book), 30  
 Horne, M. R., on Stability of Frames (book), 605  
 Horsehay Co. Ltd., mobile moulds for precast concrete panels, 240  
 Hose clamps, worm-drive, stainless steel (J.C.S. Hi-Torque Ltd.), 472  
 — Clips, stainless steel (Bell's Asbestos & Engineering Ltd.), 435  
 — Coupling in "Delrin" acetal resin, Dunlop 3 in, 567  
 — Fitting tools, Darnalloy, 53  
 — Flexible, and self-sealing couplings (trade publication), 318  
 — Nylon coiled, Top-Dog, range of, 345  
 — Reel, fire (Merryweather & Sons Ltd.), 215  
 — Fire, SC square cover (Dunford Fire Protection Services Ltd.), 215  
 — Specifications, ISO, 813  
 — Stainless steel convoluted (HNP Industrial Sales Ltd.), 634  
 Hosier and Allied Trades Research Association, crimp rigidity testing machine for nylon yarn, 380  
 Hoskins, G. O., on Elements of Industrial Organization (book), 190  
 Hospital block, Bison preferred dimension frame for system built, 698  
 — Glasgow Royal Infirmary, MotaVeyor conveyor belt as hospital exerciser, 59  
 — Royal Victoria Infirmary, Freezemasters, for cooling small specimens, 80  
 — St. Helier, foundation renewal work on, 648  
 — Technicians and engineers, need for more, 1  
 Hot drinks, Super-7 vending machine for (Joseph Sankey & Son Ltd.), 730  
 — Water and heating, control system for, Prefect, 544  
 Hough H-50B Payloader four wheel drive tractor shovel, 410  
 Houlder Bros. Ltd., liquefied-gas carrying vessel, 305  
 Houses, aircraft damage to, research (BRS), 256  
 — Building on clay slope, research on, 256  
 — Research activities of (BRS), 256  
 — System, industrialized, 12M Jespersen, 143  
 — Steel, design competition, 624  
 Houseboats as site accommodation on hydro projects, 728  
 Housewarmer heat exchanger warm-air heater, 352  
 Housing, industrialized, cinema film on, "Decision on Housing," 561  
 — and Local Government, Ministry of, gravel and sand map of England, 560-561  
 — System, industrialized, on King's Lynn estate (Lowton-Cubitt), 561  
 Hovercraft Development Ltd., development activities, 169-170  
 — Position and prospects, 169-170, 741  
 — Ferry services, 169  
 — HD.1 (Hovercraft Development Ltd.), 169-170  
 — Passenger/car ferry service, Westland SR-N4, 674  
 — SR-N1 (Westland Aircraft), 169  
 — SR-N2 (Westland Aircraft), 169  
 — SR-N4 (Westland Aircraft), 169, 741  
 — SR-N5 (Westland Aircraft), 741; overturning accidents and plough-in resistance, 680  
 — SR-N6 (Westland Aircraft), 170, 741; modification to resist plough-in, 680  
 — Tracked hovertrain proposal, 170  
 Hoverkilo kiln for pottery firing, 741  
 Hovertrain, high-speed tracked, 170  
 Hovertravel Ltd., hovercraft ferry services, 169  
 Hover-vehicle, heavy load, for weak bridges and roads, 182  
 Howard, M. (Mitcham) Ltd., foundation renewal work for St. Helier Hospital, 648  
 Howden, James, and Parsons of Canada Ltd., turbo-generator sets for Pickering atomic station, 302  
 Howe Richardson Scale Co. Ltd., member of feed mill consortium, 721  
 Howells Ltd., replacement of push benches, 625  
 Hubodometer Engler driverless hub-mounted odometer, 696  
 Huggins Laboratories Inc., Infrascop Mark 9 precision infra-red radiometer, 817  
 Hughes Aircraft Co., 22-channel television satellite, 564  
 Hughes Model 269 helicopter, 601  
 — 269A helicopter, 601  
 — 500 helicopter, 601  
 — OH-6A helicopter, 601  
 Huitson, A., on Essentials of Quality Control (book), 605  
 Hull design, tank tests on, of Cunard liner, 380  
 Human engineering guide for equipment designers, by W. E. Woodson and D. W. Conover (review), 477  
 Hume, K. J., on Metrology with Autocolimators (review), 573  
 Humidistat for control of relative humidity (Ronald Trist Controls Ltd.), 118  
 Humidity, relative, humidistat for control of (Ronald Trist Controls Ltd.), 118  
 Humphreys & Glasgow Ltd., gas reforming plants using ICI 500 process, 528  
 Humphreys, H. H., Guma Dam, 622  
 Hungarian technical and scientific journals, 316, 700  
 Hunt, A., Royal Institution research day, 642  
 Hunter, Sir John, on EITB, 609  
 Hunter, L. C., on Mathematical Theory of Reliability (book), 126; (review), 285  
 Huntrider underground transporter for men and materials, 55  
 Hursant Electronics Weathermaster Spray-gun, 213  
 Hurst, Dr. R., unitised reheat steam turbine, 521  
 Husky portable saw, 384  
 Hustler fork lift truck with attachments, 409  
 Hutchison, Sir Kenneth, on Nigerian natural gas, 257  
 Hutchison, T. B., unitised reheat steam turbine, 520-521  
 Huwood Ltd., Huwood Mastabar self-advancing roof supports, 56  
 Huwood Mastabar self-advancing roof supports, 56  
 "Hydraclaw" steel-bodied hydraulic jack (trade publication), 382  
 Hydraflex Connector in oil-drilling rig, 205  
 Hydramatic epicyclic gearbox in Oldsmobile Toronado motor car, 430  
 Hydra-Muscle Hydraulics Ltd., transportable mixing and pumping unit for rock sealing compounds, 118  
 Hydraquip Ltd., Hyvarmill high speed milling head, 436  
 Hydraulic drives, variable speed (Churchill-Sturm Ltd.), 657  
 — Fluid, Shell Irus Fluid 902, improved version, 217  
 — Motors, high-torque low-speed (Ruston & Hornsby Ltd.), 87  
 — Shock resistance, Mark 44 and Mark 77 (Chamberlain Industries Ltd.), 471  
 — Pontoon rig for pile driving, 441  
 — Press. See Press  
 — Pump. See Pump  
 — Research Station, Guma Dam, 623  
 — Systems, portable oil filter pack for (Towler Bros. Patents), 116  
 — Vibration test system, packaged (Fairey Surveys Ltd.), 793  
 Hydraulics and undercarriages equipment for HFB320 Hansa executive jet aircraft (Lockheed Precision Products Ltd.), 246  
 Hydroco products, manufacturing agreement for, 81  
 Hy-Drive fork truck (Conveyancer Fork Trucks Ltd.), 731  
 Hydrodynamics and aerodynamics, two-dimensional problems in, by L. I. Sedov (book), 510  
 — in theory and application, by J. M. Robertson (book), 286; (review), 445  
 Hydroelectric generation future of, 323  
 — Power Commission of Ontario, Pickering atomic power station, 302  
 — Scheme, Colombia, 808  
 — Scheme, El Cadillac, 91  
 — Scheme, Fada/Fionn, position and prospects of, 706; cancellation of, 737  
 — Scheme, Laidon, position and prospect of, 706; cancellation of, 737  
 — Scheme, Loch Awe, 489  
 — Scheme, pumped storage (Ffestiniog), 374  
 — Schemes, pumped storage, in Scotland, 489-491  
 — Scheme, Volta River, 336, 361-365  
 — Station, Cruachan, 489  
 — Station, Dneiper, extension plans, 624  
 — Station, underground, River Tuloma, 624  
 Hydro-flo packaged electric chiller unit for air conditioning or process cooling, 792  
 Hydrogen coolers, for 500 MW alternators, 355  
 — Generator, electrolytic, Elhygen, 185  
 — in metals analyser (Cambridge Instrument Co. Ltd.), 663  
 — Separators (trade publication), 638  
 Hydrology, applied, handbook of, by Ven Te Chow (review), 60  
 Hydromat combined spring damper unit, Boge, 586  
 Hydro-Sense control for tape controlled drilling machine, 271  
 Hydrostatic extrusion development position and prospects, 811  
 Hydrostatic Transmissions Ltd., high-torque low-speed hydraulic motors, 87  
 Hydro-Thread control for tape controlled drilling machine, 271  
 Hydrovane compressors, 789  
 Hygrometer (trade publication), 318  
 — Portable, with variable capacitance sensing element (Shaw Moisture Meters), 20  
 Hymatic Engineering Co. Ltd., Minicooler MC8 miniature gas liquefier, 147; RAV137 relief and control valves, 471; portable compressor (trade publication), 702; Hydrovane compressors, 789  
 Hy-Spec pressure gauge, 155  
 Hyster Co., lift trucks (trade publication), 798  
 Hyvarmill high speed milling head, 436



- I**
- IBM United Kingdom Ltd., IBM 224 pocket-size dictating machine, 88; mobile exhibition for sub-contractors, 369
- Ice cream products, cold store for (Newalls Insulation & Chemical Co. Ltd.), 337
- ICI (China) Ltd., translation of technical literature for Tientsin exhibition, 497
- ICI Fibres Ltd., nylon conveyor belts (trade publication), 222; Nufil and Ulstron synthetic fibres, 568
- ICI. See also *Imperial Chemical Industries*
- ICI 500 gas reforming process, 528
- IDAST. See *Interpolated Data and Speech Transmission system*
- Ignitron, water-cooled, ZX1060 (Mullard Ltd.), 24
- Iligan Integrated Steel Mills Inc., steelworks in Philippines, 813
- Illinois Tool Works Inc., Type 18 snap-action micro-switch, 114
- Illston, Dr. J. M., review of Introduction to Prestressed Concrete (Vol. 1), 93; review of Design of Non-Planar Concrete Roofs, 125
- Illumination unit, Electrolite, 817
- See also *Light; Lighting; Lamp*
- Illuminator, Nicholas, fibre optics attachment for (trade publication), 542
- ILMAC. See *International Exhibition and Congress of Laboratory, Measurement and Automation Techniques in Chemistry*
- Imatran Voima, River Tuloma underground power station, 624
- IME Spa, IME84 transistorized desk calculator, 505
- Imp Airmaster dust extraction plant, 472
- Impact breakers (trade publication), 126
- Impact Equipment Ltd., Titan paver-finisher machine for asphalt or concrete, 745
- Wrenches (trade publication), 190
- Impedance changer probe (Kynmore Engineering Co. Ltd.), 216
- Imperial Chemical Industries Ltd., appointment of regional commercial managers, 16; Melinex for drawing paper, 52; investigation into ocean resources, 80; expansion of raw titanium plant, 177; improved process of production, 177; new plant for continuous production of Purlboard laminate, 183; Flexel electric central heating system 192; ownership of Odeco (UK) Ltd., 205; pressure-testing and purging of new pipelines, 210; fertilizer process agreement with Simon-Carves Ltd., 272; £50 million loan for investment in new plant, 290; polypropylene plant, increased capacity, 304; rigid pvc lining (trade publication), 382; exhibition in Tientsin, China, 497; manpower utilization and payment scheme, 547; solvents (trade publication), 734; see also *ICI*
- Imperial College of Science and Technology, Consort Mark 2 atomic reactor, 12; appointment of visiting professors, 38
- Imperial Metal Industries Ltd., semi-fabricated titanium, 177
- Imperial Tobacco Co. Ltd., activities in teaching machine field, 518; courses at Chewton Place, 518; application of programmed instruction to sales training, 519
- Import of liquefied natural gas, by Sir Henry Jones, 771
- Imported manufactures; an inquiry into competitiveness (report), 354
- Impregilo, Volta River power project, 361, 364
- Impulse meters, single-phase and polyphase statistical, for Electricity Council (Ferranti Ltd.), 464
- Impulsive loads, behaviour of metals under, by J. S. Rinehart and J. Pearson (book), 382
- Incendata Ltd., formation and activities of, 721
- Incinerators, smokeless, Riley-Pillatt, 599
- Incomes policy comment on, 65
- Independent Television Authority, tests on colour television systems, 258
- Indexing system for rotary table polishing machines (W. Canning & Co. Ltd.), 179
- India, water and power research station golden jubilee, 823
- Indian Engineering Export Promotion Council, trade delegation to Europe, 785
- Indian Point, atomic power station at (Consolidated Edison), 721
- Indicating controller, thyristor power for, 120
- Indicators (trade publication), 605
- and amplifier unit, combined (Kent Precision Electronics Ltd.), 310
- Controller, miniaturized, Model-65 Dialset, 787
- Pneumatic, model 43A (Foxboro-Yoxall Ltd.), 726
- Indicator, neon (trade publication), 318
- for printed circuit boards, type M23 (KGM Electronics Ltd.), 23
- Remote (trade publication), 605
- Vertical scale (Kollman Instrument Ltd.), 283
- Indicator 194 gas controlled temperature indicator, 120
- Indonesia, electrification schemes, 784
- Indonesian States Tin Mining Enterprises, Bangka I non-propelled tin-mining dredge, 433
- Induction hardening. See *Hardening*
- Heating. See *Heating*
- Motor. See *Motor, electric*
- Indulex Engineering Co. Ltd., plastics cladding for London flats, 690
- Industrial accidents, NIIP study of, 592
- and Commercial Finance Corporation, activities of, 226
- Diamond Information Bureau, metalworking diamonds (trade publication), 286
- Industrial Education International, seminars on analysis of business decision problems, 391
- Industrial Equipment Ltd., grinders (trade publication), 94
- and services exhibition, International, 191, 730
- Estate outline plans for Teesside, 776
- Industrial Flexwood industrial wood veneer, 345
- Liaison officers, course on radioisotope techniques, 209
- Officers, role of, by R. Arnfield, 579
- Service of Ministry of Technology, 579
- Locomotive Joint Preservation Committee, locomotive museum at Penrhyn Castle, 272
- Organization, elements of, by T. H. Burnham and G. O. Hoskins (book), 190
- Theory and practice, by J. Woodward (book), 190; (review), 669
- Photographic and Television Exhibition (Earl's Court), exhibits at, 699
- Industrial Pressure Vessels Ltd., pressure plant for timber treatment, 259
- Relations in engineering, by A. Marsh, 737
- Industrial Sections Ltd., window frames for prefabricated wall panels, 660
- Society, trends in apprenticeships conference (Eastbourne), 809
- Industrial Timer Corp., COC/Time-O-Light portable microfilm reader, 282
- Training Act, most profitable use of, 2; appeals procedure, 38; imposition of payroll levy. *Letters*, 69, 199; trade union attitudes to, 137; implications of, 487, 781; grants for training, 580; effects of, 614, 615; implementation of, 717
- Boards, formation of foundry joint committee, 432; certificate of craftsmanship, 432; development in, 717
- Trends survey (CBI), 546
- Tribunals (England and Wales) Regulations 38
- Tribunals (Scotland) Regulations, 38
- Industry, business and, 1965, Penguin survey of, by R. Malik (review), 317
- Forecasting in, by E. O. Jones and J. G. Morrell, 353
- and university liaison development organisation (CBI), 771
- INEL. See *International Exhibition of Industrial Electronics (Basle)*
- Inelastic behaviour of load-carrying members, by J. O. Smith and O. M. Sidebottom (book), 798
- Inertia calculator (trade publication), 286
- Inertial guidance sensors, by J. M. Slater (review), 476
- Navigation system, E5, for commercial airlines (Elliott-Automation), 562
- Infirmiry, Bradford Royal, system-built construction of maternity unit, 698
- Information, access to, meeting on (Library Association), 700
- for employees, 35
- Resources in United States, directory of, 316
- and selection system for materials (Materials Data Ltd.), 530
- Infradex Ltd., Site-Comfort LP gas infra-red radiant heaters, 249; Porta-Radiant portable propane-fired radiant heaters, 536
- Infra-red radiometer, precision, Infrascopie Mark 9, 817
- Infrascopie Mark 9 precision infra-red radiometer, 817
- Ingersoll-Rand Co. Ltd., I-R CM-150 Crawl-IR self-propelled crawler drill, 155
- Inhaled particles and vapours, International symposium on, 191
- Injection moulding machine. See *Moulding machine*
- Inland Waterways Association, 193
- Development proposals, 193
- See also *River*
- Inorganic polymers for high temperatures (English Electric Co. Ltd.), 264
- Inserts, concrete, C.G. range of (Anthony Pratt & Co. Ltd.), 815
- Dry reed, gold plated (Hivac Ltd.), 667
- Inslay Industrial Ltd., tungsten carbide ball plug gauges, 187; range of carbide wheels, 570; Destaco Model 453 self-locking pliers-type clamp, 694
- Inspection, billet, automatic (United Steel Cos. Ltd.), 819
- Cars, railway, 251
- Enlargers, projectors and (trade publication), 702
- Equipment (trade publication), 798
- of internal surfaces, Type 100 optical instrument for (Vision Engineering Ltd.), 248
- Multi-gauge for, of electrical connectors, by F. R. Tolmon, 341
- Numerical control effect on, 393
- and quality control of manufactured goods, conference on, 95
- Window of armoured glass (Landon Kingsway Ltd.), 816
- Instaclip range of boltless pipe clips, 346
- Insta-Hitch implement coupling for tractors, 79
- Instamatic cine system, 512
- Institute of British Foundrymen, symposium on castings in welded fabrication, 823
- of Cost and Works Accountants, conference on energy conversion, 287
- of Directors, languages centre, 476; annual conference, 641
- of Economic Affairs, The Future of Steel, by D. Burn, 99; on City in the World Economy, by W. M. Clarke (review), 317
- of Export, export management by G. Sharman, 580
- of Management Consultants, management consultancy activities, 579
- of Marine Engineers, 30,000 shp unitised reheat steam turbine propulsion, by T. B. Hutchison, 520-521
- of Materials Handling, materials handling conference (London, 1966), 255
- of Metals, annual meeting (Grenoble), 63; conference on "Electron Microscopy in Metallurgy," 127; Microstructure of Metals, by J. Nutting and R. G. Baker (book), 478
- of Patentees and Inventors, exhibits for New York exhibition, 290
- of Physics and the Physical Society, meeting on Spectroscopic Studies of Vibrational Modes, 127; conference on physical basis of yield and fracture, 223; conference on rare earths, 288; conference on computational methods in crystallography, 352;
- Guthrie lecture on nuclear fusion research, by Dr. J. B. Adams, 799
- of Welding, one-year postgraduate course in welding technology, 73; symposium on castings in welded fabrications, 823
- Institution of Chemical Engineers, proposals for research into industrial mixing, 276; scheme for degree course in chemical engineering, 802
- Institution of Civil Engineers, report of transportation engineering conference, 8; Unwin Lecture by Dr. M. E. Kaplan, 67; presentation of prizes for temporary fly-over design competition, 98; conference on prestressed concrete pressure vessels (March 1967), 159; management group discussion, 615
- of Electrical Engineers, international conference on microwave behaviour of ferrimagnetics and plasmas, 159; conference on Design Criteria and Equipment for Transmission at 400 kV and Higher Voltages, 191; convention on interaction between guided vehicle and its tracks, 415; presidential address by L. Druquer, 481; International Conference on Ultra-High-Frequency Television, 576
- of Electronic and Radio Engineers, dinner of, 2; symposium on electronic control systems for industry, 127
- of Gas Engineers, Combustion of Methane in Diffusion Flames, by Dr. J. E. Garside, 725
- of Heating and Ventilating Engineers, IHVE Guide (1965) (book), 510
- of Highway Engineers, conference on highway practice, 607
- of Locomotive Engineers, convention on interaction between guided vehicle and its tracks, 415; design for Victoria Line underground rolling stock, by A. W. Manser, 475
- of Mechanical Engineers, convention on machines for materials and environmental testing, 63; symposium on elastohydrodynamic lubrication (Leeds University), 63; annual summer meeting in West Germany, 74; education of professional engineers in West Germany, by Dr.-Ing. G. Brenken, 74; symposium on boiling heat transfer in steam generating units, 95; Engineering Among the Schools, by G. T. Page, 101-103; symposium on new engineering materials, 159; Joint International Conference on Creep (book), 222; symposium on surges in pipelines, 255; Professional Training in Mechanical Engineering Practice for Chartered Engineers (book), 257; Automatic Railways (book), 318; Plastics and Mechanical Engineer (book), 350; Thermal Loading of Diesel Engines (book), 350; convention on interaction between guided vehicle and its tracks, 415; Stability of Systems (book), 478; conference on new engineering materials, 501-502; conference on applied science in schools, 481; engineering among the schools, by G. T. Page, 481; conference on applied science in schools, 515; Engineering Among the Schools, by G. T. Page, 515; symposium on accuracy of electronic measurement in internal-combustion engines development, 544; Presidential address by N. Allen, 545; Earth-Moving Machinery (book), 638; Engineering among the schools, 675; gyros (book), 702; design of large steam turbines for high availability, by H. Watson, 704; Thermodynamics and Fluid Mechanics Convention (book), 822; symposium on mechanical engineering at universities, 823
- of Metallurgists, course on composite materials, 287; Management and Cost Control in the Metallurgical Industry, by E. F. L. Brech, J. H. Spooner, Lord Geddes and R. L. Berry (book), 638
- of Production Engineers, Dr. Herbert Schofield Memorial Paper for Young People, by A. W. Vickers, 823
- of the Rubber Industry, conference on Communication Within Industry, 31
- of Structural Engineers, GPO radio tower designs, 676
- of Works Managers, 1964 medal awards, 432
- Instituto Sperimentale Auto e Motori, motor vehicle road testing and recording apparatus, 659
- Instruments (trade publication), 670
- Case, nylon-coated, No. 1277 (West Hyde Developments Ltd.), 217
- Control (trade publication), 62
- Solid state calibrated (modular version) (Kent Precision Electronics Ltd.), 470
- Industry, Eurolec 1965 Pocket Guide, 348
- Landing System, 333
- Manufacture, new materials and processes in, by P. J. Geary (book), 798
- Measuring (trade publication), 94
- Modular high-frequency (United States National Bureau of Standards), 788
- Optical (trade publication), 574, 798
- Pneumatic control, components for, by L. A. Zalmanzon (book), 126
- Power (trade publication), 62
- and systems 1965 (trade publication), 190
- Technology, the future pattern of research in, symposium on, 287
- Volume 1, by E. B. Jones (book), 638
- Instrumentation, atomic reactor, Dungeness A power station, 302
- Flight test, by M. A. Perry (book), 446
- Training courses in (A.C.E.-Hartons Ltd.), 49
- Insulated glands (West Instrument Ltd.), 402
- Insulation, cable, Ethylene Propylene Rubber (EPR), 345
- Calcium silicate thermal, Crosfield process for, 121
- of electrical machines, Thermalastic system, 629
- Material, glass-fibre, Fiberglas AW, 64
- for printed circuits, 692
- Insulation, Mylar polyester film for, 370
- Polystyrene, for pitch roof system, 690
- Roof, Marlith wood wool lightweight slab, 183
- Nuliner, with Polyzote expanded polystyrene, 815
- Thermal, symposium on, 319
- Insulator, glass fibre, for overhead electrification system, 645
- Insurance scheme, motor, Wingard (Thos. R. Miller), 431
- Integral Ltda., Miraflores Dam, 808
- Integration system for chromatographs, Chromalog, 248
- Intercom system, two-way transistorized (Claymore Manufacturing Co.), 448
- Telephone (Reliance Telephone Co.), 473
- Inter-Continental Office Equipment Ltd., Colorcap key location system, 762
- Interferometer, Fizeau-type simple gauge, for training departments (Hilger & Watts Ltd.), 21
- Interfrigo refrigerated wagons for inter-European food transport, 560
- Integral Process Systems Incorporated, loading boom, 86
- Interlas Ltd., KGM argon-arc welding torch, 155
- Intermolecular forces, Faraday Society discussion meeting on, 31
- Internal combustion engine, by F. A. F. Schmidt (review), 316
- Surfaces, inspection of, Type 100 optical instrument for (Vision Engineering Ltd.), 248
- International Apprentice Competition (Glasgow), 162
- Building Exhibition (Olympia), exhibits at, 597, 598; on programme of, 607; 660; warm air heating equipment, 736
- Caravan Exhibition (Earls Court), exhibits at, 480
- International Combustion Ltd., field erection of boiler for Coryton refinery, 723
- Communications and Aeronautical Exhibition (Genoa), 127
- International Computers and Tabulators Ltd., Atlas General Survey Program and computing service, 149; 1900 computer series systems program package for Inventory Management, 181; formation of Production Engineering Department, 210; reduction of manufacturing lead times, 210; dispute with Association of Supervisory Staffs, 230; sales of computer equipment, 305; exports of 1900 computer systems, 336; coincidence check for computer wiring, 338; 1901 computer, 417, 421; computing service for surface milling, 475; orders for 1900 series computers, 753; mechanism assessment computer, 754
- Conference on Cold Extrusion of Steel (Eastbourne), 383
- of Electrical Engineers (Berlin), 223
- on electron and ion beam science and technology, by R. Bakish (book), 318
- on High Pressures (France), 433
- on Ultra-High-Frequency Television (IEE), 576
- of Women engineers and scientists, 191
- Congress on Metallic Corrosion (Moscow), 287
- of the precast concrete industry (London) advance notice of, 736
- Control of space, 195
- Conversion tables, by S. Naft and R. De Sola (book), 350
- Exhibition and congress of laboratory, measurement and automation techniques in chemistry (Basle), 824
- of Industrial Electronics (Basle), 95-96, 191
- for Surface Treatment (Basle 1966), 127
- International Finance and Services Ltd., activities of, 177
- Fire Exhibition (London), 161; exhibits at, 215
- International General Electric Co. of New York Ltd., RTV-7 foam silicone rubber, 146
- Handicrafts and Do It Yourself Exhibition (Olympia), exhibits at, 384
- International Harvester Co. of Great Britain Ltd., TD-25 series B 230 hp crawler tractor with planetary steering, 118; Hough H-50B Payloader four wheel drive tractor shovel, 410; Payloader H-25B tractor shovel with power steering, 537; McCormick International 806 tractor, 744; International Hough Payloader, Model H-65B tractor shovel, 793
- Industrial Equipment and Services Exhibition, 191; exhibits at, 730
- Inventors and New Products Exhibition (New York) (advance notice), 290
- International Nickel Ltd., Baroni stainless steel beam, 370
- Plastics Exhibition, exhibits at, 90, 118
- Pressure Die Casting Conference (London), 799
- International Research and Development Co. Ltd., non-destructive testing service, 17; developments in medical physics and instrumentation, 80; Freezmaster, medical refrigeration unit, 80
- Soil Mechanics Conference (Montreal), 223
- Standards Organisation, work on rubber standards, 812
- Symposium and Exhibition on Water Desalination (Washington), advance notice, 272
- on inhaled particles and vapours, 191
- of Molinology (Estoril-Cascais, Portugal), report of, 684
- on Water Desalination (Washington), 383, 451
- International Systems Control Ltd., automation systems for Swedish cement plant, 305; Series 90 range of compatible computers and centralized digital control equipment, 760
- Transport and communications exhibition (Munich), exhibits at, 202-203



Interphone Engineer kits (Philips Electrical Ltd.), 800  
 Interpolated data and speech transmission system (IDAST), 121  
 Intersonde Ltd., DR68 wire-wound potentiometric displacement transducers, 439  
 Introduction to plate and shell theory, by C. E. Turner (review), 189  
 Invention, design and market research, by A. F. Stobart, 358  
 — See also *Patents*  
 Inventors, International, and New Products Exhibition (New York) (advance notice), 290  
 Inventory management, systems program package for, Computer ICT 1900 series, 181  
 Inverters, static, single-phase, Porta Power range of, 281  
 Investment casting, core material for (S. Smith & Sons Ltd.), 371  
 Ion beam science and technology, electron and, conference on (New York), 63  
 — Electron and, beam science and technology, international conference on, by R. Bakish (book), 318  
 — Gauge, miniature, type VH20 (AEI Electronics Ltd.), 217  
 Ionospheric radio propagation, by K. Davies (book), 30; (review), 413  
 I-R CM-150 Crawl-IR self-propelled crawler drill, 155  
 Iron Acton substation, site assembled transformer at (Bruce Peebles & Co. Ltd.), 15  
 Iron ore concentrate handling equipment at Monrovia, 134  
 — Concentrate, ship loader for, 134  
 — Deposits, Mount Goldsworthy, development of, 251  
 — Imports, construction of harbour at Port Talbot for, 369  
 — Import terminal projects for South Wales, 35  
 — Mining at Bong Ranch, Liberia, 134  
 — Track mounted stacker for, 134  
 — and steel industry, coke in, conference on (Charleroi), 31  
 — See also *Cast iron; Steel*  
 Ironworks, Eagle, Oxford, by P. W. S. Andrews and E. Brunner (book), 158  
 "Isaac Newton" 98-in telescope, description of, 165-168  
 Ishikawajima-Harima Heavy Industries Co. Ltd., MST-14 reheat steam turbine ship propulsion system, 427  
 Islander BN-2 light commercial aircraft (Britten-Norman Ltd.), 308  
 ISO Inch (Unified) system for screw threads, 706-707  
 ISO Metric system for screw threads, 706-707  
 Isocrete Ltd., plastics cladding for London flats, 690  
 Isolators (trade publication), 158  
 — for London Midland Region electrification, 456  
 Isopad Ltd., Isojacket electric heating jackets, 785  
 Italconult, investigation of water resources in Saudi Arabia, 560  
 Italy, motor car industry, production statistics, 611  
 Itinerama Ltd., Super Cinerama mobile theatre, 790  
 ITT Federal Laboratories, Pico portable microwave communication terminal, 506

## J

JACK, hydraulic (trade publication), 382  
 — BJ150, for BMC mini motor cars (Ever-sure Accessories Ltd.), 311  
 — for shallow-draught heavy-equipment vessel, 13  
 — Travelling, Traveljack, 762  
 Jacket, heating, electric, Isojacket, 785  
 Jacking and clamping system (trade publication), 254  
 Jackman, J. W., & Co. Ltd., Twin airless shot blast plants, 402  
 Jackson, Sir Willis, on Committee on manpower resources for science and technology, 577  
 Jacobs, John I., & Co. Ltd., tanker *North Sands*, 812  
 Jacobsen Van Den Burg (UK) Ltd., RTV-7 foam silicone rubber, 146  
 Jacques, E., culture of factory, 454  
 Jaguar E-type 4-2 motor car at Goodwood, 554  
 Jamgochian, Haigh, "Tree House" block of flats, 728  
 Janes, H. C., Ltd., Modolite window frames, 660  
 Janssonius, Dr., concrete course visit to Amsterdam, 488  
 Japanese, National Railways, neoprene sheets for railway track ballast protection, 791  
 Jarman, L. P., on Bullnose Morris (review), 701  
 Jay, D., on Chrysler-Cummins diesel engine plant, 112  
 J.C.S. Hi-Torque Ltd., stainless steel worm-drive hose clamps, 472  
 Jeffries, D., Ellis medal award, 432  
 Jenkins, C., general secretary of Asset, 230  
 Jenkins, R., on reducing aircraft noise, 386; on space programme, 514; opening of Mullard Electronics Centre, 752  
 Jenkins, W. J., & Co. Ltd., screw mixer (trade publication), 510  
 Jenkins, W. S., on bright ideas for bright manufacturers?, 199  
 Jensen Interceptor Drophead coupé motor car, 525  
 Jensen type KTTS plug-in capacitors for computers, 178  
 Jepson, K. S., titanium, beryllium and refractory metals in aircraft industry, 502  
 Jerome, J. A., on Modern British Bridges (book), 94  
 Jespersen 12M building system mobile moulds for precast concrete panels, 240  
 — 12M industrialized house building system, 143

Jespersen 12M system of industrialized building, factories for, 590-591  
 Jessop, N., on Communications in the Building Industry (book), 190; (review), 382  
 JF Strong-Grip wire rope clamp, 87  
 Jindivik target drone aircraft, 108  
 Jobling, James A., & Co. Ltd., industrial glass (trade publication), 62; pyrex glass (trade publication), 605; laboratory glassware (trade publication), 670  
 JOC Engineers Ltd., Crusader web-fed offset printing press for newspapers, 84  
 John Dalton College of Technology, Elliott 803 digital computer for, 419  
 Johns, D. J., on Thermal Stress Analyses (book), 413  
 Johnson, A. E., creep stress distribution in beams, 571  
 Johnson, C. R., publisher of *ENGINEERING*, 837; war service, 838; retirement of, 839  
 Johnson, H. A., on Heat Transfer Notes (review), 795  
 Johnson, H. H., war service, 838; appointed Joint Editor of *ENGINEERING*, 839; resignation of, 839  
 Johnson, Dr. K. L., review of Friction and Wear of Materials, 509  
 Johnson, Matthey & Co. Ltd., hand torch brazing (trade publication), 158; inlaid bi-metal for electrical contacts, 180; JMC spectrographic flux, 180; laboratory furnaces, 312; palladium electro-deposition for printed circuits, 379; Silver Star range of miniature silvered mica capacitors, 507  
 Johnson outboard motors, 824  
 Johnson & Phillips Ltd., new divisionalized management structure, 16  
 Johnson & Phillips South Africa (Pty.) Ltd., transformers for South African Railways electrification system, 754  
 Johore river scheme butterfly valves for water supplies, 464  
 Joint British Committee for Stress Analysis, conference on prestressed concrete pressure vessels (March 1967), 159; conference on stresses in structures and machinery, 823  
 — Diploma in management accounting, 705  
 — Panel on Nuclear Marine Propulsion, symposium on nuclear-powered ships, 672; symposium on nuclear powered ships, 750-751  
 — Seal for precast concrete, Servicore, 661  
 — Universal, YST needle bearing (Torrington Co. Ltd.), 539  
 Jointing and assembly techniques, 617  
 — Techniques, conference and exhibition (PERA), 255  
 — Tool, electric, for copper pipes, Solder-master, 155  
 Jones, A., National Board for Prices and Incomes report, 3; on incomes policy, 65  
 Jones, A. A., & Shipman Ltd., exhibition of precision grinding machines, 319; progress report, 496  
 Jones cranes, development and range of, 109-111  
 Jones, E. B., on Instrument Technology, Volume 1 (book), 638  
 Jones, E. O., on forecasting in industry, 353  
 Jones, G. J., on Fundamentals of Workshop Technology (book), 30  
 Jones, Sir Henry, British Electrical Power Convention, 5, 6; on import of liquefied natural gas, 771  
 Jones, J. C., on design methods, 357  
 Jones KL3-7 Fleetmaster mobile crane, 111  
 — KL11-7M crane, 111  
 — KL15 crane, 110  
 — KL15-25 crane, 110, 111  
 — KL15-30 crane, 111  
 — KL15-30L crane, 111  
 — KL44 crane, 110  
 — KL55 crane, 110  
 — KL65 crane, 111  
 — KL65M crane, 110  
 — KL66 cranes, 110  
 — KL77 crane, 110, 111  
 — KL77M crane, 110  
 Jones & Stevens Ltd., shaded pole electric motor, 346  
 Jones, T. C., & Co. Ltd., Super 8, Super 12 and Super 20 cranes, 109  
 Jordan Worsted Mills Co. Ltd., air conditioning equipment for, 625  
 "Josephson junctions" study of, 339  
 Joy Manufacturing Co. (UK) Ltd., CU43 Low Seam Miner and Short Face Minor coal cutting machines, 54; Mustang tracked mobile drilling rig, 472  
 Jubb, J., on on-site training courses, 580  
 Judge, A. W., on Modern Smaller Diesel Engines (book), 190  
 Jung, Dr., unitised reheat steam turbine, 521  
 Junior 1970 Moulton bicycle, 800  
 Jydk Dunkefabrik, A/S, projection welding machine, 569

## K

KABI (Electrical and Plastics) Ltd., trays and bins (trade publication), 734  
 Kadett range of motor cars, 332  
 Kahan, Theodor, on Variational Techniques in Electromagnetism (review), 60  
 Kahl atomic reactor, fuel assembly irradiation experiment, 689  
 Kahn, R. L., on Power and Conflict in Organizations (review), 636  
 Kaiser Engineers and Constructors Inc., site investigations for Volta River project, 363  
 Kaiser, H. J., Volta river project, 361  
 Kamper axial piston hydraulic pumps, 280  
 Kandem Electrical Ltd., spectroscope (trade publication), 350  
 Kane, Douglas, Group, Loctite bonding materials, 371  
 Kane-May Ltd., Dependatherm temperature sensors for office buildings, 218  
 Kantorowicz, O., tax the long car? 69, 199. *Letter*, 137

Kapitan, OHC motor car engine (Opel), 332  
 Kaplan, Dr. M. F., Unwin Lecture to ICE, 67  
 Kariba dam, effect of Rhodesian independence declaration, 770  
 Kay, Dr. L., review of High-Intensity Ultrasonics, 220  
 Kay Mercantile Co. Ltd., Freco Perfect electric hand dryer, 216  
 Kearney & Trecker-CVA Ltd., transfer machine order, 401  
 Kearns, H. W., & Co. Ltd., Model 724P horizontal milling boring and surfacing machine with numerical control, 315  
 Keates Typewriters Ltd., business equipment (trade publication), 318  
 Keeble motor car at Goodwood, 554  
 Keele University, symposium on PERT computer program, 105  
 Keen, J., on Essentials of Quality Control (book), 605  
 Keeton, Sons & Co. Ltd., hydraulic shears, 281  
 KEL-F insulation for printed circuits, 692  
 Kelly, J., study on section managers, 454  
 Kempster, M. H. A., on Introduction to Engineering Materials (book), 222  
 Kennametal (Gt. Britain) Ltd., unit tooling (trade publication), 822  
 Kennedy, Prof. A. J., review of Science of Materials, 189; review of Mechanics of Solids and Strength of Materials, 189; review of Mechanical Testing of Materials, 700  
 Kennedy & Donkin Ltd., 400 kV substation at Trawsfynydd atomic power station, 241; Cokenzie power station, 492  
 Kent-Evershed Ltd., formation of, 17, 497  
 Kent, George, Ltd., subsidiaries of, 17; control instruments (trade publication), 62; Micro-Oil oil flow meter, 119; computer control for soaking pits, 124; Chromalog integration system for chromatographs, 248; continuous automatic Titrimeter, 248; electronic control scheme for paper mill, 276; acquisition of Lea Recorder Co. Ltd., 497; titrimeter (trade publication), 638; temperature controller (trade publication), 670; 153A three term analogue output controller, 726  
 Kent, George (Petrochemical) Ltd., formation of, 17  
 Kent Precision Electronics Ltd., K-Pac solid state control relay, 24; combined amplifier and indicator unit, 310; solid state calibrated control instruments (modular version), 470; K-Pac plug-in control modules, 539  
 Kenwood Chef food mixer, design and development of, 804-805  
 Kenyon, Dr. D. M., review of Handbook of Electron Beam Welding, 253  
 Kernohan, J., PERT symposium, 105  
 Keropyan, K. K., on Electrical Analogues of Pin-Jointed Systems (review), 412  
 Kerry's Ltd., Pulsatron series type KG850 ultrasonic cleaning equipment, 21  
 Key location system, Colorcap, 762  
 Key Terrain Ltd., polypropylene drainage piping, 471; polyvinyl chloride skirting ducts, 471  
 Keyseating machine, hydraulic, Type NZH (Soag Machine Tools Ltd.), 378  
 Keystone outdoor wall lanterns, 64  
 Keyswitch Relays Ltd., heavy duty contactor, 23; plug-in component board unit (trade publication), 190  
 KGM Electronics Ltd., type M23 indicator for printed circuit boards, 23; illuminated legend boxes for marine installations, 218  
 Khabaza, I. M., on Numerical Analysis (book), 446  
 Khormaksar, power station at, 144  
 Kichenside, G. M., on Railway Carriages, 1839-1939 (review), 94  
 Kier Ltd., contract for Longannet power station, 337  
 Kilns, batch, for off-peak electrical firing, 181-182  
 Kilns and Furnaces Ltd., batch kilns for off-peak electrical firing, 181-182  
 — Hoverkiln, for pottery firing, 741  
 Kilpatrick, James, & Son Ltd., formation of Brightside Kilpatrick Engineering Services Ltd., 496  
 Kinetic energy, electrical energy storage as, 534  
 — Heating for flight load test frame, 621  
 King, A. J., on the Measurement and Suppression of Noise (book), 222; (review), 668  
 King, Prof. J. W. H., review of Experimental Stress Analysis, 572  
 King's Lynn estate, industrialized housing system on (Lowton-Cubitt), 561  
 — Quay pile driving operations, 466  
 Kings Norton, Lord, on Council for National Academic Awards, 706  
 Kingsway Fillpoint protective cabinet for oil filter terminals, 119  
 Kingsway foam inlet box for fire fighting, 343  
 Kipping, Sir Norman, management and the public interest, 159; on bottlenecks, 651  
 Kips prestressing cables for Bow viaduct, 241  
 Kirkness, R. H., review of Unified Circuit Theory in Electronics and Engineering Analysis, 252; review of Circuit Theory Analysis, 604; review of Rectifier Circuits: Theory and Design, 604  
 Kirkstall Forge Engineering Ltd., trading results, 400  
 Kisboeckoi, L., on Proceedings of the Second Conference on Dimensioning and Strength Calculations (book), 822  
 Kish Bank Lighthouse. *Letter*, 7  
 Kitamura, Dr., "Hi-Top" electrolytically-chromated steel, 617  
 Kitchenside, A. W., review of The Design of Structures of Least Weight, 795  
 K & L Steelfounders and Engineers Ltd., development and range of Jones cranes, 109-111  
 Kleen King high pressure cold water cleaning unit, 792  
 Klinger Manufacturing Co. Ltd., Mattingly head in AMI false twist machine for nylon yarn, 727  
 Klintort, unitised reheat steam turbine, 521

Klixon 2ST system of overheating protection for fan-cooled equipment, 218  
 Kloof Mine, 8,500 hp converter fed mine winders, 442  
 Knife, carving, electric (Ronson Products), 608  
 Kodachrome II, Super 8, photographic colour cine film, 512  
 Kodak Ltd., Instamatic cine system, 512; automated photographic processing equipment, 699  
 Koenigsberger, Prof. F., review of Die Design Handbook, 252; on Advances in Machine Tool Design and Research (book), 350  
 Kolbuszewski, Prof., Transportation Engineering Conference, 8  
 Kollman Instrument Ltd., vertical scale indicator, 283  
 Kombi version of Transit light commercial motor vehicles, 453  
 Komet trigger operated cartridge firing tool, 661  
 Kopp variator, 370  
 Korradi, Friedrich, KG, high precision milling machines, 214  
 Koyré, A., on Newtonian Studies (book), 638  
 K-Pac plug-in control modules, 539  
 — Solid state control relay, 24  
 Kraft laminate, resin-bonded, "Armourtex," 282  
 Kragelskii, I. V., on Friction and Wear (book), 254; (review), 573  
 Krick, E. V., on Introduction to Engineering and Engineering Design (review), 541  
 Krisson Printing Ltd., master grid for printed circuits, 23  
 Kromag potato diggers, 744  
 Kronberger, Dr. H., on water desalination plants using AGR reactor, 451  
 Krotos electronic alarm system, 434  
 Kruisings, Prof. H. J., on gas, both natural and manufactured, 323  
 Kugelfischer fuel injection equipment for Lancia Flavia motor car, 653  
 Kuiper, E., on Water Resources Development: Planning, Engineering and Economics (book), 574; (review), 797  
 Kvaerner Brug, A. S., MST-14 reheat steam turbine ship propulsion system, 427  
 Kynmore Engineering Co. Ltd., Jensen type KTTS plug-in capacitors for computers, 178; impedance changer probe, 216; range of photo-choppers, 439

## L

LABELS, self-adhesive (trade publication), 254  
 Laboratory furniture, modular (trade publication), 702  
 — Modular (Spencers Joinery Ltd.), 178  
 — Glassware (trade publication), 670  
 — Measurement and automation techniques in chemistry, international exhibition and congress of (Basle), 824  
 — Technicians, university, pay dispute of, 385  
 — Techniques, automatic, exhibition and conference, 799  
 — and workshop notes 1962-1964, by R. Lang (book), 605  
 — See also *National Engineering; National Physical*  
 Labour, casual, in docks, 227  
 — Dock, decasualization and over-manning of, 227  
 — Problems of, 193  
 — Ministry of, Manpower Research Unit study of construction industry, 259; professional and executive register, 432; N1IP study of industrial accidents, 592; *Computers in offices*, 812  
 — Mobility, Col survey on, 578  
 — Problems in motor car industry, 802  
 — See also *Manpower*  
 Lacial Building Products, rigid foam cored wall panel, 180  
 Laidon hydroelectric power project, position and prospects of, 706; cancellation of, 737  
 Laing, John, Construction Ltd., 12M Jespersen industrialized house building system, 143; mobile moulds for precast concrete panels, 240; factories for Jespersen 12M system of industrialized building, 590-591  
 Laing, Sir Maurice, on Confederation of British Industries, 353  
 Lamberton & Co. Ltd., 80 in roller straightening machine, 666  
 Lamborghini, motor car chassis with engine transverse mounted amidships, 612  
 Lamflex corrugated plastic drain piping, 790-791  
 Laminar flows, theory of, by F. K. Moore (book), 190; (review), 509  
 Laminate, kraft, resin-bonded, "Armourtex," 282  
 — Ptf/glass fabric (Tygadure Ltd.), 310  
 — Purlboard, new plant for continuous production of, 183  
 — Rigid foam, 183  
 Laminated springs, fatigue failure of, in wagons, 650  
 Lamp with flat wound filament for projectors (Westinghouse Electric International of New York), 51  
 — Neon, TPX-A, -B, -C range of (West Hyde Developments Ltd.), 471  
 — Ozone, Felvic air purifier with, 114  
 — Street, mercury-iodide, trial installation of, 24  
 — Tungsten-bromine (Osram (GEC) Ltd.), 628  
 — Tungsten-iodine, for lighting of airfields (Osram (GEC) Ltd.), 245  
 — See also *Illumination; Light; Lighting*  
 Lancashire Dynamo & Crypto Ltd., Thermalastic insulation system for electrical machines, 629  
 Lancashire Dynamo Electronic Products, activities of, 400; type RPH6 reflex photoelectric head unit, 667  
 Lancashire and Merseyside Industrial Development Association, activities of, 687  
 Lancaster, J. F., on The Metallurgy of Welding, Brazing and Soldering (review), 732  
 Lancaster & Tonge Ltd., Type ORSI dup



- pipeline strainers with fabricated steel bodies, 507
- Lancaster University, computer for, 753
- Lancer Boss Group, Skylift truck for BOAC aircraft overhaul department, 152
- Lancia Flavia motor car, Kugelfischer fuel injection equipment for, 653
- Fulvia motor car, two-seat sport version of, 611
- Zagato, Fulvia sport motor car, 652
- Land speed record, Arfons-Breedlove battle for, 712
- Landis and Gyr Ltd., electricity register for maximum demand, 120
- Landon Kingsway Ltd., Kingsway Fillpoint protective cabinet for oil filter terminals, 119; Kingsway foam inlet box for fire fighting, 343; lightweight filter for fuel oils, 538; Compact deadweight fire valve, 598; inspection window of armoured glass 816
- Landing, aircraft. See *Aircraft landing*
- Lang, R., on Laboratory and Workshop Notes 1962-1964 (book), 605
- Languages centre (Institute of Directors), 476
- Lant, T. P. R., review of Polymer Technology, 821
- Lanterns, outdoor wall, Guardian and Keystone, 64
- Laporte Acids Ltd., fluorspar mining and processing, 396
- Laporte Industries Group, fluorspar mining and processing, 396
- Lapping machines (trade publication), 605
- Flat (Payne Products International Ltd.), 343
- Larsen and Neilsen, production licence to Taylor Woodrow Anglian Ltd., 528
- Laser for calibration of length scales (NPL), 443
- Rangefinder (Rank Pullin Controls), 630
- Single frequency, type 119 (Claude Lyons Ltd.), 153
- Lathe, automatic chucking, Churchill CA9-10, temperature tests on, 790
- Single spindle, Unimat, 598
- Capstan, automatic sequence control system for (Nickols Automatics Ltd.), 313
- Centre (T. S. Harrison & Sons Ltd.), 315
- HS7 and HS13 (Stanley Machine Tool Co. Ltd.), 435
- Mascot 1600 8½ in, 694
- Mascot 1600, 551
- Electrolytic, 469
- High duty, copying equipment for (Hepworth Iron Co. (Engineering) Ltd.), 245
- Profile turning, with numerical control, Churchill Redman, 315
- Programmed capstan, AutoWard, 314
- Turret, Accuratool automatic (Dowling & Doll Ltd.), 269
- Latin America, steel industrialists' visit to UK, 656
- Lauber, T., on systems analysts, 449
- Launch. See *Boat*
- Launching vehicle, Black Arrow, 514
- Laundries, racking machine for (Short Bros. & Harland Ltd.), 741
- Laurence, Scott and Electromotors Ltd., PASE power assisted storage equipment, 58; reverse rotation prevention unit for electric motors, 88; control gear (trade publication), 158
- Lavatory pan flushing efficiency (BRS), 256
- Law, R. J., on Steam Engine (book), 822
- Lay, J. E., on Thermodynamics: A Macroscopic-Microscopic Treatment (book), 126
- Lazard Bros. & Co., Bangka I tin-mining dredge, 433
- Lead Development Association, isolation and noise and vibration (trade publication), 574
- Stronger (trade publication), 670
- Leader 15T aluminium lighting columns, 50
- Leadership, learning for, by A. K. Rice (review), 284
- Leak detection equipment, portable, for water mains (WRA), 26
- Detector, Halotec, for vacuum systems, 281
- Learning for leadership, by A. K. Rice (review), 284
- Le Bras, J., on Introduction to Rubber (book), 286
- Lectramatec (Furnaces) Ltd., furnace charging machine for tubes and forgings, 344
- Lectricoil, Top-Dog nylon coiled hose, 345
- Lectroetch (Great Britain) Ltd., electrochemical marking machine, 816
- Ledger, Rupert, & Co. Ltd., Hubodometer Engler driverless hub-mounted odometer, 696
- Lee, F., on pit closures in coal industry, 546
- Lee-McCall high tensile steel bars for St. Helier Hospital foundation renewal work, 648
- Lee Recorder Co. Ltd., acquisition by George Kent Ltd., 497
- Lee-Smith Photomechanics Ltd., cartographical camera for Fairey Surveys Ltd., 283
- Leeds Meter Co. Ltd., acquisition by George Kent Ltd., 17
- Traffic problems study, 194
- Lees, C., on Patent Protection: the Inventor and His Patent (book), 605
- Leesona Holt sizing machine, improved appearance of, 551
- Legend boxes, illuminated, for marine installations (KGM Electronics Ltd.), 218
- Leipzig Fair, 95
- Wider scope of, 191
- Leicester Lovell & Co. Ltd., Casco-MI adhesive sealant, 339
- Leister, Karl, plastic welding tools, 794
- Lektrokitt system, LKU-321 stabilized power sub-unit for, 507
- Le Mans, motor car with L6 engine, 196
- Le Mans motor car race, Rover-BRM gas-turbine entry 68-69. *Letter*, 103
- Length scales, laser for calibration of (NPL), 443
- Leningrad Elektrosila and Metal Works, River Tuloma underground power station, 624
- Leo 3 computer systems, orders for, 273
- Leo 360 computer, orders for, 465
- Leondes, C. T., on Modern Control Systems Theory (book), 286; (review), 637
- Letter facer, automatic, Alf, 200
- Sorting office, Western District (GPO), 200-201
- Levels and clinometers (trade publication), 254
- Contents indicator, continuous, Levelator, 309
- Controller, liquid (Honeywell Controls Ltd.), 248
- Detector for food and chemical industries, 117. *Correction*, 278
- Gauge, water, micrometer (Hilger & Watts Ltd.), 249
- Indicator, silo (Portasilo Ltd.), 148
- Measuring set, portable, type 74255-A (Standard Telephones & Cables Ltd.), 148
- Set, 74832 (Standard Telephones and Cables), 472
- River, recording instruments (Fischer & Porter Ltd.), 276
- Warning device for fuel oil tanks (trade publication), 446
- Levelator, continuous level contents indicator, 309
- Leverton, H., & Co. Ltd., Caterpillar 769 dump truck, 817
- Lewis, T. J., on Science of Materials (review), 189
- Leybold Vacuum Ltd., DPL range of vacuum pumps, 155
- Leys School, applied science activities, 239
- Leytool Ltd., ratchet spanners, 214
- Liardet, G. E., on Simms Motor & Electronics Corp., 593
- Liberia, iron ore mining at Bong Ranch, 134
- Library Association meeting on access to information, 700
- Guide to Engineering, 636
- Resources, Northern Special, Directory of, 603
- Lichfield, Dr. N., Transportation Engineering Conference, 8
- Liddell power station, 500 MW turbo-alternator sets, 528
- Liebesny, F., review of Automat und Mensch: Kybernetische Tatsachen und Hypothesen, 797
- Lift door, photoelectric, control switch (trade publication), 62
- Goods (trade publication), 222
- Installation for private houses (Becker Equipment & Lifts Ltd.), 320
- Packaged, for flat construction (Express Lift Co.), 698
- Scissor (trade publication), 382
- Table, hydraulic (Rolatrac Ltd.), 312
- Lifting magnet, battery-operated, Transmatic (Esel Automation Ltd.), 816
- Safe working loads of table, by L. Linder (book), 222
- Liftrac automatic vertical conveyor system, 819
- Light alloys for engineering applications, recent developments in, by J. H. Dedrick, H. R. Clayton and P. A. Fisher, 502
- Bulbs, tungsten iodine, Mazda, 331
- Fluorescent, local units for machines (P. W. Allen & Co.), 19
- Plasma, computer analysis of (NBS), 628
- Switch based on fibre optics (Bausch & Lomb Optical Co.), 187
- Transmitted, photo-head and projector (PanElectronics Ltd.), 245
- See also *Illumination; Lamps; Lighting*
- Lightfoot Refrigeration Co. Ltd., water cooling plant for Crusader web-fed offset printing press, 84
- Lighthouse, Kish Bank. *Letter*, 7
- Lighting of airfields, tungsten-iodine lamp for (Osram (GEC) Ltd.), 245
- Columns, aluminium, Leader 15T, 50
- Control unit for, Econotrol, 51
- Fittings (trade publication), 638, 670
- and heating units, Falks showroom for, 96
- Fluorescent (trade publication), 605
- Runway, for airports, 334
- Unit, road (Westinghouse Lighting Division), 283
- See also *Floodlighting; Illumination; Lamp; Light*
- Lightnin AB, formation of, 208
- Lightnin Mixers Ltd., formation of subsidiary in Sweden, 208; SETEC S.A. as Spanish representation, 208
- Lignacite Group, lightweight loadbearing blocks (trade publication), 318; concrete building block production, 624
- Limbs, powered artificial, design of, by Dr. E. Marquardt, 66
- Limelight Space-fitta series built-in furniture kits, 384
- Limestone for Sevenoaks by-pass, 337
- Limmer and Trinidad Lake Asphalt Co., voluntary standards for troughed metal decking, 593
- Linder, L., on Safe Working Loads of Lifting Table (book), 222
- Lindley, Sir Arnold, on Engineering Industrial Training Board, 580
- Lindley, Charles, & Co. Ltd., history and development, 433
- Lindorff, D. P., on Theory of Sampled-Data Control Systems (review), 284
- Line and Cable Accessories Ltd., rigid foam cored wall panel, 180
- Linear elastic theory of thin shells by J. E. Gibson (book), 190
- and non-linear systems, dynamics of, by P. Naslin (book), 286; (review), 700
- Path control of milling machine, 394
- Liner, cargo, *Cannore*, Pilgrim nut fitted on, 260
- Cargo-passenger, *Benledi*, with Cargoaire cargo dew-point system, 123
- Cunard Q4, steering gear for (Brown Bros. & Co. Ltd.), 243
- Tank tests on hull design of, 380
- Tests for propellers for (Newcastle University), 380
- *Queen Elizabeth*, by N. Potter and J. Frost (book), 190; (review), 316
- *Queen Elizabeth*, dry docking for major improvement programme (John Brown & Co. (Clydebank) Ltd.), 784
- See also *Ship*
- Lines Bros. junior 1970 Moulton bicycle, 800
- Lingard, P. A., market research seminar, 681
- Lining, pig slug, of pipelines, 152
- Polyvinyl chloride, rigid (trade publication), 382
- Link-Belt Co., dumper for coupled railway wagons, 25
- Link-line system, automated, for gear production, 657
- Liquids, gases and, thermal conductivity of, by N. V. Tseiderberg (book), 478
- Level controller (Honeywell Controls Ltd.), 248
- Meters (trade publication), 638
- Petroleum gas, petrol engine conversion kits for Honda engines, 119
- Lithium fluoride, dislocations in, course on, by Dr. Newey and Dr. Davidge, 338
- Little, T., on High Dam at Aswan (review), 637
- Live line working on electrical power distribution systems, 407-408
- Liverpool Corp., water supply for, 526-527
- University, design study group service, 561
- Livesley, Dr. R. K., review of Applied Combinatorial Mathematics, 92; review of Applied Mathematics for Engineers and Scientists, 92; review of Scalar and Vector Fields, 572
- Livingston Components Ltd., expansion of, 465
- Livingston Electronics Ltd., agreement with Teradyne, Inc., 465; magnetic reaction analyzer for non-destructive testing, 817
- Livingston Group, expansion of, 465
- Livingston Laboratories Ltd., Model 355 ac/dc digital voltmeter, 20
- Livingston New Town, 143
- Livingston Vinten-Mitchell system for television recording on film, 175
- Llewellyn, G., refractory metals as aero-engine materials, 502
- Llewellyn Glands Ltd., fluid coupling glands (trade publication), 702
- Lloyd, F. H., & Co. Ltd., position and prospects of, 15
- Lloyd, Brig. T. I., on conversion of railways, 131
- Lloyds (Burton) Ltd., Anasco dredge pump, 537
- Lloyd's Packing Warehouses (Holdings) Ltd., packaging services (trade publication), 542
- Load-carrying members, inelastic behaviour of, by J. O. Smith and O. M. Sidebottom (book), 798
- Load indicator for ropes (Edge & Sons Ltd.), 57
- Loadbearing blocks, lightweight (trade publication), 318
- Loader, blank, automatic (J. P. Udal Ltd.), 409
- Loader Equipment (Sales) Ltd., Volvo LM218 industrial loader, 792
- Hopper, FLP all wheel drive (Eimco (Great Britain) Ltd.), 56
- Industrial, Volvo LM218, 792
- Mine, remotely controlled, in Haile Moor Mine, 818
- Pneumatic, Models 310, 320, 330, Cavo, 54
- Ship, for iron ore concentrate, 134
- Shovel (Clark Equipment Ltd.), 794
- Loading boom (HNP Industrial Sales Ltd.), 86
- Lobeck-Mann hydraulic semicontinuous casting machine, 628
- Loch Awe hydroelectric power station, 489
- Loch Eil pulp mill, pile driving equipment, 441
- Lockers (trade publication), 126
- Locker Industries (Sales) Ltd., UHDE vibrating tube conveyor, 568
- Lockheed Precision Products, Avery Division, flexible hose and self-sealing couplings (trade publication), 318
- Lockheed Precision Products Ltd., undercarriages and hydraulics equipment for HFB320 Hansa executive jet aircraft, 246;
- Locomotive Adventure Vol. 2, by H. Holcroft (review), 763
- Diesel, manual on, by W. F. Bolton (review), 94
- Sentinel, for Portuguese Railways, 144
- Shirebrook West servicing depot for, 82
- Ventura engines for BR Type 1, 780
- Diesel-electric, for Belt Railway Co. (Alco Products Inc.), 250
- Diesel-electric, Brush type 4, automatic voltage regulator for (Hawker Siddeley Dynamics Ltd.), 441
- Diesel-electric, equipment (trade publication), 510
- Diesel-electric, fuel cells for, research on, 340
- Diesel-electric, for Mount Goldsworthy (English Electric Co. of Australia Pty. Ltd.), 251
- Diesel-electric, 90 class, for East African Railways and Harbours, 528
- Diesel-electric, prototype, DP2, 336
- Diesel-electric, safety control equipment for, 251
- Diesel-electric, speedometer and field diversion system for, 90
- Diesel-hydraulic, 621 hp (Andrew Barclay, Sons & Co. Ltd.), 26
- Museum at Penrhyn Castle, 272
- Panorama Vol. 1, by E. S. Cox (review), 763
- Rail/road, Unilok combination, 694
- Steam, by A. Williams and D. Percival (review), 94
- Loctite bonding materials, 371
- Lodex fuel gauges, for motor cars, 276
- Permanent magnets, 276
- Lodge-Morton mixer, FKM4,200, two tons capacity, 144
- Loeb, L. B., on Electrical Coronas: Their Basic Physical Mechanisms (review), 821
- Loewy Engineering Co. Ltd., Peco-Loewy 20/90R 2,000 ton injection moulding machine, 77; butterfly valves for water supplies, 464; extrusion press for Busch-Jaeger Dürerer Metallwerken A.G., 656
- Logic elements, Relog, 597
- Fluid (trade publication), 734
- Functions, use of turbulence amplifier, 135
- Logic Trainer, Logikit Basic, for teaching applied digital techniques, 89
- Logikit Basic Logic Trainer for teaching applied digital techniques, 89
- Logus 27 printing calculator, 505
- Londex Ltd., type PS/U adjustable pressure switch, 247; photoelectric equipment (trade publication), 638
- London Airport, Plessey air traffic control radar type AR-1, 305; aircraft noise at, 386; Pak-a-Way oil fired heaters for cargo depot, 564
- Bridge, state of repair, 130; proposed new bridge, 130
- Business School, progress in activities at, 718
- County Council, expanding towns scheme, 9
- London Electrical Manufacturing Co. Ltd., metallized polyester capacitors for printed circuits, 309; type 13K range of ceramic disc capacitors, 346
- London Electricity Boards, experiments with cable bedding materials, 658
- Motor Show (Earls Court), review of exhibits at, 555-558, 584-586
- Port of, lorry route from industrial Midlands, 98
- Radiophone service in, 49
- Traffic in, report on, by Prof. Buchanan, 131
- Control by computer in, 642
- London Transport Board, annual report, 2
- London Transport Executive, automatic trains for Victoria Line, 66; programme machine signalling for underground railway, 251; report on policy for expenditure on underground construction, 322; programme for new lines, 322. *Letter*, 419; Daimler Fleet-line double-decker buses, 368; design for Victoria Line underground rolling stock, by A. W. Manser, 475; modernization of Lots Road power station, 602
- and traffic conditions, 2
- Underground Railways. See *London Transport Executive*
- Water supply scheme, 497
- Zoo, plenum heating system for, 16
- Long Reach sewage works, automatic operation, 754
- Longannet power station, contracts for, 272, 337; orders for plant, 368
- Longclose Engineering Co. Ltd., textile dyeing equipment, 139-140; history of, 140
- Longden, H., on industrial training grants, 580
- Longman, E. G., on rolling bearings in electrical rotating machines, 42
- Lord Warden, ferry, descaling of cargo decks, 789
- Lorries. See *Motor Vehicle*
- Lorse Miner CM48 coal face cutting machine, 56
- Lots Road power station of London Transport, modernization scheme, 602
- Loughborough College of Technology, post-graduate centre of polymer technology, 206; future plans of, 391
- Low-Line, Foden, crane carrier, 662
- Low Seam Miner, CU43, coal cutting machine, 54
- Lowcock, M. T., variable loading and fatigue life of aluminium alloy L73, 571
- Lownton-Cubitt industrialized housing system on King's Lynn estate, 561
- LP-Gas Equipment Ltd., Honda petrol engine conversion kits for LP gas fuel, 119
- Lubbock, E., on sales training techniques of Product Knowledge Ltd., 73
- Lubbock, Maurice, Memorial Lecture, 157
- Lubricating oils, diesel engine, spectrographic analysis of, 440
- Lubrication, automatic (trade publication), 222
- Elastohydrodynamic, symposium on (Leeds University), 63
- Gas, of bearings, by N. S. Grassam and J. W. Powell (review), 126
- in motor cars, trends in, 555
- Water, for rotary compressor (Sulzer), 697
- and wear, by D. Muster and B. Sternlight (book), 158
- Lubricators (trade publication), 734
- Series LO2 automatic oil-fog (Shipston Engineering Co. Ltd.), 730
- Lucas alternator and dynamo developments for motor cars, 557
- Flexprint flexible printed circuit for motor-cars, 558
- Lucas, Joseph, & Co. Ltd., direction indicator relay unit for motor vehicle trailers, 246
- Lucas, Joseph (Industries Ltd.) licensing agreement with Sanders Associates Inc., 433
- Lucy, W., & Co. Ltd., history of, 158
- Ludwig Widani Werkzeugmaschinen, type BSO edge trimming machine, 314
- Lunar and planetary surface conditions, by N. A. Weil (review), 508
- Lundstrom, T., on Borides, Silicides and Phosphides (book), 190
- Lupton, Prof. T., management development seminar, 683
- LVD Co., hydraulic presses, 377
- Lydbrook railway viaduct, demolition of, 240
- Lyon, F. R., on the long term battle against inflation, 137
- Lyons, Claude, Ltd., type 119 single frequency laser, 153; integrating digital voltmeter (trade publication) 542
- Lyons Maid Ltd., cold store for ice cream products, 337
- Lythgoe, Adam, Ltd., limestone for Sevenoaks by-pass, 337

## M

- MAAG Gear-Wheel Co. Ltd., SP60 gear testing machine, 376
- Macdiarmid, N. C., on nationalization of steel, 99
- Machine Covers Ltd., formation of, 625
- Elements of, by A. Frischherz and R. Domayer (book), 574
- Guards, photoelectric (Photain Controls Ltd.), 409
- Man and, by K. Steinbuch (review), 797
- Mechanics of, Vol. 1, by H. E. Barnacle and G. E. Walker (review), 29



- Machine, safeguarding dangerous, multi-beam photoelectric system for (Photoelectronics (MOM) Holdings Ltd.), 50
- Machine Shop Equipment Ltd., pressure coolant unit, 759; production aids (trade publication), 822
- Tools at Brno Fair, 437
- Design and research, advances in, by S. A. Tobias and F. Koenigsberger (book), 350
- Dictionary of chip-forming, by H. G. Freeman (review), 61
- Distribution policy, 560
- Exhibition of (A. Douglas Co. Ltd.), 560
- Exhibition, European (Brussels), 64, 313-315, 376-378
- Exhibition of (Mexico City), 823
- Exports, 17
- Industry, National Plan impact on, 387
- Life, numerical control effect on, 393
- Metal-cutting, dictionary of, English-German, by H. G. Freeman (book), 126
- for missionary societies. *Letter*, 137
- Multi-purpose, Type UW1 (G. Zwicky (London) Ltd.), 377
- Noise reduction by fixing with Adhaesium adhesive, 724
- Operator, numerical control effect on, 393
- Utilization, numerical control effects on, 393
- Vibration, by S. A. Tobias (review), 477
- Machinefabriek Bewo, automatic circular sawing machines, 378
- Machinery, friction and wear in (book), 702
- Guards (trade publication), 222
- Special purpose (trade publication), 798
- Machining, electrochemical, advantages of, 468-469
- Calculations for, 468
- Economics of, 469
- Electrodes for, 467
- Electrolytes for, 467
- Metal-removal rates in, 467, 468
- Methods of, 467
- PERA 5000 A universal unit, 784
- Scope of the process, 467
- Shaped electrode method, 467
- Temperature of working area, 469
- of turbine blades, 469
- of stainless steel, cutting oil for, Rocol RTD, 500
- Mack Trucks Incorporated, trailer for Super Pumper fire pump, 568
- Mackenzie, A. I., on Metal Industries Ltd., 401; on Metal Industries Group, 497, 689
- MacKowiak, J., on Physical Chemistry for Metallurgists (book), 413
- Maclaren Controls Ltd., Type GAT control and limit thermostat for automatically fired heating system, 310
- Macpump 300 bilge pump, 87
- MacTaggart Scott & Co., hydraulic jacks for shallow draught vessel for heavy electrical equipment, 13
- Mac. See also *Mc*
- Madin, John H. D., & Partners, Birmingham Post and Mail headquarters, 600
- Magnaflex Corp., equipment for automatic inspection of billets, 819
- Magneform magnetic pulse cold forming process, 617
- Magnet, lifting, battery-operated, Transmatic (Esel Automation Ltd.), 816
- Permanent (trade publication), 318
- Lodex, 276
- Standard reference, range of (Preformations Ltd.), 148
- Superconducting (trade publication), 605
- Magnetic angles of sintered polarized ceramic (Magnetic Handles (EET) Ltd.), 89
- Circuit breaker in Klixon protection system for fan-cooled equipment, 218
- Magnetic Devices Ltd., range of miniature relays ac and dc, 52; double pole ac and dc relay, 404; Type 312 starting relay for small electric motors, 597; Series 305AC type PO 3000 relay, 666
- Energy, electrical energy storage as, 534
- Flow detector heads, Veriflux, 276
- Magnetic Handles (EET) Ltd., magnetic angles of sintered polarized ceramic, 89
- Hardness monitor for moving strip and continuous annealing lines (BISRA), 18
- Reaction analyser for non-destructive testing, 817
- Recording head, seven track read-after-write (Gresham Lion Electronics Ltd.), 115
- Susceptibility cell (Distillers Co.), 598
- Tape store development (Plessey Co. Ltd.), 741
- Thermometer, pocket size, model 595 (British Rototherm Co. Ltd.), 283
- Tools (trade publication), 766
- Magnetism and electricity, essentials of, by O. M. White (review), 412
- Physical principles of, by A. H. Morrish (book), 670
- Magnetizing equipment, automatic, SC-PI2-A (Hirst Electronic Ltd.), 663
- Magneto-hydrodynamic power generation. See *MHD*
- Magneto-hydrodynamics, testbook of, by J. A. Shercliff (book), 510
- Magnifier, bench, X3.5 stereo booster for (Vision Engineering Ltd.), 814
- Magnus, K., on Vibrations (review), 349
- Magpak magnetic tape system for ISC series 90 computer equipment, 760
- Maihak torsion meter, modified system, 330
- Mail sorting office, Western District (GPO), 200-201
- Maintainability: a major element of system effectiveness, by A. S. Goldman and T. B. Slattery (review), 92
- Maintenance, design and, 674
- Manual of, note on, 381
- Numerical control effect on, 394
- Mako Shark II motor car, 485
- Malcolm & Allan Ltd., control panel for gas-fired furnaces, 560
- Malik, R., on Penguin Survey of Business and Industry 1965 (review), 317
- Mallabar, J. F., on Ruston & Hornsby Ltd., 176
- Malmedie cold heading machine for tapered bearing production, 757
- Malta Drydocks, manufacturing agreement with George Ellison Ltd., 368
- Malta Ellison Ltd., formation of, 368
- Man and machine, by K. Steinbuch (review), 797
- Management accounting, joint diploma in, 705
- Audit system (MAPS), 773
- for civil engineers, by E. A. Parsons, D. M. O'Herlihy and R. H. Rowe (review), 348
- Consultancy in industrial output growth, 579
- Consultants Association, management consultancy activities, 579
- and cost control in the metallurgical industry, by E. F. L. Brech, J. H. Spooner, Lord Geddes and R. L. Berry (book), 638
- Courses, business (Industrial Education International), 391
- Development, seminar on (AIC), 683
- Education, D. L. Marples on, 615
- Electronic data processing in, 449
- Function, design as, by W. H. Mayall, 360
- Inventory, systems program package for, Computer ICT 1900 series, 181
- Operational research for, by M. J. Sargeant (book), 605
- and productivity scheme at Alexander Stephen & Sons, 298
- and the public interest, by Sir Norman Kipping, 159
- of radioactive wastes, by C. A. Mawson (book), 190; (review), 668
- Studies, diploma in, changes in course, 74
- Top, training and development, symposium on, 73
- Training, F. Metcalfe on, 420
- Managers, study on activities of, Strathclyde University, 454
- Manchester Airport (brochure), 444
- Business School, progress in activities at, 718
- College of Science and Technology, Ferranti Argus 308 computer for research problems, 208
- Exhibition of Engineering Products, 607
- Mandel, J., on Statistical Analysis of Experimental Data (book), 413
- Manders Paints Ltd., painting specifications (trade publication), 478
- Mandoval Ltd., vermiculite (trade publication), 413
- Manganese Bronze Holdings Ltd., activities of subsidiary, 177
- Manhattan flexible files, 402
- Manipulator. See *Micromanipulator*
- Mann, Albert, Engineering Ltd., Lobbeck-Mann hydraulic semicontinuous casting machine, 628
- Mann, R. W., pattern of an engineering design, 357
- Manning, J. F., on small wheel cycles, 328
- Mannox, D. J., tantalum and its alloys, 501
- Manometers, diaphragm type, Atlas range of, 88
- Manpower in construction industry, 259
- Geographical mobility of (NJAC), 577
- National Plan impact on, 388
- Policy, technological, White Paper on, 577
- Resources for science and technology, committee on, 577
- Utilization and payment scheme (ICI), 547
- See also *Labour*
- Manser, A. W., on design for Victoria Line underground stock, 475
- Mansfield, Dr. E. H., review of Introduction to Plate and Shell Theory, 189
- Manual of Maintenance, note on, 381
- Manufacturers Equipment Co. Ltd., Model 870 Rapistan hinged steel belt conveyor, 154; automatic warehouse with keyboard control, 762
- Manufactures, imported: an inquiry into competitiveness (report), 354
- Manzoni, Sir Herbert, on Civil Engineering Research Association, 67
- Map, gravel and sand, of England, 560-561
- Mapal WP adjustable reamer, 213. *Correction*, 312
- MAPS (Marketing Administrative and Production Survey), management audit system, 773
- Marbaix, Gaston E., Ltd., Mattinson large surface grinding machines, 631
- Marchwood Laboratories, research activities, 142
- Marconi Co. Ltd., radar system for Royal Australian Air Force, 16; closed circuit television cameras export orders for, 208; evaluation of closed circuit television in teaching, 208; cryogenic stripline circulator, 277; reorganization of senior management structure, 401; type AD370 automatic direction finder to Arine 550 specification, 457; Quadrantal Error Corrector, 457; AD 560 Doppler navigation system and airborne computers for Boeing 707 airliners, 464; radio transmitter-receiver type H4000 (trade publication), 542; solid state high speed switches, 567; NPN silicon planar power transistor, 759; Mark VII transistorized television camera for all colour systems, 803; tropospheric scatter radio system for RAF in Malaysia, 812
- Marconi Instruments Ltd., signal source calculator (trade publication), 350
- Marconi International Marine Co. Ltd., purchase of AEI marine radio business, 48; Contour depth recorder, 276
- Marcos Co., marine plywood chassis structure for sports cars, 43-44
- Marcos-1800 motor car, specification and road test on, 45
- Margate to Clacton barrage scheme, 513
- Marginal strips on motorways, road roller attachment for (Aveling-Barford Ltd.), 504
- Marine Accessory Co., Macpump 300 bilge pump, 87
- Engines (trade publication), 254
- See also *Engine, diesel; Engine, petrol; Turbine; Ship propulsion*
- Marine engineering developments, discussion on, 459-461. *Letter*, 613
- Industry, National Plan impact on, 388
- Equipment Council, British, formation proposals, 688
- Propulsion. See *Atomic propulsion; Propeller; Turbine; Ship propulsion*
- Market research, invention, design and, by A. F. Stobart, 358
- Senior management seminar on, 681-682
- See also *Trade*
- Marketing, administrative and production survey. See *MAPS*
- Council, National, formation of, 354
- Marking machine, automatic, for plastics (Boston Marine and General Engineering Co. Ltd.), 154
- Electrochemical (Lectro-etch (Great Britain) Ltd.), 816
- Marking-out fluid, Mark I Blue (General Engineers Supply Co. (1937) Ltd.), 402
- Marking out, optical, GP500 camera and projector system for, 11. *Letter*, 199
- Marlborough College, applied science activities, 238
- Marley Group, exhibits at International Handicrafts and Do It Yourself Exhibition, 384
- Marley Sparlite concrete panels for extension walls, 384
- Marley Thermalux expanded polystyrene ceiling panels, 384
- Marley Tile Co., lightweight insulation system of Marlith wood wool slab for roofs, 183
- Marlith wood wool slab, lightweight insulation system for roofs, 183
- Marlow Declaration, 769
- Maroth rotary screw actuator, for flight load test frame, 621
- Marples, D. L. management group discussion, 615
- Marquardt, Dr. E., on design of powered artificial limbs, 66
- Marquis Series Seven range of fire appliances, 402
- Marron Machines Ltd., Super Stork Marten angle grinding machine, 343
- Marryat & Place Ltd., tapping box for Barduct busbar system, 310; Barduct portable busbar system, 339
- Mars range of technical pens with eleven line widths, 787
- Mars, by R. S. Richardson and C. Bonestell (review), 821
- Marsh, A., industrial relations, 737
- Marsh, C., on Fram Group Ltd., 528
- Marsh, F., on Longclose Engineering, 139
- Marsh, J., Marcos Co. sports cars, 43-45
- Marsh, R., *Ocean Prince* oil-drilling rig, 204
- Marshall, Alan, & Partners, foundation renewal work for St. Helier Hospital, 648
- Marshall Conveyors Ltd., expansion scheme, 145
- Marshall, D., on BMC Minis: Maintenance, Tuning and Modification (book), 30; (review), 158
- Marshalling yard, railway, Tinsley, 626
- Martech Consultants Ltd., activities of, 632; study on export delays, 721
- Martin, Dr. B. W., review of Heat Transfer Notes, 795
- Martin, H. M., association with ENGINEERING, 835; activities with ENGINEERING, 837-838
- Martin, Sir Leslie, redevelopment scheme for Whitehall and Parliament Square, 131
- Martinelli, R. C., on Heat Transfer Notes (review), 795
- Martonair Ltd., pressure regulators with automatic relief valve, 87; type S786C single impulse pneumatic control valve, 179;  $\frac{1}{2}$  in BSP electrical pressure switch, 633
- Marviken atomic power station, 141
- Marwin Machine Tools Ltd., numerically controlled machines (trade publication), 510
- Maschinenelemente Einfuhrung, Normung, Industriewerte Vol. 1, by A. Frischherz and R. Domayer (book), 574
- Mascot 1600 centre lathe, 551
- Mask, face, air line (Spemby Technical Products Ltd.), 278
- Mason, on colour television, 258
- Mason, K., on patent brokers, 356
- Massachusetts Institute of Technology, report on railway system between Boston and Washington, 33
- Massey, B. & S., Ltd., forging plant for China, 624
- Massey-Ferguson, four, five and six-furrow MF86 plough, 78; MF34 combine drill, 78; combine harvester, 743; forage harvester, 744
- Masts, aerial, for NATO station near Carlisle, 339
- Mastabar Mining Equipment Ltd., Huwood Mastabar self-advancing roof supports, 56
- Master range of portable oil fired space heaters, 570
- Matchless Machines Ltd., Osterwalder fine blanking presses, 376; RHU450 cylindrical grinding machine, 473
- Materials, composite, course on (Institution of Metallurgists), 287
- Engineering, conference on (IME), 501-502
- and design conference and exhibition (Olympia), 357, 360, 370-371
- Introduction to, by M. H. A. Kempster (book), 222
- Friction and wear of, by E. Rabinowicz (book), 94
- Handling conference (London 1966), 255
- High-strength, by V. F. Zackay (book), 670
- Information and selection system for (Materials Data Ltd.), 530
- Mechanical testing of, by A. J. Fenner (review), 700
- and processes, new, in instrument manufacture, by P. J. Geary (book), 798
- Science of, by T. J. Lewis and P. R. Secker (review), 189
- Strength of mechanics of solids and, by F. V. Warnock and P. B. Benham (review), 189
- Structure and properties of, Vol. 3, by W. Hayden, W. G. Moffatt and J. Wulff (book), 413
- Symposium on new (IME), 159
- Testing machines, convention on, 63
- Working, new ways of, by D. Fishlock and K. W. Hards (review), 701
- See also *Engineering Materials and Design Exhibition*
- Materials Data Ltd., information and selection system for materials, 530
- Mathematical functions, handbook of, by M. Abramowitz and L. A. Stegun (book), 62
- Theory of connecting networks and telephone traffic, by V. E. Benes (book), 605
- of reliability by R. E. Barlow, F. Proschan, and L. C. Hunter (book), 126 (review), 285
- Mathematics, applied, for engineers and scientists, by S. A. Schelkunoff (review), 92
- for engineers, conference on, 351
- Mather & Platt Ltd., ProtectoSpray spray fire protection system, 215; training of draughtsmen, 614
- Matheys Optiver drilling machines for breakable materials, 503
- Matra Bonnet motor car, 484
- Matrix analysis of vibration, by R. E. D. Bishop, G. M. L. Gladwell and S. Michaelson (book), 62
- Mattersons Ltd., cranes for Capper Pass solder refining plant, 82
- Matthewman, J. H., review of Elements of Numerical Analysis, 381; review of Numerical Solution of Partial Differential Equations, 381
- Matthews & Yates, No. 60 SS fan, plenum heating system for London Zoo, 16; PU 2.5 grain drier, 744
- Mattingly head in AM1 false twist machine for nylon yarn, 727
- Mattinson large surface grinding machines, 631
- Mattmark Dam, avalanche near, inquiry into, 329; review of project, 329
- Mauder, Prof. L., research on gyroscopes, 240
- Maurice Lubbock Memorial Lecture, 157
- Mavor & Coulson Ltd., Lorse Miner CM48 coal face cutting machine, 56
- Maw, A. E., appointed manager and publisher of ENGINEERING, 839; retirement of, 839
- Maw, Dr. W. H., early association with ENGINEERING, 830-831; birth, education and early engineering experience, 832; assistant editor of ENGINEERING, 832-833; marriage of, 833; consulting engineer, 834; interest in astronomy, 836; connection with professional engineering societies, 836; death of, 838
- Mawson, C. A., on Management of Radioactive Wastes (book), 190; (review), 668
- Maxam Power Ltd., Maxalog pneumatic control system, 135; turbulence amplifier, 135; increased trade, 305; fluid logics (trade publication), 734
- Maxaret controlled braking in Jensen Interceptor motor car, 525
- Maximatic coal cutting machine, 55
- Maxmatic automatic food mixer (Pye), 768
- Maxwell, J., stabilization of very low pressures, 123
- Mayall, W. H., on Design and Human Satisfaction, 358; on Design as management function, 360
- Mayo, C. G., on Unified Circuit Theory in Electronics and Engineering Analysis (review), 252
- Mazda tungsten iodine light bulbs, 331
- MB Metals Ltd., Film-Wire flexible encapsulated printed circuit, 692
- McAlpine, Sir Robert, & Sons, beam placing gantry, 112; Cockenzie power station, 492
- McClary "7-in-1" gas-fired balanced flue furnace for warm air heating, 736
- McCormick International 806 tractor, 744
- McCormy, R. J., on design process in the USA, 357
- McDonnell Aircraft Co., hot platen hydraulic press, 82
- McEntee Technical High School, applied science activities, 238, 239
- McEwen, E., design for the 70's, 357, 360
- McFadzean, Sir William, British Electrical Power Convention, 7
- McGregor, Robert, & Sons Ltd., expansion joint for slipform paved roads, 232
- McKee, P. R., PERT symposium, 105
- McKenzie, G., PERT symposium, 105
- McMinn, Dr. S. J., review of Theory of Elastic Complexes, 188
- McMullen, Col. D., on railway accidents, 713
- McMullen, P., new ideas in drawing office, 359
- McQuistan, R. B., on Scalar and Vector Fields (review), 572
- Mc. See also *Mac*
- Measurements, strip, contact gearbox for (Truemeter Co. Ltd.), 249
- Techniques in chemistry, international exhibition, 824
- Measuring counter, electronic (Elasta Electronics Ltd.), 247
- Equipment, precision (trade publication), 702
- Instruments (trade publication), 94
- Machine, high precision vertical, Model 2443 (Newall Group Sales Ltd.), 116
- Meat Industry Exhibition (Earls Court), 824
- Meccano Ltd., plastic meccano, 800; Power Drive six-speed geared electric motor, 800
- Mechanical engineering industry, National Plan impact on, 387
- Practice for chartered engineers, professional training in (book), 257
- at universities, symposium on, 823
- Handling (trade publication), 254
- Equipment (trade publication), 413
- Plant (trade publication), 734
- System design, by I. W. E. Eder and W. Gosling (review), 93
- Testing of materials, by A. J. Fenner (review), 700
- Mechanics of automobiles, by H. E. Barnacle (review), 220
- of machines Vol. 1 by H. E. Barnacle and G. E. Walker (review), 29
- of solids and strength of materials, by



- F. V. Warnock and P. B. Benham (review), 189
- Mecrin mechanical roughness testing machine, 313
- Meda T Series of transistorized module analog computer, 694
- Meddings, W. J. (Sales) Ltd., special purpose drilling machine from standard units, 89
- Medical Research Council, Freezemasters, for cooling small specimens, 80
- Technicians, comment on shortage of, 1
- Meek, Prof. J. M., review of *Electrical Coronas: Their Basic Physical Mechanisms*, 821
- Megator Constant Priming unit for mine main pumps (Megator Pumps & Compressors Ltd.), 120
- Megator Pump & Compressors Ltd., priming unit for drainage pumps, 54; Megator constant priming unit for mine main pumps, 120
- Meikle, A., prefabricated structural steelwork, 617
- MEL Equipment Co. Ltd., Type PE7102 electrostatic sub-micron filter for oils and other liquids, 22; exhibition of industrial heating equipment, 255; quartz ultrasonic delay lines, 338; coolant clarifier, 377; activities of, and new works at Crawley, 688; helium Dewar flasks, 727; Philips type PM 2401 electronic multimeter, 729
- MEL Norbit control panel for Veromatic drilling machine, 116
- Melabs CPA-3 pulse polarographic analyser, 663
- Melinox for drawing paper (ICI), 52
- Melotte Sales, Kromag potato diggers, 744
- Melting pots for soft metals, range of (Funditor Ltd.), 186
- Memorandum on the Diploma in Management Studies HMSO, 74
- Memory unit and central processor, 4130 for NCR-Elliott 4100 computer, 217
- Mercedes-Benz, new range of motor cars, 231; 250S, 250SE, 300SEb and 300SEL motor cars, 231
- Merchant ships, submarine, advantages of, 295 — See also *Ship; Liner; Tanker, etc.*
- Merchant, W., on *Stability of Frames* (book), 605
- Mercian Electric Co. Ltd., warm air curtain unit, 214
- Mercury-arc valves, research on (CEGB), 142
- Mercury-iodide street lamps, trial installation of, 24
- Merican Electric Co. Ltd., electric fan heater, 814
- Merryweather & Sons Ltd., fire hose reel, 215; Marquis Series Seven range of fire appliances, 402
- Merseyside. See *Lancashire and Merseyside*
- Merz & McLellan, Longannet power station, 337; Cruachan power station, 489
- Messer Griesheim Ltd., numerical control for Binumat flame cutting machine, 794
- Mesthene, E. G., on *Ministers Talk About Science* (review), 188
- Metals, composite, filament-reinforced, study of (Battelle Memorial Institute), 530
- Finishing Association, uniform costing scheme, 592
- Metal Industries Group, annual meeting, 497; trading report, 688
- Metal Industries Ltd., annual report, 400; activities of subsidiaries, 400; outlook for, 401
- Liquid, flowmeter for (Elliott Bros. (London) Ltd.), 89
- Microstructure of, by J. Nutting and R. G. Baker (book), 478
- Powder Industries Federation, activities of, 112; new standard for case hardness and case depth of powder metallurgy parts, 112
- Processing equipment, cryostatic (Harris Manufacturing Co.), 379
- Refractory. See *Refractory metals*
- Roof Deck Association, formation of, 593
- Metal Sections Ltd., expansion of vitreous enamel interests, 400
- Straining of, research into high rate of, 277
- Under impulsive loads, behaviour of, by J. S. Rinehart and J. Pearson (book), 382
- Windows Association, 366
- Metalexport Type CU stretch-forming machine, 80
- Metallurgical industry, management and cost control in the, by E. F. L. Brech, J. H. Spooner, Lord Geddes and R. L. Berry (book), 638
- Services, course on dislocations in lithium fluoride by Dr. Newey and Dr. Davidge, 338
- Metallurgists, physical chemistry for, by J. Mackowiak (book), 413
- Metallurgy, dictionary of, by D. Birchon (book), 254
- Electron microscopy in, conference on, 127
- Extractive: principles and application, by W. H. Dennis (book), 94; (review), 796
- Parts, powder, case hardness and case depth of, new standard for, 112
- Powder, growth of, 112
- of welding, brazing and soldering, by J. F. Lancaster (review), 732
- Metalorganic polymers, by K. A. Andrianov (book), 222
- Metals and Controls Inc., new clad coinage materials, 209
- Metals Research Ltd., Vacseal range of muffle vacuum furnaces, 278
- Metalworking, introduction to the principles of, by G. W. Rowe (review), 348
- Metcalf, F., on *Engineering Industry Training Board*, 420
- Metco Ltd., XP1150 corrosion resistant coating by flame spraying, 563; Thermo-spray equipment, 563
- Meter, electricity, maximum demand register for (Landis & Gyr Ltd.), 120
- Panel and testers, Simpson, 80
- Metering pump, type E. (Metering Pumps Ltd.), 761
- Metering Pumps Ltd., type E metering pump, 761
- Methane, combustion of, in diffusion flames, by Dr. J. E. Garside, 725
- Slow burning-speed problem, 725
- Methylene blue dyes for dosimetry, 342
- Metric system for screw threads, 706
- Metro-Kalvar Inc., ready-to-project films, 699
- Metrology with autocollimators, by K. J. Hume (review), 573
- Metropolis Machine Tools Ltd., Wedevag WL1B twist drill point grinding machine, 473; pbc spindle speed-increasing adapter for machines, 503
- Metropolitan-Cammell Ltd., railcars for Mexican National Railways, 625
- Metroscope, vertical (trade publication), 638
- Mexican National Railways, railcars for, 625
- Meyer & Burger AG, Type UWI multi-purpose machine tool, 377
- MGB Coupé motor car at Goodwood, 554
- MGM Teletudios Inc., Gemini system of television recording on film, 175. *Letter* 356
- MHD power generation. *Letter*, 549
- Mica capacitors, miniature silvered, Silver Star range of (Johnson, Matthey & Co. Ltd.), 507
- Michaelson, S., on *Matrix Analysis of Vibration* (book), 62
- Michelotti, Triumph 1300 motor car, 524
- Microelectronics, symposium on (Southampton University), 31
- Microfiche Standards, note on, 732
- Microfilm enlarger/viewer, Caps-Jeffrey, 551
- Reader, portable, COC/Time-O-Light (Industrial Timer Corp.), 282
- Storage cabinet (James H. Randall & Son Ltd.), 403
- Technology, by C. E. Nelson (review), 157
- Microflex stainless steel hose clips, 435
- Micromanipulator, DSP/S10 (Research Instruments Ltd.), 186
- Micrometer water level gauge (Hilger & Watts Ltd.), 249
- Microminiaturization, Multilin constructional technique of, 529
- Micron Sprayers Mini-Mark 35 power portable sprayer, 744
- Micro-Oil oil flow meter, 119
- Microscope, electron. See *Electron microscope*
- Microstructure of metals, by J. Nutting and R. G. Baker (book), 478
- Microswitch, snap-action, Type 18 (Plessey Components Group), 114
- Subminiature, Type 19 (Plessey Components Group), 403
- Microtome, rocking, thermoelectric (Cambridge Instrument Co. Ltd.), 729
- Microvoltmeter, type 705 AF (Dynamat Electronics Ltd.), 663
- Microwave behaviour of ferrimagnetics and plasmas, conference on, 159
- Communications network, London-West Country, 241
- Terminal, portable, Pico, 506
- Components (trade publication), 158
- Discharge cavities (NBS), 723
- Frequencies, tunnel diodes at (Mullard Ltd.), 506
- Moisture meters, orders for (AEI Electronics), 657
- Oscillator using epitaxial construction (Standard Telecommunication Laboratories), 244
- from superconducting tin, 339
- Midas flight and maintenance recorder (Royston Instruments Ltd.), 624
- Middlesex Automation Ltd., NC100 Speedrill numerically controlled high speed drilling machine, 154
- Midland Bank Birmingham computer centre, 49
- Midland Counties Industrial Equipment Ltd., lubricators (trade publication), 734
- Midland Silicones Ltd., DP2623 high conductivity silicone heat sink 146
- Midland Tar Distillers Ltd., formation of Pittsburgh-Midland (Adhesives) Ltd., 113
- Midlands Electricity Board, batch kilns for off-peak electrical firing, 181-182
- Miles, D. C., on *Polymer Technology* (book), 222; (review), 821
- Miles Hivolt Ltd., high voltage equipment (trade publication), 670
- Mills, aerofall (trade publication), 798
- Rolling. See *Rolling Mills*
- Tipper end (trade publication), 254
- Miller, H., & Co. Ltd., Rear Vista rear window wipers for Mini motor car, 180
- Miller-Matic 3AX plug programme controller, 314
- Miller, Thos. R., Wingard motor insurance scheme, 431
- Millers Falls Co. Ltd., soldering gun, 85
- Milliken Bros. (London) Ltd., transmission towers, 715
- Milling, boring and surfacing machine, horizontal, with numerical control, Model 724P (H. W. Kearns & Co. Ltd.), 315
- Head, high speed, Hyvarmill, 436
- Machines, automatic profile, Tracemaster Type TM43D, 378
- Continuous contouring control of, 394
- Duplex, 86
- High precision (Soag Machine Tools Ltd.), 214
- Linear path control of, 394
- Programme control system for Numeroblock, 80
- Vertical, plug programmed (J. Parkinson & Son (Shipley) Ltd.), 314
- Surface, computing service for (ICT), 475
- Millionth comparator, Model 136B-3 (Federal Products Corporation of America), 404
- Millivoltmeter, portable, Type VM79 (Advance Electronics Ltd.), 185
- Millom Hematite Ore & Iron Co., making steel continuously by spraying, 723
- Mills, Edward D. & Partners, Falks showroom for lighting fittings and heating units, 96
- Mine cage gear (trade publication), 222
- Car, diesel (Aveling Barford Ltd.), 88
- Shake-out, Sinex, 57
- Castings (trade publication), 413
- Mine, coal. See *Colliery*
- Haile Moor, remotely controlled mine loader in, 818
- Hydraulic roof support for (Hoesch Ltd.), 88
- Loader, remotely controlled, in Haile Moor Mine, 818
- Loudspeaking telephone, Bretelphone, 55
- Main pumps, Megator constant priming unit for, 120
- Safety equipment (Draeger Normalair Ltd.), 53
- Winder. See *Winder; Winding*
- Working, signal systems for (Automatic Telephone & Electric Co. Ltd.), 55
- Minerals sorting machine by colour, Sortex 621M, 535
- Miner's Rule prediction of fatigue life, 571
- Mines de Fer de Mauritanie, railway inspection cars, 251
- Mingrin cables (trade publication), 30
- Mini-de-Ville motor car at Goodwood, 554
- Mini and 1100 motor cars, automatic transmission for (BMC), 522
- Motor cars, automatic transmission for, 584
- Car, by D. Marshall and I. Fraser (review), 158
- Car, Rear Vista rear window wipers for, 180
- Minibelt abrasive belt attachment, 86
- Miniblast shotblasting machine, 278
- Minicams multi-circuit timers, 310
- Minicard plug-in circuit cards, 276
- Minicooler MC8 miniature gas liquefier, 147
- Minicounter miniature open frame counter, 726
- Minimatic coal cutting machine, 55
- Mining battery, rechargeable 24V (AEI Electronics Group), 117
- Iron ore, at Bong Ranch, Liberia, 134
- Machinery Exhibition (Olympia), exhibits at, 53-57, 88, 118, 119, 120
- Power tools for (Consolidated Pneumatic Tool Co. Ltd.), 54
- Miniprinter Model M4/8, Colortron, automatic photographic printer, 699
- Mini-Sine sine bar, 787
- Ministers talk about science, by E. G. Mesthene (review), 188
- Ministry of. See *Education; Health, etc.*
- Mini-tractor, 15 bhp, description of (BMC), 711
- Minivox, Amplivox, hearing aid, 551
- Minnesota Mining and Manufacturing Co., "Scotchply" reinforced plastic springs, 277; document copier (trade publication), 638
- Minox stainless steel hose clips, 435
- Minsk-22, Electronic Bibliographer, 188
- Minter, F. G., Ltd., plastics cladding for London flats, 690
- Minton, C. D. T., titanium, zirconium and niobium, 502
- Minx motor car (Hillman), 332
- Miraflores dam, construction of (Taylor Woodrow (Overseas) Ltd.), 808
- Mirror, Pyrex, for "Isaac Newton" telescope, 166
- Missiles, aircraft and, automatic control of, by J. H. Blakelock (book), 574
- Mitchell, A. C., on optical marking out is easy, 199
- Mitchell, C. H., Ltd., manufacturing agreement with George Ellison Ltd., 368
- Mitchell Construction Kinnear Moodie Group, training centre at Peterborough, 615
- Mitchell Craig Pumps Ltd., corrosion resistant centrifugal pump, 87
- Mitchell, L. A., Ltd., blending machine with interchangeable cones, 537
- Mitchell, Shackleton Ltd., grinding machine for large crankshafts, 438
- Mittleman, J., on *Circuit Theory Analysis* (review), 604
- Mixer, Duplex, of 220 gal. capacity, 144
- FKM4, 200 Lodge-Morton, two tons capacity, 144
- Mixing head, Perrin, 793
- Industrial, research into, 276
- Machine, sand, for Hallsworth-foundry plant (Richards Structural Steel Co. Ltd.), 113
- and pumping unit, transportable, for rock sealing compounds (Hydro-Muscle Hydraulics Ltd.), 118
- MK Electric Ltd., electrical accessories 1966 (trade publication), 702
- M-O Valve Co. Ltd., rectangular cathode-ray tube for split-beam oscilloscope, 538; background information (trade publication), 542
- Mobil Chemicals Ltd., flexible duct (trade publication), 94
- Mobil Oil Co. Ltd., automatic drum spray painting unit, 438; field erection of boiler for Coryton refinery, 723
- Model, Perspex, of outlet header for reactor research, 244
- System, factory planning (Modulex 3-Dimensional Planning Ltd.), 371
- Tidal, for sea defence, 34
- Modolite window frames, 660
- Modular high-frequency measuring instruments (United States National Bureau of Standards), 788
- Recording systems (trade publication), 126
- Modulex 3-Dimensional Planning Ltd., factory planning model system, 371
- Moffatt, W. G., on *Structure and Properties of Materials*, Vol. 3 (book), 413
- Mohawk experience of One-Eleven airliner, 673
- Moir, A., "Isaac Newton" telescope, 165
- Moisture meters, microwave, orders for (AEI Electronics), 657
- Molecular sieves, conference on (Society of Chemical Industry), 95
- Research grant for Oxford University, 561
- Molinology, International Symposium of (Estoril-Cascais, Portugal), report of, 684
- Molloy, J., electrochemical machining, 467
- Molybdenum, by D. P. Hargrave, 501
- Monarch, F-80-CC oil-burner nozzle, 768
- Monark Graco Hydro-Clean air-operated pumps, 662
- Monitoring and electronic remote control equipment for surface conveyor system, 113
- Mono Pumps Ltd., CD90 mining pump, 53
- "Monobox" travelling cranes (trade publication), 574
- Monorail, overhead, in collieries, Bretby/Cowlshaw Walker, 41
- Safege, urban transport system (trade publication), 254
- Monrovia, iron ore concentrate handling equipment at, 134
- Monsanto Chemicals Ltd., Pyroclor non-flammable dielectric fluid, 441
- Moon Bros. Ltd., Model 2MR automatic double seaming machine for round cans, 214
- Moonman, E., review of *Industrial Organization: Theory and Practice*, 669
- Moore, A. I. W., review of *New Ways of Working Materials*, 701
- Moore, F. K., on *Theory of Laminar Flows* (book), 190; (review), 509
- Moore, P., review of *Lunar and Planetary Surface Conditions*, 508; review of *Mars*, 821
- Moore's Plant Ltd., Roto-Cut rotary asphalt cutter, 20
- Moorside Components, Pilgrim nut for ship propellers, 260
- Morgan, D. D., review of *Introduction to the Principles of Metalworking*, 348
- Morganite Carbon Ltd., Wondermix sintered metal oil-retaining bearings, 634
- Morley, L. S. D., review of *Introduction to Plate and Shell Theory*, 189
- Morphew, K. L., review of *Essentials of Electricity and Magnetism* (review), 412
- Morrell, J. G., on forecasting in industry, 353
- Morris, B. O., Ltd., Minibelt abrasive belt attachment, 86
- Morris, Bullnose, by L. P. Jarman and R. Barraclough (review), 701
- Morris, F. G., on A. A. Jones & Shipman Ltd., 496
- Morris, R. W., applied science in schools conference, 516
- Morrish, A. H., on *The Physical Principles of Magnetism* (book), 670
- Morrison, J. R., market research seminar, 681
- Mortar spraying process for concrete wall panels (BRS), 566
- Mortimer, J. E., on *Draughtsmen's and Allied Technicians' Association*, 138
- Morton Machine Co. Ltd., Duplex mixer of 220 gal. capacity, 144; FKM4, 200 Lodge-Morton mixer two tons capacity, 144
- Moscow Mining Institute, anti-vibration device for pneumatic drills, 440
- Moseley Autograph two-axis electronic potentiometer recorder for motor vehicle road tests, 659
- MotaVeyor conveyor belt as hospital exerciser, 59
- Motherwell Bridge & Engineering Co. Ltd., steelwork for refinery in Yugoslavia, 624
- Motivair LD compressor for small volume requirements, 87
- Moto die spray unit, 666
- Motogear F series of spur-gear reduction units, 786
- Motor car, AC 427 convertible, at Goodwood, 554
- Accessories at London Motor Show, 557-558
- Air conditioning equipment, 557
- Air conditioning, Transair, 399
- Alfa Romeo Giulia T1, description of, 710-711
- Alpine, 484
- Alternators for, position and prospects of, 557
- Antonova FM town project, 398
- Antonova GT model, 398
- Aston Martin DB6 saloon, improved version, 431
- Aston Martin estate type, 485
- Battery condition indicator for, 558
- Bertone Mini Cooper, at Goodwood, 554
- BMC Mini and 1100, automatic transmission for, 522
- BMW 2000C and 2000CS coupé, 14
- Bullnose Morris, by L. P. Jarman and R. Barraclough (review), 701
- Chassis, De Tomaso, for 5 litre model, 612
- Chassis, Lamborghini, with engine transverse mounted amidships, 612
- Citroen, at Paris Salon, 483
- Coachwork exhibits at Turin Motor Show, 652
- Colani RS, Heinkel, 399
- Corsair, with V4 engine, new version of (Ford Motor Co. Ltd.), 428-429
- Design, safety aspects of, by Dr. William Gissane, 769
- Design trends, 555-558, 584-586
- Downton Mini Cooper S, at Goodwood, 554
- Engine, Audi, 397, 556
- Engine, Ford V4, 557; for Corsair motor car, 428-429
- Engine L6, General Motors motor cars, 196
- Engine, Opel OHC, 332
- Engine, Pontiac 3-7 litre in-line six, 556
- Engine for Triumph 1300 motor car, 524-525
- Engine, two-stroke, decline in, 556
- Engine. See also *Engine, petrol*
- Exhibits at Paris Salon, 483-485
- Ferrari Dino, 484-485
- Flexprint flexible printed circuit for, Lucas, 558
- Ford Mustang, Bertone special bodied, 485
- Gas-turbine, position and prospects of, 69
- Gas turbine, Rover BRM, heat exchanger discs for, 82
- Ghia 3 litre Bugatti 101, 652
- Ghia 5 litre sports, 612
- Ghia Vallenga, 484



- Motor car, Gianinni exhibits at Turin Motor Show, 612
- Glas exhibits at Frankfurt Motor Show, 398
- Hartwell Hillman Imp Stage 4, at Goodwood, 554
- Heating equipment, 557
- Hillman Super Minx and Minx de luxe, improved versions, 332
- Honda sports 600 cc, UK market for, 258
- Industry, Italy, production statistics, 611
- Industry, labour problems in, 802
- Industry, position and prospects of, 555, 584-586
- Industry. See also *Motor industry*
- Jaguar E-type 4-2, at Goodwood, 554
- Jensen Interceptor Drophead coupé, 525
- Kadett range of, 332
- Keeble, at Goodwood, 554
- with L6 engine, Le Mans, 196
- with L6 engine, Pontiac Tempest, 196
- with L6 engine, Tempest Custom, 196
- Lancia Flavia, Kugelfischer fuel injection equipment for, 653
- Lancia Fulvia, two-seat sport version of, 611
- Lodex fuel gauges for, 276
- Lubrication in, trends in, 555
- Mako Shark II, 485
- Marcos-1800, specification and road test on, 45
- Marcos sports, marine plywood chassis structure, 43-44
- Matra Bonnet, 484
- Mechanics of, by H. E. Barnacle (review), 220
- Mercedes-Benz 250S, 231
- Mercedes-Benz 250SE, 231
- Mercedes-Benz 300SEb, 231
- Mercedes-Benz 300SEL, 231
- Mercedes-Benz, new range of, 231
- Mercedes-Benz table of specifications, 231
- MGB coupé, at Goodwood, 554
- Mini, automatic transmission for, 584
- Mini, maintenance, tuning and modification, by D. Marshall and I. Fraser (book), 30; (review), 158
- Mini, Rear Vista rear window wipers for, 180
- Mini-de-Ville, at Goodwood, 554
- NSU, 12,000 L and 1,000 LS, 399
- Oldsmobile Toronado, 485; 7 litre V8 front wheel drive, 430-431; suspension system of, 585
- OSI Mustang, 652
- OSI Secura, 652
- Pallas, Citroen, 399
- Peugeot-204, 555-556
- Porsche-901, 399
- Production in France, 484
- Race, Le Mans, Rover-BRM gas-turbine entry, 68-69. *Letter*, 103
- Reliant Scimitar, at Goodwood, 554
- Renault-16, 555-556; suspension system of, 585
- Renault 1100, 1966 version of, 196
- Riley, Pre-1939, the production and competition history of, by A. T. Birmingham (review), 796
- Rolls-Royce Silver Shadow, 485
- Rolls-Royce Silver Shadow, suspension system, 586
- Rolls-Royce Silver Shadow and Bentley T series, description of, 452
- Rover-BRM gas-turbine, at Le Mans, 68-69
- Safety features in, Roberts Law on, 806
- Sales in France, 483
- Simca, at Paris Salon, 483
- Simca-1000, semi-automatic transmission for (Perodo France), 584
- Sunbeam Rapier and Alpine, improved versions, 332
- Suspension, de Dion rear, 44
- Suspension, design trends review, 584-586
- Targa, Zuffenhausen, 399
- Taxation and length of vehicle. *Letters*, 7, 69, 103, 137, 199
- Toyota Corona, description of, 772
- Transmission, design trends review, 584
- Triumph Spitfire Stage 2, at Goodwood, 554
- Triumph 1300, with front-wheel drive, 524; semi-trailing arms suspension, 585
- Triumph 2000 Estate, at Goodwood, 554
- Urbanina town, 652
- Vauxhall Cresta, revised styling, 525; thermo-electric sealing for windscreen, 594
- Vauxhall Viva-90 versions, 525
- Ventilation equipment, 557
- Zagato Lancia Fulvia Sport, 652
- See also *Motor vehicle*
- Electric, ac, for cryogenic operation (Globe Industries Inc. (UK) Ltd.), 597
- Asynchronous, automatic starters for (AOIP), 685-686
- Control centres range, Unicenter (Field & Grant Ltd.), 179
- Controllers, Sandrive, 247
- 11 kV, for Longannet power station (Associated Engineering Industries), 368
- High speed TR/DVFR (Trend Industrial Equipment Ltd.), 470
- Hysteresis (Perfection Parts Ltd.), 538
- 90 hp flameproof flange mounted, 53
- Power Drive six-speed geared, 800
- Reverse rotation prevention unit for (Laurence, Scott & Electromotors Ltd.), 88
- Rolling bearings in, meeting on (Hoffmann Manufacturing Co. Ltd.), 42
- Shaded pole (Jones & Stevens Ltd.), 346
- Small, Type 312 starting relay for (Magnetic Devices Ltd.), 597
- Starter boards (trade publication), 190
- Starters for, vacuum contactor for (AEI), 665
- Submersible (Sumo Pumps Ltd.), 695
- Thermalastic insulation system, 629
- Three phase squirrel cage induction (Higgs Motors Ltd.), 311
- Traction, for 25 kV trains, 274-275
- Vacsyns low speed synchronous, 375
- Motor, electric, variable-pole induction, Gold Seal, 722
- Variable stiffness torque (Short Bros & Harland Ltd.), 786
- Motor Gear & Engineering Co. Ltd., Motogear F series of spur-gear reduction units, 786
- Hydraulic, high-torque low-speed (Ruston & Hornsby Ltd.), 87
- Shock resistance, Mark 44 and Mark 77 (Chamberlain Industries Ltd.), 471
- Industry, Germany, 397
- Joint Labour Council, 802
- National Plan impact on, 387
- in Scotland, 321
- Strikes in, proposals on (Electrical Trades Union), 386
- See also *Motor car industry*
- Insurance scheme, Wingard (Thos. R. Miller), 431
- Outboard, Johnson, 824
- Precision, planetary gear system for (Globe Industries Incorporated (UK) Ltd.), 283
- Motor Rail Ltd., Unilok combination rail/road locomotive, 694
- Show, Frankfurt International, exhibits at, 397-399
- London (Earls Court), review of exhibits at, 555-558, 584-586
- at Turin, exhibits at, 611-612, 652-653
- Vehicles, acceleration tests on, ISAM equipment for, 659
- Battery electric (Clayton Equipment Co. Ltd.), 631
- Bedford trucks, record exports of, 240
- British, servicing guide to, by M. H. Rosewarne (book), 478
- Bulk carriage, for solid fuels, Charrold Autobagger, 233-234
- Cargo, PATA (pneumatic all-terrain amphibian), 442
- Dodge KL600 low-loader, 431
- Dumper truck, Dumphruk 690 and 1100 (AEC), 279
- Fuel consumption tests on, ISAM equipment for, 659
- Light commercial, with V4 engine, Transit range of (Ford Motor Co. Ltd.), 453
- Road testing and recording apparatus (ISAM), 659
- Safety, challenge trophy to promote (Small & Parkes Ltd.), 656
- 500 series range of tractors and trucks (Dodge Bros. (Britain) Ltd.), 431
- Study of dynamics of, 16
- Testing of heavy goods. *Letter*, 7
- Trailers, direction indicator relay unit for (Joseph Lucas & Co. Ltd.), 246
- Underground supplies, Bretby-Wakefield, 55
- Motorola Semiconductor Products Inc., type MV1892 high power switching diode, 146; transistor selection guide (trade publication), 350
- Motorway, Accra-Tema, concrete construction of, 708
- Marginal strips on, road roller attachment for (Aveling-Barford Ltd.), 504
- Mott, Hay & Anderson, London Bridge investigations, 130; design of new bridge, 130
- Mott, L. C., on Engineering Drawing and Construction, Vol. 1 (book), 798
- Moulds, concrete shuttering and, glass fibre reinforced polyester for (BIP Chemicals Ltd.), 724
- Mobile, for precast concrete panels, 240
- Moulding, Bipel "Transcrew" plastics transfer, 118
- Cold press, of plastics, 124
- Machine, injection, Peco-Loewy 20/90R 2,000-ton, 77
- Temperature controller for (Engineering Coordinated Ltd.), 247
- of plastics, temperature control of, by V. A. Veselov (review), 61
- Moulton, A., that bicycle from Raleigh, 174; on Moulton bicycle, 229. *Letter*, 261
- Moulton bicycle, comparison with other small-wheel models, 104. *Letters*, 199, 229, 261, 328, 356, 453
- Junior 1970, 800
- Mount Goldsworthy iron-ore deposits, development of, 251
- Mount Goldsworthy Mining Associates, equipment orders for Mount Goldsworthy iron ore developments, 251
- Mountbatten, Earl, chairman of National Electronics Research Council, 2; honorary membership of Institution of Electronic and Radio Engineers, 2
- Mounting synchros and servomotors (trade publication), 605
- Vibrashock, for Rolls-Royce Silver Shadow motor car, 586
- Mowlem (Civil Engineers) Ltd., Backwater Dam, 600
- MTE control panel for Veromatic drilling machine, 116
- Mufax weather chart recorder (trade publication), 350
- Muggleton, Dr. L. M., review of Ionospheric Radio Propagation, 413
- Muirhead & Co. Ltd., type K-222-A synchro position analyser, 19; instruments and systems 1965 (trade publication), 190; Mufax weather chart recorder (trade publication), 350; oscillator (trade publication), 542; mounting synchros and servomotors (trade publication), 605
- Muldivo Calculating Machines Ltd., IME84 transistorized desk calculator, 505
- Mull, submarine power cable to, 336
- Mullard Cryomagnetic Laboratory, inauguration of, 33
- Mullard Electronics Centre, opening and activities of, 752
- Mullard Ltd., ZX1060 water-cooled ignitron, 24; semiconductors (trade publication), 62; microwave components (trade publication), 158; electromagnet for neutron diffraction, 500; tunnel diodes at microwave frequencies, 506; C428 electrolytic capacitors, 538; Ferro-cube pylon coated toroids, 633; ZC 1030 cold cathode trigger tube, 759
- Mullard Research Laboratories, helium Dewar flasks, 727
- Muller, Y., on Exercices D'Organisation et de Recherche Operationnelle (review), 284
- Mullet, G. M., Handbook of Compositions at Thermodynamic Equilibrium (book), 446
- Multi-gas detector (Draeger Normalair Ltd.), 53
- Multi-gauge for inspection of electrical connectors, by F. R. Tolmon, 341
- Multilin constructional technique of micro-miniaturization, 529
- Multimeter, electronic, Philips type PM2401, 729
- Multipacket articulated ship, development of, 719
- Multiple Monitoring system for all-weather aircraft landing, 335
- Multiplex system for all-weather aircraft landing, 335
- Munton, R., on nuclear ships, 751
- Murdoch, J., statistical training set, 718
- Murdoch, M. L., on cam design, 419
- Murfit Bulk Transporters Ltd., activities of, 401
- Murfit Continental SA, formation of, 401
- Murray & Murrell Ltd., reinforced concrete football stand at Galashiels, 466
- Murrayfield Real Estate Co., Buchanan House office block for British Railways at Glasgow, 689
- Murrell, K. F. H., review of Human Engineering Guide for Equipment Designers, 477
- Mürtz, Dr., forming by shockwave processes, 617
- Museum radio tower, London (GPO), 676-677
- Science, 50 things to see, by J. T. Van Riemsdijk (book), 126
- of Science and Industry (Birmingham), engines and equipment running on live steam, 416
- Mustang motor car (OSI), 652
- Mustang tracked mobile drilling rig, 472
- Muster, D., on Lubrication and Wear (book), 158
- Myford Ltd., air bearing spindles in grinders, 267
- Mylar polyester film for insulation, 370
- Type CS77 polyester film for printed circuits, 90
- Myriad computer system installation at Leatherhead research laboratory, 307
- Myson Heat Exchangers Ltd., Envoy fan powered convector unit for warm air heating, 736
- N**
- NAFT, S., on International Conversion Tables (book), 350
- Nail Kwik draught excluder, 352
- Napper, Prof. J. H., Teesside industrial estate, 776
- Naradi, diamond wheel with single layer surface, 409
- Narramore & Tozer Ltd., range of Springfix fork head assemblies, 90
- Naslin, P., on The Dynamics of Linear and Non-Linear Systems (book), 286; (review), 700
- Nation not afraid: the thinking of Enoch Powell, by J. Wood (review), 285
- National Aeronautics and Space Administration. See *United States*
- National Association of British Manufacturers, winding up of activities, 209
- Board for Prices and Incomes, first report on, 3. *Letter*, 137; progress of, 65
- Caravan Council, badge awards for caravans to BS 3632, 480
- National Cash Register Co. Ltd., 395; electronic accounting machine with magnetic disc memory, 505
- National Coal Board, mechanization of coal mines, 41; electronics in coal mining, 41; Telecommand system for remote control of power loader faces, 41; automatic coal plough project, 41; stable hole cutting operation research, 41; Bretby/Cowlishaw Walker overhead monorail, 41; miller type ripping machine, 53; Bretelephone loud-speaking telephone for mines, 55; electronic remote control and monitoring equipment for surface conveyor system, 113; land-sale coal depot at Bilston Glen Colliery, 121; central heating survey, 224; prospects of coal industry, 385; coastal coalfields information from boring operations, 528; financial position and prospects, 610; see also *Collieries*
- College of Rubber Technology, replacement by postgraduate centre at Loughborough College of Technology, 206
- Dock Labour Board, position in Devlin report, 193
- Economic Development Council, construction costs and productivity, 226; Imported Manufactures: an inquiry into competitiveness (report), 354
- Plan, progress report on, 257
- Electronics Research Council, activities of, 2
- Engineering Laboratory, new division for development of standard programs for computers and machine tools, 113; multi-axis continuous path control, 113; in East Kilbride development, 618; hydrostatic extrusion process, 811
- Federated Electrical Association, new agreement for electrical apprenticeships, 206
- Federation of Builders' and Plumbers Merchants, catalogue of central heating equipment retailers, 320
- of Ironmongers, catalogue of central heating equipment retailers, 320
- Institute of Agricultural Engineering, activities of, 743
- of Economic and Social Research, study of long-term costs of urban development, 513
- of Industrial Psychology, study of industrial accidents, 592
- of Oceanography, wave spectra provides best basis for offshore rig design, by L. Draper, 124; open day, 564; wave research, 564
- Joint Industrial Council, new agreement for electrical apprenticeships, 206; geographical mobility of manpower, 577
- Marketing Council, formation of, 354
- Physical Laboratory, multi-gauge for inspection of electrical connectors, 341; tank tests on hull design of Cunard liner, 380; laser for calibration of length scales, 443
- Plan, comment on, 385, 387; impact on engineering and construction industries, 387; White Paper on, 579
- Ports Council, *Port Development An Interim Plan*, 161
- National Research Development Corp., move and reorganization, 97; government pressure towards research with commercial possibilities, 97; effect of economic restrictions, 163; *Inventions for Industry* (bulletin), 220; support of new inventions, 290; activities of, 642; development of Multipacket articulated ship, 719; annual report of activities, 740-741; administrative changes, 740; provisions of Development of Inventions Act (1965), 740; reorganization of, 740; financial assistance and commitments, 740; expenditure, 740-741; review of current projects, 741; Hovercraft development, 741; Dracone flexible barge development, 741; grassland reseeding machine, 741; computer projects, 741; Hoverkilt project, 741; thermionic generator, 741; automatic racking machinery for laundries, 741
- Society for Clean Air, annual conference (Eastbourne), 546; Clean Air Year Book (1965-66), 636
- of Professional Engineers, survey on public image of engineers, 390. *Letter*, 453
- Union of General and Municipal Workers, position as general union, 709; membership statistics, 709; aims, objects and organization of, 709
- Nationalization of steel industry, 99, 673
- Nationalized Industries, Select Committee on, report on London Transport, 322
- NATO station near Carlisle, aerial masts for, 339
- Natural Environment Research Council, formation of, 564
- Gas fractionating plant for Russia (SNAM Progetti), 145
- Exploration in North Sea, 641
- Fired boilers for steam turbine installations, 552
- Liquefied, import of, by Sir Henry Jones, 771
- in Nigeria, 257
- Rubber Producers' Research Association, conference on Rubber in Engineering Applications, 823
- Naval warfare, simulation by Surface Tactical and Blind Pilotage Trainer, 389
- Navigation, blind pilotage, 389
- Inertial. See *Inertial navigation*
- System, Marconi AD 560 Doppler, airborne computers, for Boeing 707 airliners, 464
- NCR-Elliott 4100 computer for aircraft research applications, 369
- Neal NS45 Mk. 2 diesel-mechanical mobile crane, 312
- Negretti & Zambra Ltd., Consair pneumatic differential pressure transmitter, 787
- Neill, James, & Co. (Sheffield) Ltd., magnetic tools (trade publication), 766
- Nelson, C. E., on Microfilm Technology (review), 157
- Nelson, Lord, British Electrical Power Convention, 5; on British computer industry, 417; market research seminar, 681
- Neon indicators (trade publication), 318
- Lamps, TPX-A, -B, -C range of (West Hyde Developments Ltd.), 471
- Miniature, Brightlife, 114
- Neoprene coated nylon for gasholders, 152
- Sheets for railway track ballast protection, 791
- Nepper, Ing. M., tinplate industry, 617
- Networks, connecting, and telephone traffic, mathematical theory of, by V. E. Benes (book), 605
- Filters and (trade publication), 190
- Physical, by R. S. Sanford (review), 822
- Neutron diffraction, electromagnet for (Mullard Ltd.), 500
- Neville, J. C., Ltd., FoB 4MVB pipe threading machine, 281
- New Holland Claydon M140 combine harvester, 743
- New Speedlock adjustable storage racking, 436
- New Town, Livingston, 143
- Peterlee, area extension, 145
- New York Air Brake Co., manufacturing agreement for Hydreco products, 81
- New York City Fire Department, Super Pumper fire pump and trailer, 568
- Newage Lyon Ltd., Alcon self-priming pump, 817
- Newall Group Sales Ltd., Model 2443 high precision vertical measuring machine, 116
- Newalls Insulation & Chemical Co. Ltd., cold store for ice cream products, 337
- Newcastle upon Tyne, town gas installation at, 182
- Newcastle upon Tyne, University of, research grant for computer typesetting, 81; research grant for gyroscopes, 240; tests for propellers for Cunard liner, 380
- Newey, Dr., on dislocations in lithium fluoride, 338
- Newman Industries, activities of, 518
- Newport, iron ore import terminal project, 35
- Newspapers, Crusader web-fed offset printing press for, 84
- Headquarters (Birmingham Post and Mail), 600
- Presses, rotary, Crabtree "Viceroy", 600
- Typesetting by computer, Stet technique for, 244
- Newsprint machines for Eastern Europe (Black-Clawson International), 241



- Newstan Collieries, skip winding plant, 657  
 Newton Chambers Engineering Ltd., internal reorganization of, 16  
 Newton, L. S., apprenticeship trends conference, 809  
 Newtonian studies, by A. Koyré (book), 638  
 Nicholas illuminator, fibre optics attachment for (trade publication), 542  
 Nickel-chromium alloys, advanced, by C. H. White and J. Heslop, 501  
 Nickel plating solution, A505 (Forestal), 539  
 Nickols Automatics Ltd., plug-board programming for automatic turret lathe, 269; automatic sequence control system for capstan lathes, 313  
 Nicol (Nineteen Hundren Commercial Language), 421  
 Nig-Halden Group, Texpol polyester drafting film for high quality drawings, 24  
 Nigeria, natural gas in, 257  
 Nikon Nikkormat FT and Nikon F cameras, 699  
 Nile Steamship Co. Ltd., liquefied-gas carrying vessel, 305  
 Niobium, by T. E. Green and C. D. T. Minton, 502  
 Nisbet, T. S., on rolling bearings in electrical rotating machines, 42  
 Nitrile rubber ring for propeller fitting operation, 261  
 Nitrogen atmosphere for boiler feedwater tanks, 152  
 — Shrinkage, liquid, of walking dragline shafts, 724  
 Nock, O. S., review of Basic Concepts in Signal Engineering, 125  
 Noddings, C. R., on Handbook of Compositions at Thermodynamic Equilibrium (book), 446  
 Noise, aircraft, 386  
 — at London Airport, 386  
 — Analyser, impact, Type 1412 (Dawe Instruments Ltd.), 187  
 — Control, conference on (PERA), 320  
 — Machine tool, reduction by fixing with Adhaesium adhesive, 724  
 — Measurement and suppression of, by A. J. King (book), 222; (review), 668  
 — Transformer, suppression at Thorpe Marsh power station, 723  
 — and vibration, isolation and (trade publication), 574  
 Non-destructive testing, by C. Campkin, 444  
 — Testing, magnetic reaction analyzer for, 816  
 — Service (International Research & Development Co.), 17  
 Non-linear and linear systems, dynamics of, by P. Naslin (book), 286; (review), 700  
 Non-metallic materials, by W. Wood, 501  
 Norco Engineering Ltd., Norco Junior heat consumption recorder for heating systems, 352  
 Norco Junior heat consumption recorder for heating systems, 352  
 Nordenberg, H. M., on Electronic Transformers (review), 764  
 Norgren, C. A., Ltd., Series 11-018 fail safe precision controller for air gauging, 22  
 Noridska Värma Sana AB, formation of consortium, 433  
 North America, trade mission to (EIA), 689  
 North American OV-10A counter insurgency aircraft, 498  
 North Hants Engineering Ltd., dissolved oxygen meter, 72  
 North, James, & Sons Ltd., Bonanza Minor safety work boots, 248  
 North Sands, tanker, with "J" type diesel engine, 812  
 North of Scotland Hydro-Electric Board, submarine power cable to Mull, 336; Cruachan power station, 489; electrical power map, 491; history and activities of, 491; cancellation of Fada-Fionn and Laidon hydro-electric schemes, 737; projects in hand, 737  
 North Sea, oil and gas prospecting, production licences for, 194; gas prospecting in, 418; oil prospecting in, 418; coal seams, 528; natural gas exploration in, 641; oil exploration in, 641; Sea Gem oil drilling rig in (British Petroleum Co. Ltd.), 771  
 North Thames Gas Board, facilities and services (trade publication), 254; modification of diffusion type burner for methane, 725; water heater for Canvey Island methane terminal, 753  
 North-West survey for regional planning, 162  
 North Western Electricity Board, summer courses for schoolboys on electricity supply industry, 419; English Electric-Leo-Marconi system 4 computer, 753  
 North Western Gas Board, gas reforming plants using ICI 500 process, 528  
 Northern Bechtel Corp., BP refinery at Gothenburg, 433  
 Northern Gas Board, new town gas installation at Newcastle upon Tyne, 182  
 Northumbrian River Authority, installation of river level-recording instruments, 276  
 Norton Abrasives Ltd., diamond wheel with single layer surface, 409  
 Norton Co., high precision cylindrical grinding machine, 281  
 Norton, E., on nuclear ships, 750  
 Norton, G. P., on Yorkshire Copper Works, 813  
 Norton International Inc., diamond wheel with single layer surface, 409  
 Norton, Sir James Farmer, & Co. Ltd., fully automatic billet peeling machine, 86; activities at Winsford, 463  
 Norwegian Bulk Carriers, Harland & Wolff contract for new vessels, 241  
 Norwegian Institutt for Atomenergi, Italian participation in Halden project, 529  
 Notice boards (trade publication), 638  
 Nottingham High Pavement School, applied science activities, 239  
 Nova Hut Klementa Gottwald steelworks, English Electric computers for, 465  
 Nova Scotia Light & Power Co., Tuft Cove No. 1 power station, 528  
 Nozzle, oil-burner, Monarch F-80-CC, 768  
 NSU, exhibits at Frankfurt Motor Show, 398-399; 1000L and 1000LS motor cars, 399  
 NTN Bearings-Birfield Ltd., ball and roller bearings (trade publication), 286  
 NTSC system of colour television, 258  
 Nucelite, by W. Wood, 501  
 Nuckey, Scott & Co. Ltd., Warrior Quick Jet helical tap for blind hole tapping, 280  
 Nuclear energy. See Atomic energy  
 Nuclear Equipment Ltd., type 150 remote handling equipment, 152  
 Nuclear fusion research, by Dr. J. B. Adams, 799  
 — Power. See Atomic power  
 Nuclear Power Group, tenders for Dungeness B atomic power station, 171; Oldbury nuclear power station, 172; sale of Goliath gantry crane, 209; Dungeness A atomic power station, 299; Oldbury atomic power station testing of steam turbines, 563  
 Nuclear power station. See Atomic power station  
 — Propulsion. See Atomic propulsion  
 — Reactor. See Atomic reactor  
 — See also Atomic  
 Nucleonic Consultants Ltd., radio isotope advisory service, 753  
 Nucleonic tin-coating width gauge, Atomat, 790  
 Nufil synthetic fibre, 568  
 Nuliner roof insulation with Polyzote expanded polystyrene, 815  
 Nume Ltd., sealed belt conveyor, 186  
 Numerical analysis of beam and column structures, by W. G. Godden (book), 542  
 — Elements of, by P. Henrici (review), 381  
 — by I. M. Khabaza (book), 446  
 — Control, benefits of, and "hidden" advantages, 393  
 — for Binumat flame cutting machine (Messer Griesheim Ltd.), 794  
 — Churchill Redman profile turning lathe with, 315  
 — Cintimatic six spindle turret drilling machine with, 315  
 — Circuit building machine with (Standard Telephones & Cables Ltd.), 271  
 — Comparison with conventional machines, 393  
 — of drilling machine, 376, 627  
 — of drilling machine (trade publication), 822  
 — of drilling machine (Vero), 280  
 — Economics of, case histories on, 393  
 — Effect on cutter life, 393  
 — Effect on drawing office, 393  
 — Effect on floor space and storage, 393  
 — Effect on inspection, 393  
 — Effect on machine life, 393  
 — Effect on machine operators, 393  
 — Effect on machine utilization, 393  
 — Effect on production, 393  
 — Effect on programming, 393  
 — Horizontal milling, boring, and surfacing machine with, Model 724P (H. W. Kearns & Co. Ltd.), 315  
 — of machines (trade publication), 510  
 — of machine tools, advantages of, 327  
 — of machine tools (Dunlop Aviation Division), 326-328  
 — of machine tools (ICT), 210-211  
 — of machine tools, increase in use of, 269-271  
 — of machine tools, by H. A. Van Raalte, 732  
 — Maintenance effects, 394  
 — Numerical system of, 270  
 — Symposium on (PERA), 799  
 — System, Sinumerik, 376  
 — Solution of partial differential equations, by G. D. Smith (review), 381  
 Numerical center tape controlled model 70 drilling machine (Giddings & Lewis), 269  
 Numerical system of numerical control, 270  
 Numeroblock, programme control system for milling machines, 80  
 Nürnberg, W., on Die Prüfung elektrischer Maschinen und die Untersuchung ihrer magnetischen Felder (review), 733  
 Nut method, Pilgrim, for fitting of ship propellers, 260  
 — Self-locking, with nylon insert, Nyloc, 742  
 Nutrunners, screwdrivers and (trade publication), 446  
 Nutting, J., on Microstructure of Metals (book), 478  
 Nu-way Q3 Rotovac proportioning oil burners, 49  
 N.V. Optische Industrie "De Oude Delft" photographic film copying equipment, 699  
 Nyloc self-locking nut with nylon insert, 742  
 Nylon cable saddle, flexible (Herzbi Ltd.), 310  
 — Coated instrument case, No. 1277 (West Hyde Developments Ltd.), 217  
 — Toroids, Ferroxcube, 633  
 — Coiled hose, Top-Dog range of, 345  
 — Collapsible bulk storage container, Big Bag, 792  
 — Conveyor belts (trade publication), 222  
 — Gas holders for nitrogen, 152  
 — Inset, Nyloc self-locking nut with, 742  
 — Yarn, crimp rigidity testing machine for, 380  
 — Mattingly head in AM1 false twist machine for, 727  
 Nylon Engineering Co., Nysteel lightweight slat conveyor chain, 370  
 Nysteel lightweight slat conveyor chain, 370
- O**
- OATLEY, Prof. C. W., scanning electron microscope, 747  
 Ocean Driller oil-drilling rig, 204  
 Ocean Drilling & Exploration Co., ownership of Odeco (UK) Ltd., 205  
 Ocean Prince semi-submersible oil-drilling rig, description of, 204-205  
 Ocean Queen oil-drilling rig, 204  
 Ocean resources, investigation into, 80  
 Oceanology Study Group, Commercial, formation of, 80  
 Odeco (UK) Ltd. ownership of, 205; description of Ocean Prince semi-submersible oil-drilling rig, 204-205  
 O'Doherty, E. F., Psychological Aspects of the creative act, 357  
 Odometer, driverless hub-mounted, Hubodometer Engler, 696  
 Oerlikon, SA (Pty) Ltd., transformers for South African Railways electrification system, 754  
 Office buildings, Dependatherm temperature sensors for, 218  
 — Computers in, 812  
 Offshore oil rig. See Oil drilling rig  
 Ogilvie, D. G., shipbuilders and marine turbines, 613  
 O'Herlihy, D. M., on Management for Civil Engineers (review), 348  
 Oil drilling rig design, by L. Draper, 124  
 — Rig, Ocean Driller, 204  
 — Rig, Ocean Prince semi-submersible, 204-205  
 — Rig, Ocean Queen, 204  
 — Rig, Sea Gem (British Petroleum Co. Ltd.), 771  
 — Rig, Sea Gem, gas discovery by, 418  
 — Engine. See Engine, diesel  
 — Exploration in North Sea, 641  
 — Filter. See Filter  
 — Flow meter, Micro-Oil, 119  
 — Fuel. See Fuel oil  
 — Industry, position and prospects of, 5-7, 385  
 — Prospecting in North Sea, 418  
 — in North Sea, production licences for, 194  
 — Storage in bulk, 531  
 — See also Lubrication; Petroleum: Refinery  
 Old, C. L., applied science in schools conference, 516, 517  
 Oldbury atomic power station, constructional details, 172-174; integral boiler-reactor design, 172-174; prestressed-concrete pressure vessel for, 172-174; testing of steam turbines, 563  
 Oldroyd, Prof. J. G., review of Statics of Granular Media, 29  
 Oldsmobile Toronado motor car, 485; 7 litre V8 front wheel drive, 430-431; suspension system of, 585  
 Olivetti, Logus 27 printing calculator, 505; Dora portable typewriter, 505  
 Olmsted, S. P., on Ethical Problems in Engineering (review), 765  
 O-M Ltd., TMS1-60/130 large vertical boring and turning mill, 635  
 Onan & Sons Inc., sound shield for marine diesel generator, 218  
 One-Eleven aircraft, landing system on (British Aircraft Corp.), 334-335  
 One-Eleven short-haul jet airliner, orders and operation for, 673  
 Oosterschelde bridge, constructional details on, 488; course visit to (Cement and Concrete Association), 488; prestressed concrete construction, 728  
 Opel, Adam, AG, Kadett range of motor cars, 332; Opel OHC motor car engine, 332  
 Operational research, the first twenty years, by R. H. Collcutt (review), 540  
 — for management, by M. J. Sargeant (book), 605  
 — Organization and, exercises on, by Y. Muller (review), 284  
 Optical instruments (trade publication), 574; 798  
 — Type 100, for inspection of internal surfaces (Vision Engineering Ltd.), 248  
 — Marking out, GP500 camera and projector system for, 11. Letter, 199  
 Optical Measuring Tools Ltd., Model 2443 high precision vertical measuring machine, 116  
 Optics, fibre, light switch based on (Bausch and Lomb Optical Co.), 187  
 — Mass production of (Rank Taylor Hobson Division), 209  
 Optidress equipment (trade publication), 574  
 — for grinding wheel forms, 219  
 O'Rahilly, A., on Electromagnetic Theory (book), 446  
 Orbit determination, methods of, by P. R. Escobal (book), 670  
 Ordnance Survey gravel and sand map of England, 560-561  
 Ore slurry, radioisotope analyser for, 183  
 ORGALIME, removal of technical barriers to trade in Europe, 549  
 Organization, industrial: theory and practice, by J. Woodward (review), 669  
 — and operational research, exercises on, by Y. Muller (review), 284  
 Orth, C. D., on Administering Research and Development (book), 318  
 Osborn, Samuel, & Co. Ltd., cutters and chucks (trade publication), 478  
 Oscillator (trade publication), 542  
 — Microwave, using epitaxial construction (Standard Telecommunication Laboratories), 244  
 — Portable, type 74254-A (Standard Telephones & Cables Ltd.), 148  
 — Tuneable, at optical frequencies, 52  
 Oscillograph recorder, portable, type 5-124P2 (Bell & Howell Ltd.), 185  
 — Type 5-124 (Consolidated Electrodynamics), 464  
 Oscilloscope, hybrid split-beam, D53 (Telequipment Ltd.), 538  
 — Indicator, universal (trade publication), 638  
 OSI exhibits at Turin Motor Show, 652  
 OSI Mustang, motor car, 652  
 OSI Secura motor car, 652  
 Oskarshamn atomic power station, 141  
 Oskarshamnsverkets Kraftgrupp AB, Oskarshamn atomic power station, 141  
 Osmond, A. & S., Ltd., Type 261 abrasive wheel cutting-off machines, 409  
 Osram (CUTCO) Ltd., trial installation of mercury-iodide street lamps, 24; tungsten-iodine lamp for lighting of airfields, 245; tungsten-bromine lamps, 628  
 Osterwalder fine blanking presses, 376  
 Otway, F. O. J., on three new "tubes", 419  
 Oundle School, applied science activities, 237  
 Outboard Marine Corp., Johnson outboard motors, 824  
 Outboard motors, Johnson, 824  
 Outlet header, Perspex model of, for reactor research, 244  
 Oven, electric batch (AEW Ltd.), 153  
 — Electric, for large plastic sheets (AEW Ltd.), 662  
 — Gas fired (Automatic Equipment Ltd.), 280  
 Overalls (trade publication), 605  
 Overdrive, Auto Range, Auto Transmissions, 584  
 — de Normanville type 230, AutoRange version of, for automatic transmission, 558  
 Overheating protection for fan-cooled equipment, Klixon 2ST system of, 218  
 Overseas Containers Ltd., formation of, 322  
 Overseas students, vacation training for. Letter, 261, 356  
 Overshoot and take-off director for aircraft (Elliott-Automation Ltd.), 244  
 OVEX finishing machines, 343  
 Owen Organization, Insta-Hitch implement couplings for tractors, 79; Wispur haymaker, 79; Rover-BRM gas-turbine motor car. Letter, 103  
 Owens, B., on Unochrome Ltd., 625  
 Owens-Corning Fiberglas AW glass-fibre insulating material, 64  
 Oxford University, SRC grant for molecular research, 561  
 Oxygen analyser, industrial, Type OA137 (Servomex Controls Ltd.), 598  
 — Dissolved, AML meter, 71  
 — Generation from carbon dioxide (Westinghouse Research Laboratories), 411  
 — Resuscitator, portable, Automan, 117  
 Ozonair Engineering Co. Ltd., air filters (trade publication), 222; Z-Mat automatic air filters for small air flows, 631  
 Ozone lamp, Felvic air purifier with, 114
- P**
- PA Management Consultants, training audit and profitable use of Industrial Training Act, 2. Letter, 69; productivity scheme at Alexander Stephen & Sons, 298  
 Pacemaker equipment for track-to-train communication tests, 411  
 Pacific Intertec dc transmission scheme, English Electric auto transformers, 80  
 Pacific 102 air conditioner, 224  
 Package Co. Ltd., range of Pak-a-Way automatic oil-fired air heaters, 278  
 Package Heater Co. Ltd., Pak-a-Way oil fired heaters for cargo depot, 564; Pak-a-Way space heater for mobile theatres, 790  
 Packaging Products Ltd., "Armour-tex" resin-bonded kraft laminate, 282  
 — Services (trade publication), 542  
 Padlock attachment, Type PL, for rotary switches (Craig & Derricott Ltd.), 218  
 Page, G. T., Engineering Among the Schools (survey), 101-103, 235, 236, 237, 481, 515, 675  
 Page, P., St. Paul's Cathedral repairs, 369  
 Page printers, teletype (trade publication), 350  
 Paint analysis by polarography (US NBS), 149  
 — Heaters (Aerograph-DeVilbiss Co. Ltd.), 535  
 — Spray gun, general purpose (Gray & Campbell Ltd.), 119  
 Painter Bros., transmission tower testing, 596; cantilever and portal structures for overhead electrification system, 644  
 Painting machine, multi-spindle automatic spray, CRT12 (Automatic Equipment Ltd.), 630  
 — Specifications (trade publication), 478  
 — Spray, automatic drum unit (F. W. Berk & Co. Ltd.), 438  
 — Guns, Graco Golden, 438  
 Pak-a-Way automatic oil-fired air heaters, range of (Package Co. Ltd.), 278  
 Pak-a-Way oil fired heaters for cargo depot, 564  
 Pak-a-Way space heater for mobile theatres, 790  
 Pal system of colour television, 258  
 Pall (UK) Sales Ltd., Ultipor 2 type SU cartridge type compressed air and gas filters, 22; exothermic gas dryers, 344  
 Palladium electrodeposition for printed circuits (Johnson, Matthey & Co. Ltd.), 379  
 Pallas motor car, Citroen, 399  
 Pallet trailer, Stanhay-Bigbury, 79  
 Palmers, M. R., Steel Congress (Luxembourg), 617  
 Palmers Travelling Cradle & Scaffolding Co. Ltd., Duralumin for lightweight suspended platform, 149  
 Pametrada, reheat marine steam turbine installation, 426; position of, 546. Letter, 613; feasibility study on unitized reheat steam turbine, 520-521  
 Panax Equipment Ltd., safety circuit for radiation machine, 242  
 Panels, cladding, on multi-storey flats, glass-fibre reinforced plastics for (Greater London Council), 690  
 — Concrete, Sparlite, for extension walls, 384  
 — Glass reinforced polyester, for prefabricated building, 790  
 PanElectronics Ltd., transmitted light photo-head and projector, 245  
 Pannell, C., on redevelopment scheme for Whitehall and Parliament Square, 131  
 Pantograph wear in overhead electrification system, 644  
 Paper, drawing, Super Permatrace, 52  
 — Mill, electronic control scheme for (George Kent Ltd.), 276  
 — Self-copy, Sinecarbon B, 309  
 — Tape, gummed, reinforced, Armourbond, 282  
 Papermaking machine, automatic feed-stock control of (Bowaters UK Pulp & Paper Mills Ltd.), 276  
 Papworth, Herbert, Partners, scheme for waterboring in chalk downs, 497  
 Parcel sorting office, Western District (GPO), 200-201  
 Paris Exposition of 1867, 831  
 Paris Salon, motor car exhibits at, 483-485



- Park, car. See *Car park*
- Parker, Dr. A., review of *Chemical Engineering Practice* (Volume 9), 444
- Parkinson Cowan Ltd., group activities, 48; liquid meters (trade publication), 638; measurement type water meter (trade publication), 702
- Parkinson Cowan Measurement Ltd., totalising counter (trade publication), 542
- Parkinson Howard (Accra) Ltd., Accra-Tema Motorway, 708
- Parkinson, J., & Son (Shipley) Ltd., plug programmed vertical milling machines, 314
- Parliament Square and Whitehall, redevelopment scheme for, 131
- Parsons-Basil, investigation of water resources in Saudi Arabia, 560
- Parsons, Brown & Partners, Baghdad city centre redevelopment scheme prize-winning design, 466
- Parsons, C. A., & Co. Ltd., autotransformer tanks in aluminium NP8, 210; turbo-generator sets for Pickering atomic power station, 302
- Parsons, E. A., on Management for Civil Engineers (review), 348
- Parsons, R. H., association with ENGINEERING, 837; resignation of, 839
- Partial differential equations, numerical solution of, by G. D. Smith (review), 381
- Particles and vapours, inhaled, International symposium on, 191
- Partitions, demountable (trade publication), 382
- Partlow Corp., Indicator 194 gas controlled temperature indicator, 120
- Parton, K. C., computer in design offices, 358
- PASE (power assisted storage equipment), 58
- Pastorelli & Rapkin Ltd., hydrometer (trade publication), 318
- PATA (pneumatic all-terrain amphibian) cargo motor vehicle, 442
- Patent brokers, list of. *Letter*, 356
- Patent Enamel Co. Ltd., vitreous enamelled products discontinued, 400
- Patent protection: the inventor and his patent, by C. Lees (book), 605
- Patterson Industries Inc., blending machine with interchangeable cones, 537
- Paul, R. J. A., on Fundamental Analogue Techniques (book), 702
- Paver-finisher machine for asphalt or concrete, Titan, 745
- Payloader H-25B tractor shovel with power steering, 537
- Hough H-50B, four wheel drive tractor shovel, 410
- Payment scheme and manpower utilization (ICI), 547
- Payne, A. R., on Rubber in Engineering Design Practice (review), 93
- Payne Products International Ltd., heat exchanger discs for Rover BRM, 83; flat lapping machine, 343
- Pay-TV Ltd., pay television transmissions experiment, 130
- Pearce, J. G., on Copper in Cast Iron (review), 28
- Pearse, E. S., on Quickfit and Quartz Ltd., 17
- Pearson, D., on the Moulton bicycle, 261
- Pearson, Sir Denning, engineers in society, 675
- Pearson, J., on Behaviour of Metals under Impulsive Loads (book), 382
- Pearson Panke Ltd., Weingarten percussion presses, 662
- Peco-Loewy 20/90R 2,000-ton injection moulding machine, 77
- Peco Machinery Sales (Westminster), Peco-Loewy 20/90R 2,000-ton injection moulding machine, 77
- Peco-Whyman Ltd., glass fibre reinforced polyester coffering forms, 724
- Peebles, Bruce, & Co. Ltd., site assembled transformer at Iron Action substation, 15; 90 hp flameproof flange mounted electric motor, 53; De La Rue Bull Compatibles/400 computer, 177; transformers for Cockenzie power station, 492
- Peeling machine, billet, fully automatic (Sir James Farmer Norton & Co. Ltd.), 86
- Peglers Ltd., Belmont thermostatic radiator valve, 544
- Pegson Ltd., Amsco dredge pump, 537; ER2 power rammer, 551; Pegson-Weda immersible pump, 729
- Pegson-Weda immersible pump, 729
- Pelapone Ltd., trailer mounted diesel generators, 311
- Pellet Welder casting repairer, 117
- Pens, technical, with eleven line widths, Mars range of, 787
- Pencil sharpener, electric (trade publication), 318
- Pendred, B. W., Editor of *The Engineer*, 771
- Penfold Metallising Co. Ltd., Miniblast shot-blasting machine, 278
- Penguin survey of business and industry 1965, by R. Malik (review), 317
- Peninsular Electric Power Co., Tsing Yi power station, 465
- Penn Controls Inc., click dial thermostats, 537
- Pennsalt Ltd., symposium on centrifuges (Moscow), 785
- Pennsylvania, University of study of Josephson junctions, 339; microwaves from superconducting tin, 339
- Penny, A. M., on sociology and design, 358
- Penrhyn Castle, locomotive museum at, 272
- Penstocks, sewage, automatic operation for (West Kent Main Drainage Sewage Board), 754
- for Volta River project, 364
- Pequignot, C. A., on Chunnel (review), 30
- Perameters Co. Ltd., Perrin mixing head, 793
- Percival, D., on Steam Locomotives (review), 94
- Perfection Engineering Ltd., internal honing machines, 376
- Perfection Parts Ltd., series 93 Basotrol internal pilot gas control, 246; 59026-420 single decade digital clock, 472; click dial thermostats, 537; hysteresis electric motors, 538; Monarch F-80-CC oil-burner nozzle, 768
- Performance and profitability, by M. J. Clay and B. H. Walley (book), 670
- Peristaltic pump, Auto-Chemistaltic, 537
- Perkin-Elmer, Model 450 recording spectrophotometer, 248
- Perkins Engines Group, manufacturing agreement with Toyo Kogyo, 272
- Perkins, F., Ltd., diesel engine combustion systems 653; Aeroflow combustion system, 653; "H" combustion system, 653; direct injection system, 653
- Perkins Group, 170 bhp V8510 diesel engine, 347; agreement with Toyo Kogyo Co., 347; order for transfer machines, 401
- Perkins Manufacturing Co. Ltd., Spacesaver storage system for parts, 184
- Permanent magnets (trade publication), 318
- Association, permanent magnets (trade publication), 318
- Lodex, 276
- See also *Magnet*
- Permanite, voluntary standards for troughed metal decking, 593
- Permeable-filling trailer (Alvan Blanch Development), 79
- Permutit Co. Ltd., poison resistant resins, 624
- Perrin mixing head, 793
- Perry, Dr. D. H., RAE prizewinning author, 81
- Perry, M. A., on Flight Test Instrumentation (book), 446
- Perry, P., apprenticeship trends conference, 781
- Personer hydraulic baling press, 536
- Perspex model of outlet header for reactor research, 244
- PERT network analysis computer programme, symposium on, 105
- Analysis, examples of use of, 105
- Technique (trade publication), 190
- Technique, courses in (EELM), 529
- Peterlee New Town, area extension, 145
- Petree, J. Foster, hundred years of ENGINEERING, 828-839; appointed Joint Editor of ENGINEERING, 839
- Petrochemicals Ltd., agreement with unions, 625; reorganization of management, 625
- Petro-Forge system of high-energy rate forging, 775
- Petrol engine, GII30, F30 cultivator/tractor powered by (Honda (UK) Ltd.), 727
- Honda, conversion kits for LP gas fuel, 119
- Injection equipment (Simms), 593
- Petroleos Mexicanos (Pemex), loan from Baring Bros., 81; liquefied-gas carrying vessel, 305
- Petroleum industry, United States, supply and costs in the, by F. M. Fisher (book), 766
- See also *Oil: Refinery*
- Petters Ltd., PAZI air-cooled diesel engine, 551
- Peugeot 204 motor car, 555-556
- Phylene tanker, installation of Contour echo sounders, 276
- Philippines, steelworks in, 813
- Philips Electrical Ltd., Radio Engineer and Interphone Engineer kits, 800
- Philips Filtration, Type PE7102 electrostatic sub-micron filter for oils and other liquids, 22; coolant clarifier, 377
- Philips, N.V., coolant clarifier, 377
- Philips type PM2401 electronic multimeter, 729
- Phillips, A., on Structure and Properties of Alloys (book), 126
- Phillips Chemical Co., process for particle form polymers, 81
- Phillips, Rev. M. D., applied science in schools conference, 517
- Phonovid system of television recording on gramophone records, 288
- Phosphides, borides, and silicides, by B. Aronson, T. Lundstrom and S. Rundqvist (book), 190
- Phosphorus based polymers in high-temperature material studies, 264
- Phosphorus-nitrogen polymers in high-temperature material studies, 264
- Photain Controls Ltd., photoelectric machine guards, 409
- Photo-choppers, range of (Kynmore Engineering Co. Ltd.), 439
- Photocopying equipment (George Anson & Co. Ltd.), 731
- Photoelectric coating technique, Zandman (trade publication), 286
- Controls (trade publication), 350
- Equipment (trade publication), 638
- Transistorized (Electronic Machine Control Ltd.), 213
- Head unit, reflex, type RPH6 (Lancashire Dynamo Electronic Products), 667
- Lift door control switch (trade publication), 62
- Machine guards (Photain Controls Ltd.), 409
- Switch (trade publication), 318
- System, multi-beam, for safeguarding dangerous machines (Photoelectronics (MOM) Holdings Ltd.), 50
- Photoelectronics (MOM) Holdings Ltd., multi-beam photoelectric system for safeguarding dangerous machines, 50
- Photographic exhibition (trade publication), 413
- Film copying equipment, De Oude Delft, 699
- Processing equipment, automated (Kodak Ltd.), 699
- and television exhibition, industrial (Earls Court), exhibits at, 699
- Photo-head and projector, transmitted light (PanElectronics Ltd.), 245
- Photometry, by J. W. T. Walsh (book), 478
- Photopia Ltd., Durst U70C photographic enlarger with colour filter head, 699
- Photostress technique (trade publication), 286
- Physical chemistry for metallurgists, by J. Mackowiak (book), 413
- Networks, by R. S. Sanford (review), 822
- Physics, applied, for sixth formers, symposium on, 419
- of high pressures and the condensed phase, by A. Van Itterbeek (review), 669
- Picard, Henri, et Frère Ltd., Manhattan flexible files, 402
- Pickard, W., & Co. Ltd., Uracel urethanized cellulose enamel, 439
- Pickering atomic power station, turbo-generator sets for, 302
- Pico portable microwave communication terminal, 506
- Pig slug lining of pipelines, 152
- Pilcon portable shear strength testing instrument for soil, 506
- Pilditch, J., on Business of Product Design (review), 381
- Pile driver, Akerman, model 700-4P, 20
- Driving through concrete, "Calweld" piling rigs for, 466
- Hydraulic pontoon rig for, 441
- Pilgrim nut method for fitting of ship propellers, 260
- Piling & Construction Co. Ltd., Pilcon portable shear strength testing instrument for soil, 506
- Rigs, "Calweld", for pile driving through concrete, 466
- Pillar Holdings Ltd., annual report, 785; reorganization of, 785
- Pilot, automatic, in airliners, 333
- Pilotage navigation, blind, 389
- PIM. See *Precision Indicator of the Meridian*
- Pin-jointed systems, electrical analogues of, by K. K. Keropyan (review), 412
- Pinchin Johnson & Associates Ltd., new factory for paint and resins, 688
- Pingon P600 tower crane with rail mounted mast, 411
- Pininfarina, exhibit at Frankfurt Motor Show, 399; Fiat 2300 S motor car, 652; Alfa Romeo Guilia Tubolare chassis, 652
- Pipe clips, boltless, Instaclip range of, 346
- Coiled, head losses in, by Dr. J. A. Sandover and J. A. Tallis, 156
- Copper, electric jointing tool for, Soldermaster, 155
- Plastic clips for (Camfast Clips Ltd.), 608
- Large, mobile bending machine for, Mark 4 (General Descaling Co. Ltd.), 504
- Steel, radiography welded joints of, BS, 627
- Thermocouple (trade publication), 670
- Threading machine, FoB 4MVB (J. C. Neville Ltd.), 281
- See also *Tube*
- Pipelines, new, pressure-testing and purging of (Imperial Chemical Industries), 210
- Pig slug lining of, 152
- Strainers, Type ORSI duplex, with fabricated steel bodies (Lancaster & Tonge Ltd.), 507
- Surges in, symposium on (IME)
- Piping, drain, corrugated plastic, Lamflex, 790-791
- Plastics, Mole plough for laying, 791
- Drainage, polypropylene (Key Terrain Ltd.), 471
- Pressure vessels and, defects and failures in, by H. Thielsch (book), 574
- Pirelli General, overhead electrical equipment for British Railways London Midland Region main line, 643
- Piston machines, rotary, by F. Wankel (review), 603
- Pit, soaking, computer control for, 124
- Pitchford, J. H., on Ricardo & Co., 812
- Pitney-Bowles Ltd., addressing machines (trade publication), 638
- Pittsburgh-Midland (Adhesives) Ltd., formation of 113; trade mark "Bondmaster", 113
- Pittsburgh Plate Glass Co., formation of Pittsburgh-Midland (Adhesives) Ltd., 113; partnership in Sherbro Minerals Ltd., 400
- Plain man's guide to atomic energy (trade publication), 254
- Plane, concrete, EDCO CD10, for removing road markings, 183
- Planetary surface conditions, lunar and, by N. A. Weil (review), 508
- Planing machine, surface, concrete (Errut Products Ltd.), 434
- Planning, factory model system, (Modulex 3-Dimensional Planning Ltd.), 371
- Plant makers and users, cooperation between, by Sir Maurice Fiennes, 514
- Plasmas and ferrimagnetics, microwave behaviour of, conference on, 159
- Plasma-flame spraying, 563
- Plasma light, computer analysis of (NBS), 628
- PlasmaVac thin film depositor, 85
- Plastazote expanded polyethylene by vacuum forming, 181
- Plastic building products (trade publication), 822
- Clips for copper pipes (Camfast Clips Ltd.), 608
- Drain piping, corrugated, Lamflex, 790-791
- Piping, Mole plough for laying, 791
- Gun, toy (Chad Valley), 800
- Plastic Meccano, 800
- Metal coating, Galvaplas, 346
- Putty, hard setting, Talurit, 507
- Sheet cutting Machine (John Holroyd & Co. Ltd.), 186
- Springs, reinforced, "Scotchply", 277
- Tooling and manufacturing handbook, by F. W. Wilson (book), 542
- Welding tools (Welwyn Tool Co. Ltd.), 794
- Plastics, Bipel "Transcrew" transfer moulding, 118
- Cold press moulding of, 124
- Cutting tools for (Trend), 661
- Exhibition, International, exhibits at, 118
- Glass-fibre reinforced, for cladding panels on multi-storey flats (Greater London Council), 690
- Hammer (trade publication), 222
- for high temperatures, inorganic polymer development, 264
- for high temperatures, Russian studies, 264
- and the mechanical engineer (book), 350
- MH25 portable electric cutting machine for (Trend Industrial Equipment Ltd.), 473
- Moulding of, temperature control of, by V. A. Veselov (review), 61
- Reinforced, guide to, 820
- Shell, for crates, 403
- Water storage cistern in, Aspect, 128
- "Plastirol" flexible duct (trade publication), 94
- Plate and shell theory, introduction to, by C. E. Turner (review), 189
- Steel (trade publication), 734
- Platform, suspended, lightweight, Duralumin for (Palmers Travelling Cradle & Scaffolding Co. Ltd.), 149
- Plating solutions, nickel and copper (Forestal Industries (UK) Ltd.), 539
- Zonax activated carbon filter pads, 539
- See also *Electroplating*
- Platinum resistance temperature sensing elements, range of (Research and Engineering Controls Ltd.), 147
- Some properties and applications of, by A. S. Darling, 501
- Plato and education and engineering, 324. *Letter*, 391
- Plenty & Son Ltd., new premises, 625
- Plenum heating system for London Zoo, 16
- Plessey air traffic control radar type AR-1, 305
- Plessey Automation Group, computer for traffic control in West London, 642
- Plessey Co. Ltd., professional components divisions (trade publication), 30; range of silicone rubber encapsulated capacitors, 218; reorganization, 369; acquisition of Telegraph Condenser Co. Ltd., 369; hot pressing of ceramics at Allen Clark Research Centre, 693; magnetic tape store development, 741
- Plessey Components Group, Type 18 snap-action micro-switch, 114; Type 19 sub-miniature microswitch, 403; connector research and development, 593
- Plessey Group, Bretelephone loudspeaking telephone for mines, 55; package service of Mechanical Products Division, 371
- Plessey Radar Ltd., radar system for Royal Australian Air Force, 16; HF200 height-finders, 433; overseas contracts for radar equipment, 496; type 424 radar for Cracow and Poznan airports, 812
- Plessey Telecommunications Group, automatic telephone exchange at Euston Station, 401
- Plessey-UK Ltd., UNICrimp crimping equipment, 55
- Pleydell-Pearce, A. G., on choosing and evaluating, 358
- Plimmer, Dr. R. N. A., review of Modern Control Systems Theory, 637
- Plotter, Bristol Dynamaster X-Y, 790
- Plough bodies, multi-purpose (Ransomes, Sims and Jefferies), 744
- MF86, four, five and six-furrow (Massey-Ferguson), 78
- Mole, for laying plastics drain piping, 791
- Snow, hand-propelled, Toro Snow Pup and Snow Husky, 640
- TD23 five-furrow disc (Ransomes, Sims and Jefferies), 78
- Plowden, Lord, on Tube Investments Ltd., 813
- Plowden report on aircraft industry, 801
- Plug gauges, ball, tungsten carbide (Insley Industrial Ltd.), 187
- and sockets, industrial (trade publication), 222
- Plutonium recovery from irradiated fuels, 392
- Plywood, marine, for sports car chassis structure, 43-44
- PMD Chemicals Ltd., electroplating power unit, 312
- Pneumatic Components Ltd., brake-bleeding unit, 726
- Control. See *Control*
- Valve. See *Valve*
- Cylinders, "S" range of (Desoutter Lang Pneumatic Ltd.), 634
- Differential pressure transmitter, Consair, 787
- Feed for friction saw (Trennjaeger (Great Britain) Ltd.), 503
- Protection of telephone cable networks (trade publication), 30
- See also *Compressed air: Compressor*
- P & O Steam Navigation Co., formation of Overseas Containers Ltd., 322
- Polar Water Conditioner Ltd., magnetic-field water conditioner, 691
- Polariscope, diffuse light (Sharples Engineering Co. (Bamber Bridge) Ltd.), 761
- Polarographic analyser, pulse, Melabs CPA-3, 663
- Polarography, paint analysis by (US NBS), 149
- Poligrat Ltd., electropolishing (trade publication), 286
- Polish Technical Review, 125, 636
- Polisher, floor scrubber and (R. S. Stokvis & Sons Ltd.), 731
- Polishing machines, rotary table, indexing system for (W. Canning & Co. Ltd.), 179
- Political and economic planning for research into company boards, 272
- Pollution of overhead electrification equipment, 645
- River, reduction in, by Dr. B. A. Southgate, 482
- Polyester drafting film for high quality drawings, Texpol, 24
- Film, Mylar, for insulation, 370
- Mylar type CS77, for printed circuits, 90
- Flooring, reinforced (trade publication), 413
- Glass fibre reinforced, for concrete shuttering and moulds (BIP Chemicals Ltd.), 724
- Insulation for printed circuits, 692
- Panels, glass reinforced, for prefabricated building, 790
- Resin glass fibre powered roof ventilation unit, Turbrovent, 50
- Polyethylene, expanded, Plastazote, by vacuum forming, 181
- High density, Rigidex, 81
- Polymathic Engineering Co. Ltd., fork lift truck (trade publication), 126
- Polymers, heteroatomic, in high temperature material studies, 264
- for high temperatures, Russian studies, 264
- Homoatomic, in high temperature material studies, 264
- Inorganic, for high temperatures (English Electric Co. Ltd.), 264
- Metalorganic, by K. A. Andrianov (book), 222
- Particle form, process for, 81



- Polymer technology, by D. C. Miles and J. H. Briston (book), 222; (review), 821
- Postgraduate centre of (Loughborough College of Technology), 206
  - Polyolefine housings for neon lamps, 471
  - Polypropylene (trade publication), 605
  - Drainage piping (Kay Terrain Ltd.), 471
  - Polystyrene, expanded, Polyzote, Nuliner roof insulation with, 815
  - Insulation for pitch roof system, 690
  - Polythene bottles, Rondec Universal Stage-5, printing machine for, 242
  - for water-storage cistern, 128
  - Polyurethane rubber components, Prescollan, 371
  - Poly-Vee belt drive for checkweighing machine, 424
  - Polyvinyl chloride corrugated sheeting, Cobex, in reservoir baffle wall, 210
  - Indoor telephone cables (trade publication), 158
  - Lining, rigid (trade publication), 382
  - Production increase (British Geon Ltd.), 593
  - Skirting ducts (Key Terrain Ltd.), 471
  - Wiring kits for industrialized building (British Insulated Callender's Cables Ltd.), 594
  - Fluoride film, Tedlar, 660
  - Polyzinc zinc spraying system for bright steel, 242
  - Polyzote expanded polystyrene, Nuliner roof insulation with, 815
  - Pontiac Tempest motor car with L6 engine, 196
  - Pontiac 3.7 litre in-line six motor car engine, 556
  - Pontoon rig, hydraulic, for pile driving, 441
  - Pope, Dr. G. G., RAE prizewinning author, 81
  - Popper, P., on engineering ceramics, 501
  - Porce-Master Chemical Co. Ltd., resurfacing process for baths and basins, 672
  - Porsche 901 motor car, 399
  - Port Development An Interim Plan, National Ports Council, 161
  - Port developments, Finucane Island, 251
  - Port Huon, refrigerated cargo ship, 307
  - Port of London lorry route from industrial Midlands, 98
  - Port of London Authority, increase in harbour charges, 162
  - of Spain B power station, cable for, 625
  - Talbot, iron ore import terminal project, 35
  - Porta-Boost, 2650, carrier model battery charger, 278
  - Porta Power range of single-phase static inverters, 281
  - Porta-Radiant portable propane-fired radiant heaters, 536
  - Portable Welders Ltd., lightweight spot welding gun, 630
  - Portal structures for overhead electrification system, 644
  - Portasilo Ltd., silo level indicator, 148
  - Porter, D. I. R., on applied science activities in schools, 481; on school approach to technology, 515, 516
  - Porter Paints Ltd., exhibition of industrial heating equipment, 255
  - Portsmouth blockmaking machinery, by K. R. Gilbert (book), 478
  - Technical High School, applied science activities, 239
  - Portuguese Railways, Sentinel diesel locomotives for, 144
  - Position analyser, synchro, type K-222-A (Muirhead & Co. Ltd.), 19
  - Positional control of drilling machine, 394
  - Positioning equipment, coordinate, SCOPE, 315
  - Post box with Aluminate finish, extruded aluminium for (Aluminium Co. of America), 724
  - Office Users' Council, proposed formation of, 66
  - Postal services, need for re-examination of, 514
  - Postgraduate course. See *Course*
  - Potassium, sodium and its alloys with, by J. Allen, 501
  - Potez Industries of Ireland Ltd., Model 60/11 oil-fired unit for warm air heating, 736
  - Potter, N., on The Elizabeth (book), 190; (review), 316
  - Potterton, Thomas, Ltd., range of Diplomat gas-fired boilers, 32; Prefect control system for hot water and heating, 544. *Correction*, 640; gas-fired Warm Air heating, 736
  - Pottery firing, Hoverkiln kiln for, 741
  - Pounder, C. C., unitised reheat steam turbine, 521
  - Powder compacting press, Rigid-Reflex, 504
  - Powder Couplings Ltd., progress of, 208
  - Epoxy-resin (trade publication), 190
  - Injection equipment for flame cutting (British Oxygen Co. Ltd.), 183
  - Metallurgy growth of, 112
  - Powder Metallurgy Joint Group, symposium, 127
  - Parts, case hardness and case depth of, new standard for, 112
  - Powdered Pipe Inc., stainless steel convoluted hose, 634
  - Powell Duffryn Ltd., Housewarmer heat exchanger warm-air heater, 352; WA-25D heat exchanger, 736
  - Powell, Enoch, the thinking of: nation not afraid, by J. Wood (review), 285
  - Powell, Dr. J. W., on Gas Lubricated Bearings (review), 126; development of air bearings, 265
  - Power & Co., Trundler roller trolley, 726
  - Power conference, World (Tokyo), advance notice, 799
  - and conflict in organizations, by R. L. Kahn and E. Boulding (review), 636
  - Power Drive six-speed geared electric motor, 800
  - Power failures, position and prospects of, 675
  - Power-Gas Corp. Ltd., gas plant units for Spain, 16; new town gas installation at Newcastle upon Tyne, 182; Seabank gas reforming plant, 240
  - Industry, energy storage considerations, 531
  - Power source, variable three-phase, TPO 229 (Feedback Ltd.), 50
  - Station, Adelaide, boilers and boiler cleaning plant for, 560
  - — Agcroft C., silt prevention for condenser tubes, 475
  - — Akosombo, first turbine on load, 336
  - — Ap Lei Chau, boiler equipment for, 721
  - — Atomic. See *Atomic*
  - — Bromborough, nitrogen atmosphere above feed water storage tanks, 152
  - — Cockenzie, constructional details and progress, 492
  - — Didcot, circulating pumps and motors for, 465
  - — Dunston, trials of AEI flue dust monitor, 564
  - — Eggborough, four-flue chimney at, 151; turbo-alternators for, 151; testing of 500 MW. alternator, 355
  - — Ferrybridge C., collapse of cooling towers, 578
  - — Generator trends, 372
  - — at Khormaksar, 144
  - — Liddell, 500 MW turbo-alternator sets, 528
  - — Longannet, contracts for, 272, 337; orders for plant, 368
  - — Lots Road, of London Transport, modernization scheme, 602
  - — Nuclear. See *Atomic*
  - — Port of Spain B, cable for, 625
  - — Russian visits to British, 529
  - — Shadara (Pakistan) gas turbine plant for, 208
  - — Thorpe Marsh, transformer noise suppression at, 723
  - — Tsing Yi, Hong Kong, 120 MW turbine generators for, 465
  - — Tuft, Cove No. 1, 528
  - — West Burton, trial coal delivery, 529
  - Sub-unit, LKU-321 stabilized, for Lektrokit system, 507
  - Supply and battery charger, heavy duty combined, GLE 400 (Gresham Lion Electronics Ltd.), 20
  - Equipment for telephones (Westinghouse Brake & Signal Co. Ltd.), 147
  - System for London Midland Region electrification, 455-456
  - Tools for mining (Consolidated Pneumatic Tool Co. Ltd.), 54
  - Transmissions (trade publication), 126
  - Dc, research at Marchwood Laboratories, 142
  - Design criteria and equipment for 400 kV and higher voltages, conference on (IEE), 191
  - Link with France, 374
  - Overhead electrification equipment for British Railways London Midland Region main line, 643-645
  - — Overhead lines, 373
  - — Overhead lines, 132 kV grid system, 372
  - — Overhead lines, 275 kV super grid system, 372
  - — Overhead lines, 400 kV supergrid system, 372
  - — Overhead line training school (CEGB), 561
  - Overhead lines. See also *Transmission towers*
  - System, bulk transmission, 373
  - System, constructional and operational difficulties, 374
  - System in England and Wales, by H. B. Dreyfus, 372-374
  - System, interconnection capacity, 373
  - System, load variation problems, 374
  - System, quality requirements, 374
  - System, security requirements, 374
  - by underground cables, 373
  - See also *Gearing; Drive; Transmission*
  - Unit, welder, for wire welding (Westinghouse Electric International Co.), 630
  - See also *Fuel, Power, Process Control and Automation Exhibition*
  - Powerblast Mark 1 turntable for flash removal, 535
  - Powergrip tyres for Dumptruk dumper truck, 279
  - Powerlite 4 chain saw (Remington), 436
  - Pownall, J. F., contour canal scheme, 193
  - PowRmatic Ltd., packaged gas burner conversion units, 761
  - Poznan airport, Plessey Type 424 radar for, 812
  - International Fair, exhibits at, 80
  - Pratt, Anthony & Co. Ltd., C. G. range of concrete inserts, 815
  - Precipitators, hydrostatic, "Roto-Clone" Type N (trade publication), 126
  - Precision controller for air gauging, Series 11-018 fail safe (C. A. Norgren Ltd.), 22
  - Precision Grinding Ltd., Optidress, Projector-scope and Profiloscope equipment for grinding wheel forms, 219; optical instruments (trade publication), 574
  - Precision Indicator of the Meridian (PIM) units, 689
  - Precision Screw & Manufacturing Co. Ltd., move to new factory at Willenhall, 721
  - Preece, Cardew & Rider, Trinidad power station and cable, 625
  - Prefabrication: A history of its development in Great Britain, by R. B. White (book), 542
  - Prefect control system for hot water and heating, 544. *Correction*, 640
  - Preferred Numbers BS2045, 368-369
  - Pre-Finish Metals Inc., colour coated steel sheet, 664
  - Preformations Ltd., range of standard reference magnets, 148
  - Preheater tubes, glass (trade publication), 638
  - Prentice, R., applied science in schools conference, 515; mobile exhibition, "Technology Today", 749
  - Prescollan polyurethane rubber components, 371
  - President Graco Hydra-Clean air-operated pumps, 662
  - Presses (trade publication), 766
  - Automatic stagger feed (Joseph Rhode & Sons Ltd.), 377
  - Presses, baling, hydraulic, Personer, 536
  - Hydraulic, for scrap metal (Simon Handling Engineers Ltd.), 154
  - Blanking, fine, Osterwalder, 376
  - for concrete wall panels (BRS), 566
  - Extrusion, Loewy, for Busch-Jaeger Dürener Metallwerken A.G., 656
  - Packaged type hydraulic, range of (Fielding & Platt Ltd.), 19
  - Forging, Massey 1,800 ton high speed, for China, 624
  - Hydraulic (LVD Co.), 377
  - Forging, DGH counterblow hammers and (Burton, Griffiths & Co. Ltd.), 473.
  - Hot platen, 82
  - 25 ton (Taylor Splice Co.), 567
  - Hydrostatic extrusion, type 1600/80 (Fielding & Platt Ltd.), 811
  - Newspaper, rotary, Crabtree "Viceroy", 600
  - Percussion, Weingarten, 662
  - Powder compacting, Rigid-Reflex, 504
  - Power, in factories, new regulations for, 209
  - 100 ton (E. W. Bliss), 599
  - Printing. See *Printing*
  - SP friction screw (Burton Griffiths & Co. Ltd.), 473
  - Turret punch (trade publication), 542
  - Unloaders (trade publication), 605
  - Pressed Steel Co. Ltd., information for employees, 35
  - Pressing, hot, of ceramics, by A. G. Thomas and G. G. Deeley, 693
  - Pressure coolant unit (Machine Shop Equipment Ltd.), 759
  - Die casting conference, International (London), 799
  - Gauge, Hy-spec, 155
  - High, and the condensed phase, physics of, by A. Van Immerbeek (review), 669
  - Plant for timber treatment (Industrial Pressure Vessels Ltd.), 259
  - Pressure Products Inc. (UK) Ltd., formation of, 177
  - Regulators with automatic relief valve, 87
  - and shut-off valves (trade publication), 286
  - Switch, heavy duty miniature (Tehro Fluid Power), 568
  - Pressure-testing and purging, equipment for combining (British Oxygen Co. Ltd.), 210
  - and purging of new pipelines (Imperial Chemical Industries), 210
  - Pressure transducers, CE26 (Coutant Electronics Ltd.), 470
  - Tubes, zirconium alloy, development of, by B. Watkins and R. E. Cockaday, 501
  - Very low, stabilization of, 123
  - Vessels and piping, defects and failures in, by H. Thielsch (book), 574
  - Prestressed concrete, conference on (March 1967), 159
  - Reactor, of prestressed concrete, 172
  - Prestressed concrete. See *Concrete, prestressed*
  - Price control, comment on, 65
  - Prichard, M. I., on National Marketing Council, 354
  - Priest Furnaces Ltd., furnace modernization at William Beardmore & Co., 560
  - Priestman Bros. Ltd., crane range (trade publication), 94
  - Prigg, J. A., modification of domestic appliances for gases of high calorific value, 725
  - Priming unit for drainage pumps (Megator Pumps and Compressors Ltd.), 54
  - Megator Constant, for mine main pumps, 120
  - Printed circuit boards (GEC (Electronics) Ltd.), 273
  - Boards for H200 computer (Honeywell Controls Ltd.), 273
  - Boards, indicator for, type M23 (KGM Electronics Ltd.), 23
  - Flexible encapsulated, Film-Wire, 692
  - Flexprint, 433
  - Flexprint flexible, for motor cars, Lucas, 558
  - Force transducer (Fairey Surveys Ltd.), 403
  - Gold-plated, 551
  - Master grid for (Krisson Printing Ltd.), 23
  - Metallized polyester capacitors for (London Electrical Manufacturing Co. Ltd.), 309
  - Mylar type CS77 polyester film for, 90
  - Palladium electrodeposition for (Johnson, Matthey & Co. Ltd.), 379
  - Strain gauge (Fairey Surveys Ltd.), 403
  - Printer, data processing serial (Electronic Machine Control Ltd.), 344
  - High speed off-line, HS500 (Scientific Furnishings Ltd.), 570
  - Page, teletype (trade publication), 350
  - Photographic, automatic, Colortron Mini-printer Model M4/8, 699
  - Printing machine for polythene bottles, Rondec Universal Stage 5, 242
  - Packaging and Allied Trades Research Association Laboratories, adhesive setting time testing device, 275
  - Press, Crusader web-fed offset, for newspapers, 84
  - See also *Typesetting*
  - Probability and its engineering uses, by T. C. Fry (book), 382
  - Probert, Dr. D., stabilization of very low pressures, 123
  - Proceedings of the second conference on dimensioning and strength calculations, by L. Kisbocskói (book), 822
  - Process automation, research into, 209
  - Control, techniques of, by P. S. Buckley (review), 221
  - See also *Fuel, Power, Process Control and Automation Exhibition*
  - Cooling, Hydro-flo chiller unit for, 792
  - Processor, central, and memory unit type 4130, for NCR-Elliott 4100 computer, 217
  - Product design, business of, by J. Pilditch and D. Scott (review), 381
  - Product Knowledge Ltd., programmed instruction for salesmen, 73
  - Product Planning Ltd., activities of, 632
  - Production aids (trade publication), 822
  - Control, VISA simulator for (Urwick Management Centre), 458
  - Costs, comment on, 65
  - Engineering Advisory Service, formation of, 801
  - Research Association, activities of, 48; conference and exhibition on assembly, jointing and fastening techniques, 255; report on tailshaft failures, 260; conference on noise control, 320; education and training programme, 615; courses for 1966, 615; low-cost automation course, 615; value engineering course, 615; report on throwaway tip turning tools, 627; 5,000A universal electrochemical machining unit, 784; numerical control symposium, 799; Production Engineering Advisory Service, 801
  - Numerical control effects on, 393
  - Production Tool Alloy Co. Ltd., Adapt-o-drill gun-type drill for high-precision holes, 758
  - Productivity centres, regional, proposal for, 579-580
  - Road construction costs and, 226
  - Scheme at Alexander Stephen & Sons, 298
  - Technology and change, conference on (British Productivity Council), 607
  - Professions, public image of, Gallup Poll survey of, 390
  - Professional and executive register (Ministry of Labour), 432
  - Profile Accurascope, grinding machine, Model 55, 343
  - Profloscope equipment for grinding wheel forms, 219
  - Profitability, performance and, by M. J. Clay and B. H. Walley (book), 670
  - Program, drilling, automated industrial (ICT), 627
  - Program Evaluation and Review Technique. See *PERT*
  - Programs for KDF9 computer, 563
  - Programme controller, plug, Miller-Matic 3AX, 314
  - Writing for Bristol Tutor system, 518
  - Programmed instruction for salesmen (Product Knowledge Ltd.), 73
  - Learning, basic requirements of, 518
  - Programming, numerical control effects on, 393
  - Project work in apprentice training, by R. Burke, 807
  - Projectors and inspection enlargers (trade publication), 702
  - Instamatic, for Super 8 Kodachrome II colour film, 512
  - Lamp with flat wound filament (Westinghouse Electrical International of New York), 51
  - for optical marking out, GP500 system, 11
  - and photo-head, transmitted light (Pan-Electronics Ltd.), 245
  - Projectorscope equipment for grinding wheel forms, 219
  - Propane-fired radiant heaters, portable, Porta-Radiant, 536
  - Propathene, expanding consumption, 304
  - Propellers for Cunard liner, tests for (Newcastle University), 380
  - Efficiency and rotational speed, 461
  - Pilgrim nut method for fitting of ship, 260
  - Shaft failures in ships, 260
  - Horsepower measurement without slip rings, 330
  - Proplan. See *Product Planning Ltd.*
  - Propulsion of ships. See *Atomic propulsion; Marine propulsion; Propeller; Turbine; Ship propulsion*
  - Proshan, F., on Mathematical Theory of Reliability (book), 126; (review), 285
  - Protective cabinet, Kingsway Fillpoint, for oil filler terminals, 119
  - Protector Safety Products Proprietary Ltd., industrial safety equipment, 567
  - ProtectoSpray spray fire protection system, 215
  - Protolite Ltd., tipped end mills (trade publication), 254
  - Ptfe/glass fabric laminate (Tygadure Ltd.), 310
  - Puckert air operated bar feed for automatic turret lathe, 269
  - Pugh, H. Ll. D., on Recent Developments in Cold Forming (book), 382
  - Pullin Photographic Ltd., Nikon Nikkormat FT and Nikon F cameras, 699
  - Pulp mill, Fort William, 368
  - Loch Eil, pile driving equipment, 441
  - Pulsatron series type KG850 ultrasonic cleaning equipment, 21
  - Pulse duration controller, solid state (Foxboro-Yoxall Ltd.), 667
  - Generator, decade, solid-state, PG101 (Aveley Electric Ltd.), 630
  - Pumps, air-operated, Graco Hydra-Clean, 662
  - Balanced-vane, Vickers-Detroit, for Peco-Loewy 20/90R injection moulding machine, 77
  - Bilge, Macpump 300, 87
  - Centrifugal (trade publication), 446
  - Corrosion resistant, 87
  - Circulating, and motors for Didcot power station (W. H. Allen Sons and Co. Ltd.), 465
  - Drainage, priming unit for (Megator Pumps and Compressors Ltd.), 54
  - Dredge, Amsco, 537
  - and gravel, Simonacco-Warman, 21
  - Feed, deaerator and, TWP type, for liner *Queen Elizabeth* (G. & J. Weir Ltd.), 784
  - Fire, Godiva UHP, 375
  - High powered, Super Pumper, 568
  - Fuel, for Ventura diesel engines, 780
  - Gorator, range of vertical and horizontal (Woods' Engineers (Ramsbottom) Ltd.), 21
  - Hydraulic, axial piston, Kamper, 280
  - High pressure oil, in-line (Towler Bros. (Patents) Ltd.), 119
  - Immersible, Pegson-Weda, 729
  - Induced flow, for air or water (Wm. R. Selwood Ltd.), 695
  - Metering, type E (Metering Pumps Ltd.), 761
  - Micro-metering (Watson-Marlow Ltd.), 631



- Pump, mine main, Megator constant priming unit for, 120
- Mining, CD90 (Mono Pumps Ltd.), 53
  - Peristaltic, Auto-Chemistaltic, 537
  - Purpose-built (trade publication), 670
  - Seal, rotary synthetic rubber, Zealox, 371
  - Self-priming, Alcon, 817
  - Snore, Goodyear BC12 face drainage (Holman Bros. Ltd.), 120
  - Spray, Graco Bulldog 30: 1 Hydra, 438
  - Submersible, SumPak, 817
  - Sump, free-standing (Worthington-Simpson Ltd.), 695
  - Truck, Viking vane type, for liquefied petroleum gas industry, 88
  - Tube, type WAB (Glen Creston Ltd.), 729
  - Vacuum, DPL range of (Leybold Vacuum Ltd.), 155
  - Vacuum/compressor, motor mounted, Gast model 0822 (John Hinton Ltd.), 537
  - Water, circulating, for Longannet power station, 368
- Pumped storage hydroelectric power scheme (Ffestiniog), 374
- Hydroelectric power schemes in Scotland, 489-491
  - Scheme at Cruachan power station, 489
  - Schemes, energy storage considerations, 532
  - Scheme, Ffestiniog, 533
- Pumping Exhibition (Earls Court), exhibits at, 21
- and mixing unit, transportable, for rock sealing compounds (Hydra-Muscle Hydraulics Ltd.), 118
- Punched card network analysis method, Autopert, 105
- System for mixing animal foods, 124. *Correction*, 183
- Purging and pressure-testing, equipment for combining (British Oxygen Co. Ltd.), 210
- and pressure-testing of new pipelines (Imperial Chemical Industries), 210
- Purification unit for helium (British Oxygen Cryoproducts), 814
- Purlboard laminate, new plant for continuous production of, 183
- Putty, plastic, hard setting, Talurit, 507
- Pye closed circuit television camera, 594
- Pye Electric Ltd., Maxmatic automatic food mixer, 768
- Pye Telecommunications Ltd., miniature radio-telephone equipment, 434
- Pye, W. G., & Co. Ltd., range of standard reference magnets, 148
- Pyrex glass (trade publication), 605
- Mirror for "Isaac Newton" telescope, 166
- Pyroceram heat exchanger discs for Rover BRM, 83
- Exchangers in Rover-BRM gas-turbine motor car, 68
- Pyroclor non-flammable dielectric fluid, 441
- Pyrocord continuous pyrotechnic flame detector, 625
- Pyrotex Ltd., group activities, 48
- ## Q
- Q4, Cunard liner, steering gear for (Brown Bros. & Co. Ltd.), 243
- Qantas Airlines, Marconi AD 560 Doppler navigation system and airborne computers for Boeing 707 airliners, 464; E5 inertial navigation system for Boeing 707 airliner, 562
- QB Ltd., Crusader web-fed offset printing press for newspapers, 84
- Quadrantal Error Corrector (Marconi Co. Ltd.), 457
- Qualcast Tools Ltd., Mapal WP adjustable reamer, 213. *Correction*, 312
- Quality control centre (Vauxhall Motors Ltd.), 752
- Essentials of, by A. Huitson and J. Keen (book), 605
  - Inspection and, of manufactured goods, conference on, 95
  - and reliability year, 578
- Qualter, Hall & Co. Ltd., skip winding plant, Newstan Collieries, 657
- Quartz ultrasonic delay lines (MEL Equipment Co. Ltd.), 338
- Quasi-Arc LD 180 ac welding set, 117
- Quay, Kings Lynn, pile driving operations, 466
- Queen Elizabeth liner, by N. Potter and J. Frost (book), 190; (review), 316; dry docking for major improvement programme (John Brown & Co. (Clydebank) Ltd.), 784
- Queen's Award to Industry, form and requirements of, 195
- Queensland Treasury, ICT 1900 computers for, 337
- Quenching process, Elquench (BISRA), 18
- Quick-charger, 2800, trolley model battery charger, 278
- Quickfit & Quartz Ltd., increased activity of French subsidiary, 17; formation of Quickfit Reeve Angel Inc., 752
- Quickfit Reeve Angel Inc., formation of, 752
- Quickfit S.A., increased sales, 17; new offices and warehouses, 17
- QRY. See *Quality and Reliability Year*
- Q.V.F. Ltd., glass preheater tubes (trade publication), 638
- ## R
- RABINOWICZ, E., on Friction and Wear of Materials (book), 94; (review), 509
- Racks (trade publication), 222
- Racking machine for laundries (Short Bros. & Harland Ltd.), 741
- Storage, adjustable, New Speedlock, 436
- Radar air traffic control, Plessey type AR 1, 305
- Airport, Plessey HF 200 heightfinders for, 433
  - for Cracow and Poznan airports, Plessey type-424, 812
  - Simulator for Surface Tactical and Blind Pilotage Trainer, 389
- Radar system for Royal Australian Air Force (Plessey Radar Ltd.), 16
- Radburn layout for Teesside industrial estate, 776
- Radiant tube, air heated, Brightad, 660
- Radiation Central Heating Ltd., Heatmaster gas-fired small bore central heating unit, 416
- Detection, dye systems for (NBS), 342
- Radiation Gas Fires Ltd., Satellite overhead radiant gas heaters, 186
- Machine, gamma, portable, with safety device (Gamma Rays Ltd.), 242
  - Technology, intense-beam, dosimetric techniques for, 342
  - Thermopiles (trade publication), 542
- Radiators, panel, multi-spot welding machine for (Danish Welder Co. Ltd.), 211
- Quick-heating, Thermalrad, 448
  - Valve, thermostatic, Belmont, 544
- Radio Corporation of America, laser range-finder, 630
- Engineer kits (Philips Electrical Ltd.), 800
  - Engineering Laboratories, tropospheric scatter radio system for RAF in Malaysia, 812
  - Galaxies study by radio telescope, 106
  - Isotope advisory service (Nucleonic Consultants Ltd.), 753
  - Propagation, ionospheric, by K. Davies (book), 30; (review), 413
  - System, tropospheric scatter, for RAF in Malaysia, 812
  - Telephone equipment, miniature (Pye Telecommunications Ltd.), 434
  - Transistorized pocket, Courier AM and Courier FM, 569
  - Telescope, new, at Lords Bridge (Cavendish Laboratory), 106
  - Tower, Birmingham, design and construction of (General Post Office), 676-677
  - Museum, London (GPO), 676-677
  - Official opening, 482
  - Transmitter-receiver type H4000 (trade publication), 542
- Radioactive waste disposal at CEN, Mol, 392
- Management of, by C. A. Mawson (book), 190; (review), 668
- Radiographic equipment, X-ray, safety standards for (Davey, Paxman & Co. Ltd.), 10
- Radiography welded joints of steel pipes, BS, 627
- Radioisotope analyser for ore slurry, 183
- Technique for flow measurements, 442
  - Industrial Liaison Officers course on, 209
- Radiometer, infra-red, precision, Infrascopie Mark 9, 817
- Radiophone service in London, 49
- Radius turning device, Holdridge, 90
- Railcars, fire protection equipment for (Graviner (Colnbrook) Ltd.), 625
- for Mexican National Railways, 625
  - Rolls-Royce diesel engines for, 625
  - for Toronto, 625
- Railroads of the Black Hills, by M. Fillder (review), 732
- Railway accidents, causes and trends of (report), 713-714
- at Henwick Hall, 547
  - Steel overbridge failure at Clapham Junction, 674, 678-679
  - Automatic (book), 318
  - Bogie. See *Bogie*
  - Bridge. See *Bridge*
  - Carriage construction research, 649
  - 1830-1914, by H. Ellis (review), 732
  - 1839-1939, by G. M. Kichenside (review), 94
  - Coach. See *Railway carriage; Railcar*
  - Conversion League, activities of, 131
  - into roads, 131
  - Czechoslovakian State, Leo 360 computer for, 465
  - Film premieres at National Film Theatre, 384
  - Inspection cars, 251
  - Japanese National, neoprene sheets for railway track ballast protection, 791
  - Locomotive. See *Locomotive*
  - Marshalling yard, Tinsley, 626
  - Monorail. See *Monorail*
  - Portuguese, Sentinel diesel locomotives for, 144
  - Rolling stock for Victoria Line underground, by A. W. Manser, 475
  - Stock. See also *Locomotive; Carriage; Railcar; Wagon*
  - Rotterdam metro construction, 782-783
  - Signalling. See *Signalling*
  - South African, electrification system, transformers for, 754
  - Track ballast protection, neoprene sheets for, 791
  - Maintenance-free, research on, 650
  - Track-to-train communication tests, 411
  - Train, automatic, for Victoria Line, 66
  - Operation, unit system of, 25
  - Underground. See *Underground; London Transport Executive*
  - US urban, study of, 417
  - Vehicle interaction with track, convention on, 415
  - Movement simulation by computer, 650
  - Wagon. See *Wagon*
  - Workshop closures, effect of, 226
  - Reconstruction at Crewe and Derby, 337
- Railwayman's diesel manual, by W. F. Bolton (review), 94
- Railwaymen, redundancy and the, by D. Wedderburn, 227
- Raleigh RSW16 small-wheel bicycle, 104. *Letter*, 328
- Raleigh Industries Ltd., trading report, 688
- Rand Corp, study of urban railways in US, 417
- Randal, James H. & Son Ltd., microfilm storage cabinet, 403
- Randall, A., development of Bristol Tutor teaching machine, 518-519
- Rangefinder, laser (Rank Pullin Controls), 630
- Rank Film Library, Industrial Training Films (catalogue), 206
- Rank Pullin Controls, laser rangefinder, 630
- Rank Taylor Hobson Division, mass production of fibre optics, 209
- Rank Xerox Ltd., new plant in Holland, 721
- Ransley, H. T., distribution of electrical power, 405-408
- Ransome & Marles Bearing Co. Ltd., trading report, 813
- Ransomes & Rapier Ltd., liquid nitrogen shrinkage of walking dragline shafts, 724
- Ransomes, Sims & Jeffries Ltd., PASE power assisted storage equipment, 58; TD23 five-furrow disc plough, 78; Cavalier 2800 combine harvester, 404; combine harvester, 743; multi-purpose plough bodies, 744; FR Precision Band Sprayer, 744
- Rapier motor car. See *Sunbeam Rapier*
- Rapistan, Model 870, hinged steel belt conveyor, 154
- Rare earths, conference on, 288
- Rata, P. J. H., on Aluminium Busbar (book), 254
- Ratby Engineering Ltd., crimp rigidity testing machine for nylon yarn, 380
- Ratchet spanners (Leytool Ltd.), 214
- Raworth, B. A., association with ENGINEERING, 835; death of, 838
- Rea, R. & J. H., Ltd., compound marine steam engine presented to Plenty, 625
- Reactor, atomic. See *Atomic reactor*
- Chemical, theory of, by K. Denbigh (review), 820
  - Nuclear. See *Atomic reactor*
- Readhead, John, & Sons, overseas orders for bulk carriers, 304
- Reamer, adjustable, Mapal WP, 213. *Correction*, 312
- Rear Vista rear window wipers for Mini motor car, 180
- Reason, R. E., on The Equation of the Mean Line of Surface Texture Found by an Electric Wave Filter (book), 766
- Receiver, communications, transistorized, type R408 (Redifon Ltd.), 311
- Reconditioning machine for crawler track rollers (Bob Anderson (Engineers) Ltd.), 530
- Record Electrical Co. Ltd., indicators (trade publication), 605
- Record Tower Cranes Ltd., 763 tower crane, 536
- Recorder-controller, combined, for textile industry (Veeder-Root Ltd.), 178
- Recorder, events, Amprobe, 345
- Oscillograph, portable, type 5-124P2 (Bell & Howell Ltd.), 185
- Recording head, magnetic, seven track read-after-write (Gresham Lion Electronics Ltd.), 115
- Systems, modular (trade publication), 126
  - Rectifiers (trade publication), 605
  - Circuits: theory and design, by J. Schaefer (book), 254; (review), 604
  - for dc conversion equipment, development of single anode design, 142
- Redlyre Ltd., Centramatic 35 oil-fired boiler, 32
- Redifon Ltd., Type R408 transistorized communications receiver, 311
- Redman Tools Ltd., ejector springs (trade publication), 798
- Redpath Brown & Co., plastics cladding for London flats, 690
- Redpath, Buchanan, J., & Co. Ltd., chimney installation at Waterloo station boiler-house, 59
- Reduction gear. See *Gear*
- Redundancy payments act, function of, 497
- and the railwaymen, by D. Wedderburn, 227
- Reed & Mallik Ltd., hydraulic pontoon rig for pile driving, 441
- Reed, Dr. Thomas B., research into high temperature solid state chemistry, 304
- Reeling drum, cable, for cranes (Malcolm Cross Ltd.), 216
- Rees, William F. Ltd., Seerdrum refuse plant, 791
- Reeve Angel, H., & Co. Inc., formation of Quickfit Reeve Angel Inc., 752
- Reeves, N. C., on German for Engineers (book), 734
- Refinery, Canvey Island (United Refineries Ltd.), 813
- Coryton, field erection of boiler for, 723
  - Westernport, automatic blending system for, 25
- Reflector sheet (trade publication), 605
- Refractory castables, developments in, by T. D. Robson, 502
- Metals in the aircraft industry, by A. R. G. Brown and K. S. Jepson, 502
  - behaviour and properties of, by T. E. Tietz and J. W. Wilson (review), 733; (book), 94
  - as possible future aircraft engine materials, by G. Lewelyn, 502
- Refrigerated wagons for inter-European food transport, 560
- Refrigeration, modern, and air conditioning directory 1965 (book), 734
- System, cargo, for American President Lines (Chrysler Corp), 656
- Refrigerator, gaseous helium, for testing atomic propulsion system components, 401
- Helium, for bubble chamber (British Oxygen Cryo-products), 553
  - with automatic defrosting, Automatic-36, 824
- Refuse plant, Seerdrum, 791
- Regent Pembroke, tanker, Cargomaster cargo discharge times for, 132
- Regional planning studies, 162
- Productivity centres, proposal for, 579-580
  - Regulating reservoir. See *Reservoir*
- Reheat marine steam turbine installation (Pametrad), 426
- Steam turbine ship propulsion installation, MST-14 (GEC(US)), 427
- Reid, D. R., review of Temperature Control of the Moulding of Plastics, 61
- Reinforced concrete. See *Concrete*
- Rekord OHC motor car engine (Opel), 332
- Relays for checkweighing machine diverting system, 424
- Control, solid state, K-Pac, 24
  - Double pole ac and dc (Magnetic Devices Ltd.), 404
- Relay, double-throw (trade publication), 350
- Hermetically sealed 25A, Euroswitch, 114
  - Latching, Series 34 range of, in a crystal can (Sigma Instruments Inc.), 178
  - Miniature, ac and dc, range of (Magnetic Devices Ltd.), 52
  - Over-current and earth fault, PBO2 (Associated Electrical Industries Ltd.), 696
  - Plug-in, Siemens (trade publication), 62
  - Series 305AC type PO 3000 (Magnetic Devices Ltd.), 666
  - Starting, Type 312, for small electric motors (Magnetic Devices Ltd.), 597
  - Unit, direction indicator, for motor vehicle trailers (Joseph Lucas & Co. Ltd.), 246
- Reliability, mathematical theory of, by R. E. Barlow, F. Proshan, and L. S. Hunter (book), 126; (review), 285
- Reliance Telephone Co., intercom telephone, 473; push-button master unit for private automatic telephone exchanges, 729
- Reliant Scimitar motor car at Goodwood, 554
- Relog logic elements, 597
- Remington chain saws, 436
- Remote indicators (trade publication), 605
- Renault 16 motor car, 555-556; suspension system of, 585
- Renault 1100 motor car, 1966 version of, 196
- Rendel, Palmer & Tritton, four-flue chimney at Eggborough power station, 151; Belfast dry dock project, 698
- Renite Sales Co., Moto die spray unit, 666
- Repair re-usable multi-storey car park system in precast concrete, 25
- Resco Engineers Ltd., small heat exchangers, 281
- Research, cooperative industrial, in Europe, 337
- and development, administering, by C. D. Orth, J. C. Bailey and F. W. Wolek (book), 318
- Research & Engineering Controls Ltd., range of platinum resistance temperature sensing elements, 147; renamed Rosemount Engineering Co. Ltd., 529
- in Europe, comment on, 225
  - Expenditure, growth in, 33
- Research Instruments Ltd., DSP/S10 micro-manipulator, 186
- Scientific, government-sponsored, 97
- Reservoir, Balderhead, description of, 526; inauguration of, 526
- Bexhill, lightweight baffle wall for, 210
  - Clywedog, in Wales, 526
  - Regulating, schemes inaugurated and projected, 526
  - Tryweryn, description of, 526; inauguration of, 526
  - Water supply, yield estimation for, symposium on, 128
- Resins, poison resistant (Permutit Co. Ltd.), 624
- Respirator, dust, lightweight, Supasafir, 786
- Resuscitator, oxygen, portable, Automan, 117
- Retraining of operators at Churchman's, Ipswich, 518
- Reverse rotation prevention unit for electric motors (Laurence, Scott & Electromotors Ltd.), 88
- Reyrolle, A., & Co. Ltd., air-break circuit breaker, 55; industrial plugs and sockets (trade publication), 222
- Reznor Nesbitt, Hydro-flo packaged electric chiller unit for air conditioning or process cooling, 792
- Rhein Stahl Union Brückenbau AG, track mounted stacker for iron ore, 134
- Rhenium, some properties and applications of, by A. S. Darling, 501
- Rheumatism, incidence of, 418
- in light industry (British Medical Association), 418
- Rhodes, Joseph, & Sons Ltd., shearing machine with epicyclic drive, 59; automatic stagger feed press, 377
- Rhodesia, effect of independence declaration on Kariba dam, 770
- Ribbons, multi-colour, for temperature recording (Ellams Duplicator Co. Ltd.), 52
- Ricardo & Co., Engineers (1927) Ltd., trading report, 812
- Rice, A. K., on Learning for Leadership (review), 284
- Richard Thomas & Baldwins Ltd., iron ore import terminal project, 35; computer control for soaking pits, 124; Colour Coated Steel coloured steel sheet, 664; short-time working in Ebbw Vale and Spencer works, 673
- Richards, Prof. E. J., on research into aircraft noise, 386
- Richards Structural Steel Co. Ltd., sand mixing machine for Hallsworth foundry plant, 113
- Richards & Wallington Ltd., expansion of crane hire service, 336
- Richardson, Sir Alexander, association with ENGINEERING, 835; appointed Joint Editor of ENGINEERING, 838
- Richardson, R. S., on Mars (review), 821
- Richardsons Fertilizers Ltd., new plant for operating ICI fertilizer process, 272
- Richardsons Westgarth, basic centrifugal compressors for 5,000 to 50,000 cu. ft. per min range, 228-229
- Richardsons Westgarth (Instrumentation & Controls) Ltd., acquisition of manufacturing and marketing rights for Drayton Southern data logging equipment, 81
- Rigid-Reflex powder compacting press, 504
- Rigidex high density polyethylene, 81
- Riley High School, applied science activities, 239
- Riley (IC) Products Ltd., Riley-Pillatt, smokeless incinerators, 599
- Riley motor cars, pre-1939, the production and competition history of, by A. T. Birmingham (review), 796
- Riley-Pillatt smokeless incinerators, 599
- Riley, W. F., on Experimental Stress Analysis (review), 572
- Rinehart, J. S., on Behaviour of Metals under Impulsive Loads (book), 382



- Rio-Tinto Zinc Corporation, investigation into ocean resources, 80
- Ripper, adjustable, 21R tractor mounted (Allis Chalmers), 599
- Ripping machine, miller type (Richard Sutcliffe Engineering Systems Ltd.), 53
- River Derwent scheme inauguration of, 369
- Flow stabilization by regulating reservoirs, 526
- Level recording instruments (Fischer & Porter Ltd.), 276
- Pollution, reduction in, by Dr. B. A. Southgate, 482
- Tuloma, underground hydroelectric power station, 624
- Riverside maintenance, barge mounted trencher digger for (T. Harrison Chaplin Ltd.), 312
- Road accidents. See *Accident*
- Bridge. See *Bridge*
- Campaign Council, routes to ports, comparison between Britain and W. Germany, 98
- Concrete, slipform paver for construction of, 232
- Construction costs and productivity, 226
- Programme, delay in, 227
- Haulage increased costs, 65
- Lighting unit (Westinghouse Lighting Division), 283
- Markings, removing, EDCO CD10 concrete plane for, 183
- Prefabricated warming cable mats (British Insulated Callender's Cables Ltd.), 441
- Programme, restriction of, 227
- Railways conversion into, 131
- Research Laboratory, expansion joint for slipform paved roads, 232: road accident research, 610: Accra-Tema Motorway, 708
- Roller attachment for marginal strips on motorways (Aveling-Barford Ltd.), 504
- Traffic. See *Traffic*
- See also *Fly-over*; *Highway*; *Motorway*
- Roadtrak Major tyres for Dumptruk dumper truck, 279
- Robens, Lord, British Electrical Power Convention, 5, 6-7; on Bevercotes Colliery, 75; on the place of coal, 323; on National Coal Board, 385; implications of automation, 651
- Roberts, A. Boake, & Co. Ltd., electric surface heating for distillation column, 785
- Roberts, Prof. Ben, social changes and automation, 651
- Roberts, F. B., Editor of *ENGINEERING*, 839
- Roberts Law, on safety features in motor cars, 806
- Roberts, Sir Peter G., on Hadfields Ltd., 17
- Robertson, J. M., on Hydrodynamics in Theory and Application (book), 286; (review), 445; on European Miniature Electronic Components and Assemblies Data 1965-66 (book), 510
- Robertson, M. F., review of The First Twenty Years' Operational Research, 540
- Robertson Thain Ltd., voluntary standards for troughed metal decking, 593
- Roberston, W. H. A., & Co. Ltd., thread rolling attachments (trade publication), 126; BISRA cantilever rolling mill, 151; range of Torrington-Robertson slab milling equipment, 187; Model 76/92 Hallden-Robertson guillotine flying shear for Australia, 666-667
- Robinson, D., & Co. Ltd., Minicams multi-circuit timers, 310; Superslug electronic delay units, 815
- Robson, T. D., refractory castables, 502
- Rocbord storage containers for corrugated fibreboard, 762
- Rochester quadrajet carburettor for Oldsmobile Toronado motor car, 431
- Rock drill, heavy duty, Yak, 410
- Sealing compounds, Hardstem and Hardstop, 118
- Compounds, transportable mixing and pumping unit for (Hydra-Muscle Hydraulics Ltd.), 118
- Rocker gear for Ford V4 motor car engine, 429
- Rocket boost unit, BS 605, for aircraft assisted take-off (Bristol Siddeley Engines Ltd.), 107
- Engine, BS 606 and BS 625, for Black Arrow space vehicle (Bristol Siddeley Engines Ltd.), 107
- Unit, PR37/2, for Jindivik target drone aircraft (Bristol Siddeley Engines Ltd.), 108
- Rocking microtome, thermoelectric (Cambridge Instrument Co. Ltd.), 729
- Rockwell Machine Tool Co. Ltd., Numeri-center tape controlled drilling machine with automatic tool changing magazine, 270; termination of contract with US Industries Inc., 432; termination of sales agreement with US Industries Inc., 496; sales agreement for Verson presses, 496
- Rocol RTD cutting oil for machining of stainless steel, 500
- Rodene Electrical Co. Ltd., Minicams multi-circuit timers, 310
- Rodway Technical High School, applied science activities, 239
- Roglsperger, Ing. H., & Co., agent in Vienna for Anderton Springs Ltd., 176
- Rohde & Schwarz, Type SLRC high power signal generator, 375
- Rolatrac Ltd., hydraulic lift table, 312
- RolaVeyor conveyor equipment (J. Collis & Sons Ltd.), 113
- ROLF, coal cutting machine, 76
- Roll, K. H., on growth of powder metallurgy, 112
- Rolls, tubular steel, for newsprint machines (Chesterfield Tube Co. Ltd.), 241
- Roller bearings. See *Bearings*
- Crawler track, reconditioning machine for (Bob Anderson (Engineers) Ltd.), 530
- Road. See *Road roller*
- Straightening machine, 80 in. (Lamberton & Co. Ltd.), 666
- Trolley, Trundler, 726
- Rolling machine, Massey 3 in., for China, 624
- Mill, cantilever (British Iron and Steel Research Assoc.), 151
- Rolling mill, cold, packaged reversing (Thos. C. Wild (Machinery) Ltd.), 249
- Stock. See *Locomotive*; *Carriage*; *Railcar Wagon*
- Rolls-Royce Ltd., Sentinel diesel locomotives for Portuguese Railways, 144; Silver Shadow motor car, 385; Silver Shadow and Bentley T series motor cars, description of, 452; new approach to railway bogie design, 581-583; Silver Shadow motor car, suspension system, 586; sub-frame system, 586; factory at East Kilbride, 618; diesel engines for railcars, 625; Dart R.Da.7 turboprop aircraft engines, 688
- Rondec Universal Stage 5 machine for printing polythene bottles, 242
- Ronson Products, electric carving knife, 608
- Roofs, concrete, non-planar, design of, by J. S. Terrington and F. H. Turner (review), 125
- Industrialized pitch system (RIPR), 690
- Insulation, Nuliner, with Polyzote expanded polystyrene, 815
- System Marlith wood wool slab lightweight, 183
- Support, hydraulic, for mines (Hoesch Ltd.), 88
- Longwall race, remotely controlled (Electro-Hydraulics Ltd.), 55
- Power advanced, range of (Gullick Ltd.), 57
- Self-advancing, Huwood Mastabar, 56
- Ventilation unit, powered, in fire resistant polyester resin glass fibre, Turbrovent, 50
- Roofing panels, asbestos cement, Spantiles, 660
- Rooks, D. E., on Nigerian natural gas, 257
- Rootes Group, mechanical improvements to Hillmans and Sunbeams Rapier and Alpine, 332
- Rope, load indicator for (Edge & Sons Ltd.), 57
- Wire. See *Wire rope*
- Rosemount Engineering Co. Ltd., new name for Research & Engineering Controls Ltd., 529
- Rosewarne, M. H., on Servicing Guide to British Motor Vehicles (book), 478
- Ross, on United Dominions Trust Ltd., 177
- Rotacone drill grinding machine, 314
- Rota-Lock tube clamp, 569
- Rotary engine, Wankel, at Frankfurt Motor Show, 399
- Piston machines, by F. Wankel (book), 574; (review), 603
- Roths colliery, growth and closure of, 654
- "Roto-Clone" Type N hydrostatic precipitators (trade publication), 126
- Roto-Cut rotary asphalt cutter, 20
- Roto-Finish Ltd., OVEX finishing machines, 343; finishing plant (trade publication), 446
- Rotor, laminated, for turbogenerator, 489
- Rotork Engineering Co. Ltd., Rotork 12A actuators for sewage penstock operation, 754; add-on units for Synchronpak valve actuators, 815
- Rotterdam, metro railway construction, 782-783
- Roughness testing machine, mechanical, Mecrin, 313
- Roussopoulos, A. I., on Theory of Elastic Complexes (review), 188
- Rover Co. Ltd., gas-turbine motor car, 68-69; Rover-BRM gas-turbine motorcar at Le Mans, 68-69. *Letter*, 103; Rover BRM gas turbine motor car, heat exchanger discs, 82
- Rowe, G. W., on An Introduction to the Principles of Metalworking (review), 348
- Rowe, R. H., on Management for Civil Engineers (review), 348
- Rowson Conveyors Ltd., merger with William Douglas & Sons (Engineering) Ltd., 368
- Royal Agricultural Society of England National Agricultural Centre at Stoneleigh, 78
- Aircraft Establishment, prizewinners in annual authors competition, 81; structures laboratory at Farnborough, 620; prestressed concrete test frame for simulation of flight loads, 620-621
- Australian Air Force, radar system for (Plessey Radar Ltd.), 16
- Charter for Council of Engineering Institutions, text of, 291-292
- Royal Institution, research day on electrical engineering, 642
- Institution of Chartered Surveyors, course for Thames barrage scheme to M. Wand, 513
- Ordnance Factory, powder injection equipment for flame cutting, 183
- Show (1965), exhibits at, 78-79
- Smithfield Show of agricultural machinery, 743
- Society, *Notes and Records*, 28
- Victoria Infirmary, Freezemasters, for cooling small specimens, 80
- Royce Electric Furnaces Ltd., diffusion furnace, 535
- Royles Ltd., twin strainer cages for pipelines, 21
- Royston Instruments Ltd., Midas flight and maintenance recorder, 624
- Rubber components, polyurethane, Prescollan, 371
- Conveyor belting, BS, 753
- Deflashing, Wheelabrator automatic mechanical machine for, 83
- in engineering application, conference on, 823
- in engineering design practice, by A. B. Davey and A. R. Payne (review), 93
- Introduction to, by J. Le Bras (book), 286
- Physical testing of, by J. R. Scott (book), 413; (review), 444
- Rotary pump seal, synthetic, Zealox, 371
- Silicone, foam, RTV-7 (Jacobsen Van Den Berg (UK) Ltd.), 146
- Standards, ISO work on, 812
- Thermoplastic, Cariflex K-101, 567
- Ruberoid Co., voluntary standards for troughed metal decking, 593; industrialized pitch roof system, 690
- Rubert & Co. Ltd., surface roughness specimens (trade publication), 286; Mecrin mechanical roughness testing machine, 313
- Rubery Owen & Co. Ltd., Hallsworth automatic foundry plant for Czechoslovakia, 113; air heaters (trade publication), 446
- Rugby signal box, description of power-operated installation, 46-47
- Ruhr motorway link with Europoort, 98
- Rundqvist, S., on Borides, Silicides and Phosphides (book), 190
- Runway lighting for airports, 334
- Rupes, Super Stork Marten angle grinding machine, 343
- Rusling, John, Ltd., Rota-Lock tube clamp, 569
- Russell, S., & Sons Ltd., RS20 automatic cold circular sawing machine, 536
- Russia, houseboats as site accommodation on hydro projects, 728
- My Native Land, by G. P. Tschobotarioff (review), 253
- Natural gas fractionating plant for (SNAM Progetti), 145
- State Committee for Coordination of Scientific Research visits to British power stations, 529
- Ruston & Hornsby Ltd., high-torque low-speed hydraulic motors, 87; annual accounts, 176; export successes, 176; AO 12,800 bhp diesel engine with space frame modular construction, 550; Thermax Two packaged boiler, 730
- Rutherford High Energy Laboratory, helium refrigerator for bubble chamber, 553
- Rutile mining project in Sierra Leone, 400
- Ryzewski, J. R., on Theory of Arch Dams (review), 413
- Rye-Arc Ltd., Gamma 10 computer system, 241
- Rye, Claude, Bearings, transmission equipment (trade publication), 254
- S**
- SABO Universal rotary descaling tool, 789
- Saddle, flexible nylon cable (Herzbi Ltd.), 310
- SADI (Great Britain) Ltd., variator remote control (trade publication), 734
- Sadia Water Heaters Ltd., thermal storage water heater, BEAB approval, 640
- Safe working loads of lifting table, by L. Linder (book), 222
- Safegon monorail urban transport system (trade publication), 254
- Safety aspects of motor car design, by Dr. William Gissane, 769
- Barriers, aircraft, 334
- Belt, Freeway, 431
- Circuit for radiation machine (Panax Equipment Ltd.), 242
- and construction codes USA states and cities, directory of, by K. O. Siemon (book), 158
- Control equipment for diesel-electric locomotives, 251
- Device for large machines (Photoelectronics (MOM) Holdings Ltd.), 50
- Equipment, industrial (Siebe, Gorman & Co. Ltd.), 567
- Mine (Dräger Normalair Ltd.), 53
- Features in motor cars, Roberts Law on, 806
- Motor vehicle, challenge trophy to promote (Small & Parkes Ltd.), 656
- Standards in radiographic testing facilities (Davey, Paxman & Co. Ltd.), 10
- Work boots, Bonanza Minor, 248
- SAGEM, design agreement with Ferranti Ltd., 177; equipment for ELDO and Concorde, 177
- Sailboat, 40-knot, by B. Smith (review), 476
- Sains, H., review of Electromagnetic Clutches and Couplings, 349
- Saint. See *St*
- Sales training, application of programmed instruction to, 519
- Salesmen, programmed instruction for (Product Knowledge Ltd.), 73
- Salford Corporation, Fram system for Ellor Street housing project, 528
- Salisbury Cathedral, underfloor heating, 37; off-peak underfloor electric heating in, 819
- Salone Internazionale Dell'Automobile (Turin), exhibits at, 611-612
- Salrad panel heater with Flexel elements, 192
- Salt production at Winsford, 462
- Saltoats Town Council, trial of Flexal heating in council houses, 192
- Sammonds, C. J., review of Behaviour and Properties of Refractory Metals (review), 733
- Sampled-data control systems, theory of, by D. P. Lindorff (review), 284
- San Francisco Bay rapid transit rail scheme, 417
- Sand and gravel map of England, 560-561
- and gravel plants, closed circuit television for (Hardy & Padmore Ltd.), 594
- Mixing machine for Hallsworth foundry plant (Richards Structural Steel Co. Ltd.), 113
- Sandeman, Kennard & Partners, Balderhead reservoir, 526
- Sanders Associates Inc., licensing agreement with Joseph Lucas (Industries Ltd.), 433
- Sanders, W. H., Sandrive electric motor controllers, 247
- Sandover, Dr. J. A., head losses in coiled pipes, 156
- Sandrive electric motor controllers, 247
- Sandvik Swedish Steels Ltd., tool holders (trade publication), 126; learn winter driving (trade publication), 446; drawing dies (trade publication), 574; Coromant Ejector drill for deep holes, 758; Coromant T-MaX close pitch facemill, 816
- Sandwich courses in training of draughtsmen, 614
- Sanford, R. S., on Physical Networks (review), 822
- Sangamo Controls Ltd., temperature controller, 185
- Sanitary Engineering Conference (Urbana, Ill.), 255
- Sankey, Joseph, & Sons Ltd., Super-7 vending machine for hot drinks, 730
- Santon Ltd., D18 thermal storage water heater, BEAB approval, 640
- Sargeant, M. J., on Operational Research for Management (book), 605
- Sargrove Electronics Ltd., ELSIE transistorized signalling system, 55
- Satchwell Control Systems Ltd., heating engineers guide (trade publication), 702
- Satchwell I in SML Minival motorized valve, 544
- Satellite, Gemini-6 and Gemini-7 rendezvous project, 810
- Manned, by Dr. W. F. Hilton (review), 445
- Overhead radiant gas heaters, 186
- Television, 22-channel (Hughes Aircraft Co.), 564
- Saudi Arabia, investigation of water resources in, 560
- Saunders Valve Co., type MS ball plug valve, 146
- Savage & Parsons Ltd., formation of Nuclear Equipment Ltd., 152
- Saw, bandsaw, BBS 10 (Burgess Products), 384
- "Hook-Tooth" (trade publication), 94
- Chain, Remington, 436
- Circular, Gjerde, 598
- Cold, PHA27 automatic (Strojimport), 437
- Friction, pneumatic feed for (Trennjaeger (Great Britain) Ltd.), 503
- Multibladed frame, for stone (Triefus Industries Ltd.), 51
- Portable, Husky, 384
- See also *Resaw*
- Sawing machines, circular, automatic (Machinfabrik Bewo), 378
- RS20 automatic cold circular (S. Russell & Sons Ltd.), 536
- Unit, wall (Concrete Sawing Equipment Ltd.), 410
- Saxton & Co. (Deep Drillers) Ltd., activities of, 305
- Saxton & Co. (London) Ltd., activities of, 305
- Sayers, Dr. B. McA., review of Dynamics of Linear and Non-Linear Systems, 700
- Scaffolding (Great Britain) Ltd., formation of Showex Ltd., 497
- Over St. Paul's Cathedral (Big Ben Scaffolding Co.), 369
- Scalar and vector fields, by R. B. McQuistan (review), 572
- Scales, length, laser for calibration of (NPL), 443
- Removal, weld, for stainless steel, D-Scale Paste DS-25, 379
- Scamp, J., Motor Industries Joint Labour Council, 802
- Scandinavia, export opportunities for ship-building components in (booklet), 449
- Scanning electron microscope, Steroscan, 747-748
- Microscope (Westinghouse Electric International Co.), 306
- Scarborough High School, applied science activities, 239
- "Scee" bench vice jaws (trade publication), 478
- Schack, A., on Industrial Heat Transfer (book), 574
- Schaefer, J., on Rectifier Circuits: Theory and Design (book), 254; (review), 604
- Schellkunoff, S. A., on Applied Mathematics for Engineers and Scientists (review), 92
- Schmidl, H., electronic artificial arm from Italy, 65
- Schmidt, F. A. F., on the Internal Combustion Engine (review), 316
- Schnadt, H. M., on welding of new steel qualities, 617
- Schools, applied science in, conference on, 481
- Science in, conference on (IME), 515
- Science in, survey of, 237-239
- Science in, USA, 559
- Approach to technology, by D. I. R. Porter, 515, 516
- Council, conference on applied science in schools, 481; engineering among the schools, by G. T. Page, 481; conference on applied science in schools, 515; proposal for pilot development project in engineering science in secondary schools, 515; school approach to technology (report), 514, 516
- Engineers as teachers in, survey of, 235
- Engineering among (survey), by G. T. Page, 101-103, 235, 236, 237, 481, 515, 675
- Engineering in, by N. Allen, 545
- Engineering in, conference on (IME), 515
- Engineering in, survey of position and requirements, 235, 236, 237-239
- Exhibition on Technology Today, 749
- Secondary, engineering science in, pilot development project proposal, 515
- Schoolboys, summer courses for, on electricity supply industry, 419
- Schumacher, Dr. E. F., on Inter-tech, 321
- Schweizer, Otto, Mechanische Werkstaette, drilling device for holes from 0.004 in to 0.080 in., 86
- Schwing, Friedrich Wilh., contractor's plant (trade publication), 126
- Sciaky Co., welding equipment for Ford of Britain, 475
- Sciaky Electric Welding Machines Ltd., electron beam welding machine, 213
- Science, applied, in schools, conference on (IME), 515
- in schools, survey of, 237-239
- in schools in USA, 559
- Engineering, in secondary schools, pilot development project proposal, 515
- of materials by T. J. Lewis and P. R. Secker (review), 189
- Ministers talk about, by E. G. Mesthene (review), 188
- Museum: 50 things to see, by J. T. Van Riemsdijk (book), 126
- Research Council, grant for research, Dr. F. Stainthorpe, 208; grant to Cambridge University for research into industrial automation, 209; research grant for gyroscopes, 240; grant to Political and Economic Planning, 272; grant for research on high temperature solid state



- chemistry, 304; molecular research grant for Oxford University, 561
- Scientific Furnishings Ltd., HS500 high speed off-line printer, 570
- Scientific Instrument Manufacturers' Association of Great Britain, exhibition in Roumania, 223
- Scientific research. See *Research*
- Scientific Systems Ltd., activities of, 518
- Scissor lifts (trade publication), 382
- SCOPE coordinate positioning equipment, 315
- "Scotchply" reinforced plastic springs, 277
- Scotland, electric power generation position and prospects, 737
- Electricity supply in, position and prospects of, 489-492
- Industrial development position and prospects, 618-619, 654-655
- Motor industry in, 321
- Plan for development, need of, 588-589
- Pumped storage hydroelectric power schemes in, 489-491
- Report on the castings market in, 785
- Scott Bader & Co. Ltd., *Compass* house magazine, 603
- Scott, Bowman, education and training and automation, 651
- Scott, D., on Business of Product Design (review), 381
- Scott Division (Balfour Group), spray drying (trade publication), 798
- Scott, J. R., on Physical Testing of Rubbers (book), 413; (review), 444
- Scott & Wilson, Kirkpatrick & Partners, interest in Incendata Ltd., 721
- Scottish Aviation Ltd., Salrad panel heater with Flexel elements, 192
- Council, report on the castings market in Scotland, 785
- Scottish Gas Board, furnace modernization at William Beardmore & Co., 560
- Highland Forests, new road to (Forestry Commission), 368
- Local Authority Special Housing Consortium, Bison system for blocks of flats, 465
- Scrap metal, hydraulic baling press for (Simon Handling Engineers Ltd.), 154
- Scraper, elevating, 260E (Allis-Chalmers), 434
- Euclid TS 14 cu. yd., 808
- Screw cutting lathe. See *Lathe*
- Fastening system, SPAT self-piercing and tapping (GKN), 634
- Machine, automatic, No. 2B (Brown & Sharpe Ltd.), 376
- Mixer, vertical epicycloid, "Verto-Mix" (trade publication), 510
- Threads, ISO Inch (Unified) system for, 706
- ISO Metric system for, 706-707
- Metric system for, 706
- See also *Thread rolling; Threading*
- Screwdrivers and nutrunners (trade publication), 446
- Scrubber, floor, and polisher (R. S. Stokvis & Sons Ltd.), 731
- Scull, Arthur, & Son Ltd., merger with Drake & Gorham Ltd., 112
- Sea defence, tidal models for, 34
- Sea Gem oil drilling rig, gas discovery by, 418; in North Sea, 771
- Sea Horse tractor for use through water (County Commercial Cars Ltd.), 494
- Seabank gas reforming plant, 240
- Seals (trade publication), 702
- Joint, for precast concrete, Servicore, 661
- Lip, Sealometer testing machine, 565
- Rotary pump, synthetic rubber, Zealox, 371
- Scraper, Hallite, to protect hydraulic rams, 57
- Shaft, hydrodynamic helixseal and hydro-seal, 565
- 605 rotating (Sealol Ltd.), 147
- Split, for large diameter shaft, type 300 (Crane Packing Ltd.), 786
- Testing machine, Sealactor, 565
- Machine, Sealrater, 565
- Sealant, adhesive, Casco-MI, 339
- Sealactor, seal testing machine, 565
- Sealing machine for semiconductor diode production, 263
- Thermo-electric, for Vauxhall Cresta wind-screen, 594
- Sealocrete Ltd., Sealofrost anti-frost and plasticizing agent for cement, 691
- Sealofrost anti-frost and plasticizing agent for cement, 691
- Sealol Ltd., 605 rotating seal, 147
- Sealometer lip seal testing machine, 565
- Sealrater, seal testing machines, 565
- Seaming machine, Model 2MR automatic double, for round cans (Moon Bros. Ltd.), 214
- Secan system of colour television, 258
- Secker, P. R., on Science of Materials (review), 189
- Secondary schools, engineering science in, pilot development project proposal, 515
- Section manager, study of activities of, 454
- Secura, OSI, motor car, 652
- Sedov, L. I., on Two-Dimensional Problems in Hydrodynamics and Aerodynamics (book), 510
- Seely, S., on Dynamic Systems Analysis (review), 28
- Seedrum refuse plant, 791
- Seismic timer, R-117 (Soiltest Inc.), 309
- Selas Gas & Engineering Co. Ltd., renamed Wellman Selas Ltd., 240
- Selectronic 701 supervisory remote control equipment, 83
- Selenium surge suppressors (trade publication), 574
- Self-Changing Gear Co., final drive units, for hydraulic locomotives, 26
- Self-copy paper, Sinecarbon B, 309
- Selling to Canada (booklet), 592
- Sellotape Products Ltd., tapes for industry (trade publication), 286
- Selwood, Wm. R. Ltd., induced flow pump for air or water, 695
- Semiconductors (trade publication), 62
- Diodes, automatic machinery for production of (Bader Machinery Co. Ltd.), 262-263
- Progress in (Vol. 9), by A. F. Gibson and R. E. Burgess (book), 510
- Semiconductors, silicon, in ISC series 90 computer equipment, 760
- Transistor curve display 8100 for (Elliott Automation Ltd.), 213
- Semper, E., applied science in schools conference, 517
- Senior, E. W., on Ransome & Marles, 813
- Sensing and control equipment, ultrasonic, Sonac, 54
- Sentinel diesel locomotives for Portuguese Railways, 144
- Separation equipment, vibrating and (trade publication), 574
- Separators, hydrogen (trade publication), 638
- Sequence control system, automatic, for capstan lathes (Nickols Automatics Ltd.), 313
- Services. See *International Industrial Equipment and Services Exhibition*
- Servicing guide to British motor vehicles, by M. H. Rosewarne (book), 478
- Servicised Ltd., Servicore preformed weatherproof joint seal for precast concrete, 661
- Servicore preformed weatherproof joint seal for precast concrete, 661
- Servo drive unit (Vactric Control Equipment Ltd.), 278
- Servomex Controls Ltd., Type 0A137 industrial oxygen analyser, 598
- Servomotors, mounting synchros and (trade publication), 605
- Servotronik temperature indicating controller with thyristor power, 120
- SETEC S.A., Spanish representatives for, Lighting Mixers Ltd., 208
- Sethi, R. K., on pumpless injection for diesel engines, 137
- Sevenoaks by-pass, limestone for, 337; Titan paver-finisher machine for, 745
- Sevenoaks School, applied science activities, 237
- Sewage disposal, sewerage and, by L. B. Escrib (book), 670
- Penstocks, automatic operation for (West Kent Main Drainage Sewage Board), 754
- Purification developments, 482
- Sewerage and sewage disposal, by L. B. Escrib (book), 670
- SGB Building Equipment Division, adjustable hanger bracket, 434; mobile and static access towers, 536
- SGE Signals Ltd., equipment for resignalling scheme at Rugby, 46; "Timplex" time-division-Multiplex high speed data transmission system, 46
- SGS-Fairchild Group, annual sales conference (Tenerife), 561
- SGS-Fairchild Ltd., flip-flop element (trade publication), 190; dc amplifier (trade publication), 542
- Shackel, B., on ergonomics and design, 358
- Shadara power station (Pakistan) gas turbine plant for, 208
- Shaffer Slip Joint in oil-drilling rig, 205
- Shaft horsepower measurement without slip rings, 330
- Large diameter, type 300 split seals for (Crane Packing Ltd.), 786
- Seals, hydrodynamic helixseal and hydro-seal, 565
- Walking dragline, liquid nitrogen shrinkage of, 724
- Shake-out, mine car, Sinex, 57
- Shallow draught ship for transportation of heavy equipment, 13
- Sharman, F. A., on Royal Charter, 197; professional engineer, 198
- Sharman, G., on training for export management, 580
- Sharples Engineering Co. (Bamber Bridge) Ltd., diffuse light polariscope, 761
- Sharples International, symposium on centrifuges (Moscow), 785
- Shaw, Anne, Data Processing Ltd., 449
- Shaw, Anne, on management consultancy, 449
- Shaw, Anne, Organization, 773; training programme for systems analysts, 449
- Shaw Moisture Meters, portable hygrometer with variable capacitance sensing element, 20
- Shawford Control Gear Ltd., selector switch with locking sleeve, 282
- Shawinigan Chemicals of Canada, reorganisation of, 368
- Shawinigan Ltd., reorganisation of, 368
- Shear, hydraulic (Keeton, Sons & Co. Ltd.), 281
- Strength testing instrument, portable, for soil, Pilcon, 506
- Shearer-loader, Anderton, 55
- Shearing machine with epicyclic drive (Joseph Rhodes & Sons Ltd.), 59
- Sheepsfoot compactor, type 454 triple-drum (South-West Welding & Manufacturing Co.), 504
- Sheet cutting machine, plastic (John Holroyd & Co. Ltd.), 186
- Neoprene, for railway track ballast protection, 791
- Reflector (trade publication), 605
- Steel, coloured, Colour Coated Steel (Richard Thomas & Baldwins Ltd.), 664
- Sheeting, corrugated, Cobex pvc, in reservoir baffle wall, 210
- Weather, heavy gauge, Tenasco 900, 115
- Sheffield Metallurgical and Engineering Association, symposium on castings in welded fabrication, 823
- Sheffield Twist Drill & Steel Co. Ltd., annual report, 49; increased cost of high-speed steel, 49; Dormer Series 2 Helimatic screwed shank tool holder, 154
- Shell-BP Petroleum Development Co. of Nigeria Ltd., natural gas in Nigeria, 257
- Shell Chemical Co., Ltd., Cariflex K-101 thermoplastic rubber, 567; polypropylene (trade publication), 605
- Shell International Marine Ltd., Philene tanker, installation of Contour echo sounders, 276; activities of, 330
- Shell Iru Fluid 902 hydraulic fluid, improved version, 217
- Shell-Mex & B.P. Ltd., Shell Iru Fluid 902 hydraulic fluid, improved version, 217
- Shell plastics for crates, 403
- "Shell" Research Ltd., remote recording torsion meter without slip rings, 330
- Shell Tankers Ltd., tanker *North Sands*, 812
- Shell theory, plate and, introduction to, by C. E. Turner (review), 189
- Thin, linear elastic theory of, by J. E. Gibson (book), 190
- Shelley Electric Furnaces Ltd., Hoverkiln kiln for pottery firing, 741
- Shelving, storage (trade publication), 702
- Shenfield, A. A., on Confederation of British Industries, 353
- Shepherd, F. & Son Ltd., University of York building progress, 206
- Sheppard, F. E., bogie design studies, 581-583
- Sherbourne Engineering Ltd., prefabricated steel pedestrian bridges, 728
- Sherbro Minerals Ltd., rutile mining project in Sierra Leone, 400
- Shercliff, J. A., on Textbook of Magneto-hydrodynamics (book), 510
- Sherwen Shearline feeders for coal bagging plant, 121
- Shield, sound, for marine diesel generator (G. & M. Power Plant Co. Ltd.), 218
- Ship, alarm scanning system for (Honeywell Controls Ltd.), 306
- Articulated, developments in, 719
- Multipacket, development of, 719
- Atomic propulsion of. See *Atomic propulsion*
- and Boat Builders' National Federation, trade mission to Middle East, 720
- Cargo, refrigerated, *Port Huon*, 307
- Design trends, discussion on, 459-461
- Loader for iron ore concentrate, 134
- Merchant, submarine, advantages of, 295
- Propulsion, fuel consumption factor in, 460-461
- Power increase trends for, discussion on, 459-461. *Letter*, 613
- See also *Atomic propulsion; Marine propulsion; Turbine; Propeller*
- Shallow draught, for transportation of heavy equipment, 13
- Steering gear, electro-hydraulic ram type (Brown Bros. & Co. Ltd.), 243
- See also under specific types of ship
- Shipbuilding components, export opportunities for, in Scandinavia (booklet), 449
- Industry, National Plan impact on, 388
- Position and prospects of, 546. *Letter*, 613
- Steel protection in, 617
- Shipston Engineering Co. Ltd., Series LO2 automatic oil-fog lubricators, 730
- Shipton Automation (Sales) Ltd., Automation Electrowriter facsimile transmitter, 730; Automation narrow belt conveyor, 730
- Shipyard, Eriksberg, drydock for, 784
- Orders for 1963 (British Shipbuilding Conference), 593
- Shirebrook West servicing depot for diesel locomotives, 82
- Shockwave processes, forming by, Dr. Mürtz on, 617
- Short Bros. & Harland Ltd., Belfast transport aircraft, Head-up display systems for, 241; civil Belfast aircraft version proposal, 593; racking machine for laundries, 741; variable stiffness torque electric motor, 786
- Short circuit tests on 500 MW alternators, 356
- Short Face Minor coal cutting machine, 54
- Shorter process of flame hardening, developments of, 150
- Shot blast plants, Twin airless, 402
- Shotblasting machine, Miniblast, 278
- Shot-peening, effect on laminated spring life, 650
- Shovel loaders (Clark Equipment Ltd.), 794
- Tractor, four wheel drive, Hough H-50B Payloader, 410
- HD-7G (Allis-Chalmers), 536
- International Hough Payloader Model H-65B, 793
- with power steering, Payloader H-25B, 537
- Show. See *Exhibition*
- Showex Ltd., formation of, 497
- Shrinkage in concrete at 105 and 110° C, 122
- Liquid nitrogen, of walking dragline shafts, 724
- Shunter, crane, and fork lift truck, Unilok combined, 58
- Shuttering, concrete, and moulds, glass fibre reinforced polyester for (BIP Chemicals Ltd.), 724
- Sidebottom, O. M., on Inelastic Behaviour of Load-Carrying Members (book), 798
- Sidereal Drive for "Isaac Newton" telescope, 168
- Siebe Gorman & Co. Ltd., Aerorlox breathing apparatus, 54; Air Master compressed air set, 54; Automon portable oxygen resuscitator, 117; industrial safety equipment, 567
- Siemens Group, Sinumerik numerical control system, 376
- Siemens plug-in relays (trade publication), 62
- Siemon, K. O., on Directory of Safety and Construction Codes USA States and Cities (book), 158
- Sierra Leone, rutile mining project in, 400
- Sifam Electrical Instrument Co. Ltd., photo-transistor operated temperature controllers, 663
- Sigma Instruments Inc., Series 34 range of latching relays in a crystal can, 178; double-throw relay (trade publication), 350
- Sigmund Pulsometer Pumps Ltd., hydro-pneumatic booster plenum heating system for London Zoo, 16; SumPak submersible pump, 817
- Signal box failure at Clapham Junction, 674, 678-679
- Rugby, description of power-operated installation, 46-47
- Distress, personal (Draeger Normalair Ltd.), 53
- Engineering, basic concepts in, by S. A. Srinivasan (review), 125
- Signal generator, high power, Type SLRC (Aveley Electric Ltd.), 375
- Source calculator (trade publication), 350
- Systems for mine working (Automatic Telephone and Electric Co. Ltd.), 55
- Signalling and control system, R2 fail safe (John Davis & Son (Derby) Ltd.), 153
- Power-operated, Rugby, 46-47
- Programme machine, for underground railway (London Transport Executive), 251
- System, transistorized, ELSIE, 55
- Sikorsky S61N helicopter, 368
- Silazone polymers in high temperature studies, 264
- Silbestos protection for factory inspection platforms, 144
- Silcock, R., & Sons Ltd., punched card system for mixing animal foods, 124. *Letter*, 183
- Silentair drill with air bearings and air turbine drive, 265
- Silica Gel Ltd., air drying breathers, 694
- Silicides, borides, and phosphides, by B. Aronsson, T. Lundstrom and S. Rundqvist (book), 190
- Silicon diodes (trade publication), 350
- Nitride ceramics, 72. *Letter*, 229
- Pure, by H. A. Vodden and J. L. Williams, 502
- Semiconductors in ISC series 90 computer equipment, 760
- Silicone heat sink, high conductivity, DP 2623 (Midland Silicones Ltd.), 146
- Rubber encapsulated capacitors, range of (Plessey Co. Ltd.), 218
- Foam, RTV-7 (Jacobsen Van Den Berg (U.K.) Ltd.), 146
- Use in high temperature polymer studies, 264
- Silo level indicator (Portasilo Ltd.), 148
- Silt prevention for condenser tubes, 475
- Silvaflame Co. Ltd., machinery guards (trade publication), 222
- Silver Shadow motor car (Rolls-Royce), 385; suspension system (Rolls-Royce), 586
- Silver Star range of miniature silvered mica capacitors (Johnson, Matthey & Co. Ltd.), 507
- Simca motor cars at Paris Salon, 483
- Simca-1000 motor car, semi-automatic transmission for (Ferodo France), 584
- Simmonds Aerocessories, 742
- Simms Group Research and Development Ltd., opening of new laboratories, 720; projects in progress, 720
- Simms-Marvel-Schebler Co., formation of, 593
- Simms Motor and Electronics Corp., trading position, 593; production of petrol injection systems for motor vehicles, 593
- Simms Motor Units Ltd., Type SS spring starter for diesel engines, 404
- Simon-Carves Ltd., BBRV post-tensioning system for Bow viaduct, 241; agreement on fertilizer process with ICI, 272; 120 MW reheat oil fired boilers for Adelaide power station, 560
- Simon Engineering (Dudley) Ltd., SS85 Snorkel firefighting and rescue unit, 215
- Simon Engineering Ltd., position and prospects of, 16-17; plant for new town gas process, 720; trading report, 720
- Simon Handling Engineers Ltd., hydraulic baling press for scrap metal, 154
- Simonaco Ltd., Simonaco-Warman dredge and gravel pumps, 21
- Simonaco-Warman dredge and gravel pumps, 21
- Simplifix Couplings Ltd., needle control banjo couplings, 89
- Simpson, C. R. H., review of Railway carriages 1839-1939, 94; review of Railwayman's Diesel Manual, 94; review of Steam Locomotives, 94; review of Railroads of the Black Hills, 732; review of Railway Carriages in the British Isles from 1830-1914, 732; review of Splendour of Steam, 732; review of Locomotive Adventure, Vol. 2, 763; review of Locomotive Panorama, Vol. 2, 763
- Simpson panel meters and testers, 80
- Sine bar, Mini-Sine, 787
- Sinecarbon B self-copy paper, 309
- Sinex mine car shake-out, 57
- Sintered components (trade publication), 286
- Metal oil-retaining bearings, Wondermix, 634
- Sinumerik numerical control system, 376
- Sir George Monoux Grammar School, applied science activities, 239
- Sirect Mark II temperature controller with current limiting facilities, 117
- Sisson, G. M., "Isaac Newton" telescope, 165
- SISTERS, position and prospects of, 34
- Site accommodation on hydro projects, house-boats as, 728
- Site-Comfort LP gas infra-red radiant heaters, 249
- "680" prefabricated timber building system (W. C. Youngman Ltd.), 696
- Sixth formers, applied physics for, symposium on, 419
- Size limits, British Standard on, 368-369
- Sizer, Richard, Ltd., straining system for flight load test frame, 621; member of feed mill consortium, 721
- Sizewell atomic power station, fuel loading at, 15; description of, 70
- Sizing machine, Leesona Holt, improved appearance of, 551
- Skanska Cementaktiebolaget, automation of cement plant, 305
- SKC Research Associates, powder metallurgy process for coin production, 112
- Skefko Ball Bearing Co., roller bearings for diesel hydraulic locomotives, 26; sketching, technical, freehand, by H. Cook (book), 766; system of individual operator training by tape (RITT), 74
- Skills analysis techniques, 136
- Training, course on, 136
- Skinningrove Iron Co. Ltd., fabricated steel-work and steel sections (trade publication), 670
- Skip winding plant, Newstan Collieries, 657



- Skirting ducts, polyvinyl chloride (Key Terrain Ltd.), 471
- Skyhook, Top-Dog nylon coiled hose, 345
- Skylift truck for BOAC aircraft overhaul department, 152
- Slab milling equipment, Torrington-Robertson, range of, 187
- Reheating study (BISRA), 18
- Slag, blast-furnace, Slagceram construction material from (BISRA), 18
- Slagceram construction material from blast-furnace slag (BISRA), 18
- Slater, J. M., on Inertial Guidance Sensors (review), 476
- Slattery, T. B., on Maintainability: A Major Element of System Effectiveness (review), 92
- Slip Group, Sliptechnik water valve with intake for chemical additives, 187
- Slipform paver for construction of concrete roads, 232
- Sliptechnik water valve with intake for chemical additives, 187
- Slitting machine for steel strip (B. Thornton Ltd.), 503
- Slough Machine Tool Co. Ltd., diecasting machines, 662
- Sludge. See *Sewage*
- Slurry, ore, radioisotope analyser for, 183
- Small & Parkes Ltd., challenge trophy to promote motor vehicle safety, 656
- Smalley, Richard (Engineering) Ltd., Smalley 360 small, all-purpose mechanical excavator, 631
- Smeed, Transportation Engineering Conference, 8
- Smells from electrical fittings, 320
- Household, tracing of, 320
- Smith, A. A., on Carbon Dioxide Shielded Consumable Electrode Arc Welding (book), 62; (review), 541; review of The Metallurgy of Welding, Brazing and Soldering, 732
- Smith, B., on The 40-Knot Sailboat (review), 476
- Smith, D. W., on machine tool distribution policy, 560
- Smith, Dr. E. H. Frost, review of Theory of Sampled-Data Control Systems, 284
- Smith, F. H., why teach-in?, 174; on Moulton bicycle, 199. *Letter*, 229, 356. *Letter*, 453
- Smith, G. D., on Numerical Solution of Partial Differential Equations (review), 381
- Smith, Sir Henry Wilson, on Doxford and Sunderland Shipbuilding & Engineering Co. Ltd., 337
- Smith, J. O., on Inelastic Behaviour of Load-Carrying Members (book), 798
- Smith, K. M., on Graded Problems for Electrical Engineers (book), 286
- Smith, N. R., on Industrial Applications of the Diamond (review), 603
- Smith, S., & Sons Ltd., core material for investment casting, 371
- Smith, Thomas, & Sons (Rodley) Ltd., T35 truck crane, 662
- Smith, W., on TV programmes from film, 356
- Smith, W. G., on the new industrial training, 199
- Smith, W. S., Transportation Engineering Conference, 8
- Smithfield. See *Royal Smithfield Show*
- Smith's Dock Co. Ltd., oil-drilling rig for Transocean Drilling Co., 204; description of *Ocean Prince* semi-submersible oil-drilling rig, 204-205
- Smiths (Harlow) Ltd., Delta Z Drive for small boats, 347
- Smiths heating equipment for motor cars, 558; battery condition indicator gauge, 558
- Smiths Industrial Division, SUSIE telemetry system for underground equipment, 57; Hy-spec pressure gauge, 155
- Smoke control, progress in, 546
- SMP magnetic-pneumatic floating table for machining operations, 503
- SNAM Progetti, natural gas fractionating plant for Russia, 145
- Snorkel firefighting and rescue unit, SS85, 215
- Snow & Co. Ltd., Model V60 16 surface grinding machine, 313
- Snow, Lord, design exhibition, 550
- Snow ploughs, hand-propelled, Toro Snow Pup and Snow Husky, 640
- Snow Pup and Snow Husky hand-propelled snow ploughs (Toro Manufacturing Corporation), 640
- Soag Machine Tools Ltd., high precision milling machines, 214; Type NZH hydraulic keyseating machine, 378; TMS1-60/130 large vertical boring and turning mill, 635
- Soaking pits, computer control for, 124
- Société d'Applications Générales d'Electricité et de Mécanique. See *SAGEM*
- Society of Chemical Industry, conference on molecular sieves, 95
- in 1860s, by Prof. A. Briggs, 826-828
- Engineers in, by Sir Denning Pearson, 675
- of Environmental Engineers, convention on machines for materials and environmental testing, 63
- of Instrument Technology, symposium on "The future pattern of research in instrument technology," 287
- Technology and, conference on (Bath), 31
- Sociology and design, by A. M. Penny, 358
- Socket outlet, 13A, with more room in box (J. A. Crabtree & Co. Ltd.), 448
- and plugs, industrial (trade publication), 222
- Sodium and its alloys with potassium, by J. Allen, 501
- Soil mechanics conference, international (Montreal), 223
- Soil Mechanics-Soletanche Ltd., Backwater Dam, 600
- Soil, Pilcon portable shear strength testing instrument for, 506
- Testing, T-8040 triaxial chamber for (Soiltest Inc.), 309
- Soiltest Inc., T-8040 triaxial chamber for testing soils, 309; R-117 seismic timer, 309; Failures in Foundation (booklet), by Dr. J. Feld, 496
- Sokolovskii, V. V., on Statics of Granular Media (review), 29
- Solar. See *Sun*
- Solartron Ltd., Surface Tactical and Blind Pilotage Trainer, 389
- Solbraze Ltd., Autoflame equipment model AFR12 brazing machine, 535; Autoflame soldering and brazing unit, 792
- Solder coating machine, roller (Technograph & Telegraph Ltd.), 153
- Refining, new plant for (Copper Pass Ltd.), 82
- Soldering and brazing unit, Autoflame, 792
- Brazing and welding, metallurgy of, by J. F. Lancaster (review), 732
- Gun (Millers Falls Co. Ltd.), 85
- Iron, high speed, model G 18 W (Antex Ltd.), 178
- Machine for semi-conductor diode production, 262
- Soldermaster electric jointing tool for copper pipes, 155
- Solid state chemistry, high temperature, grant for research on (Science Research Council), 304
- Solids and strength of materials, mechanics of, by F. V. Warnock and P. B. Benham (review), 189
- Solvents (trade publication), 734
- Somerston Shipping Co. Ltd., universal bulk carriers, 304
- Sommerhoff, Gerd, applied science in schools conference, 517
- Sonac ultrasonic sensing and control equipment, 54
- Sonar echos, 58
- Soniscare ultrasonic generator for scaring vermin and birds, 786
- Sonodur Type 1850, non-destructive hardness tester, 663
- Sonotrol Devices Ltd., Econotrol control unit for lighting, 51
- Sorefare, Sentinel diesel locomotives for Portuguese Railways, 144
- Sortex 621M minerals sorting machine by colour, 535
- Sorting machine, minerals, by colour, Sortex 621M, 535
- Office, Western District (GPO), 200-201
- Sound shield for marine diesel generator (G and M Power Plant Co. Ltd.), 218
- South African Railways electrification system, transformers for, 754
- South Bank Insulation Co. Ltd., Silbestos protection for factory inspection platforms, 144
- South Crofty Ltd., pressure plant for timber treatment, 259
- South Durham Steel & Iron Co. Ltd., 80 in. roller straightening machine, 666
- South London Electrical Equipment Co., welding equipment for Ford of Britain, 475
- of Scotland Electricity Board, contracts for Longannet power station, 272; Longannet power station contracts for, 337; Longannet power station orders for plant, 368; electrical power map, 491; history and activities of, 491; Cockenzie power station, 492
- South Wales Electric (Pty.) Ltd., 465
- South Wales, iron ore import terminal projects for, 35
- South Wales Switchgear Ltd., 66 kV package substation for Hong Kong, 307
- South Wales Transformers Ltd., new factory at Neave Township, Port Elizabeth, 465
- Western Gas Board, Seabank gas reforming plant, 240
- Southall Grammar School, applied science activities, 239
- Southall & Smith Ltd., Driver Southall 0215 general purpose Checkweigher weighing machine, 423-424; feedback control for checkweighing machine, 424
- Southampton University, symposium on microelectronics, 31; Fawley Foundation lecture by Sir Denning Pearson, 675; computer for, 753
- Southern Electricity Boards, experiments with cable bedding materials, 658
- Southgate, Dr. B. A., on reduction in river pollution, 482
- Southwell, Sir Richard, on size and flight, 296
- Southwest Welding and Manufacturing Co., type 454 triple-drum sheepsfoot compactor, 504
- Space, international control of, 195
- Space Nuclear Propulsion Office (US), 401
- Programme, position and prospects of British, 107, 514
- Technology, modern trends in, symposium on, 287
- Vehicle, Black Arrow, BS 606 and BS 625 rocket engines for (Bristol Siddeley Engines Ltd.), 107
- Black Knight, success of, 107
- Spacecraft, Gemini-Titan 5, flight of, 290
- Space-fitta series built-in furniture kits, 384
- Spacesaver storage system for parts, 184
- Spain, B., on Vector Analysis (book), 286
- Spain to Canary Islands, submarine telephone cable from, 273
- Spanners, ratchet (Leytool Ltd.), 214
- Spantiles asbestos cement roofing panels, 660
- Sparlite concrete panels for extension walls, 384
- SPAT system double-action assembly gun and special screw (GKN), 634
- Spear, P., the Rover-BRM gas turbine car, 103
- Special Institutions for Scientific and Technological Education and Research. See *SISTERS*
- Specialoid Ltd., annual report, 208
- Specifications, standard. See *British Standards Institution: Standard; Standardization*
- Spectra-Physics, type 119 single frequency laser, 153
- Spectrograph, broad range multi-gap, for Yale University, 433
- Spectrographic analysis of diesel engine lubricating oils, 440
- Flux, JMC (Johnson, Matthey & Co. Ltd.), 180
- Spectrophotometer (trade publication), 62
- Recording, Model 450 (Perkins-Elmer), 248
- Spectroscope (trade publication), 350
- Spectroscopic studies of vibrational modes, meeting on, 127
- Speed-increasing adapter, pbc spindle, for machines (Metropolis Machine Tools Ltd.), 503
- Speed limit of 70 mph and road accidents, 705
- Record, land, Arfons-Breedlove battle for, 712
- Reducers, geared, Hainsworth, 551
- Speedometer and field diversion system for diesel-electric locomotives, 90
- Speedrill, NC100, numerically controlled high speed drilling machine, 154
- Speedwork Labels Ltd., self-adhesive labels (trade publication), 254
- Spemby Technical Products Ltd., air line face mask, 278; dilatometer for high temperatures, 344
- Spence, Sir Basil, design for Sunderland Civic Centre, 600
- Spencer Chapman & Messel Ltd., reorganization of, 273
- Spencer (Melksham) Ltd., Cartrac and Litrac automatic conveyor system, 819
- Spencers Joinery Ltd., modular laboratory furniture, 178; modular laboratory furniture (trade publication), 702
- Spherocyl Corrector, Vickers, for correction factors in hardness testing on curved surfaces, 411
- Spiers, H. M., review of Techniques of Process Control, 221; review of Chemical Reactor Theory, 820
- Spiers, J., diesel engine combustion systems, 653
- Spindle speed-increasing adapter, pbc, for machines (Metropolis Machine Tools Ltd.), 503
- Splendour of steam, by H. Ellis (review), 732
- Splices and terminals, Stratotherm, 247
- Spooner, J. H., on Management and Cost Control in the Metallurgical Industry (book), 638
- Spray drying (trade publication), 798
- Eliminators, Western Red Cedar, for cooling tower, 275
- Fire protection system, ProtectoSpray, 215
- Gun, paint, general purpose (Gray & Campling Ltd.), 119
- Weathermaster, 213
- Unit, die, Moto, 666
- Sprayed Insulations Ltd., Silbestos protection for factory inspection platforms, 144
- Sprayer, Mini-Mark 35 power portable (Micron Sprayers), 744
- Spraying machine, automatic, L4103 dial type (Binks-Bullows Ltd.), 116
- Process, mortar, for concrete wall panels (BRS), 566
- System, zinc, for bright steel, Polyzinc, 242
- See also *Painting*
- Springs, ejector (trade publication), 798
- Laminated, fatigue failure of, in wagons, 650
- Looping machine, modular (Torrington Manufacturing Co.), 214
- Plastic, reinforced, "Scotchply", 277
- Vibratory feeding equipment with (Burgess and Associates Inc.), 277
- Springfields, hydrostatic extrusion press, 811
- Springfix fork head assemblies, range of, 90
- Square roots, squares and, by C. Attwood (book), 638
- Squares and square roots, by C. Attwood (book), 638
- Squashaper, 438A wave-form converter, 470
- Squire, N., on Water Engineer's Handbook 1965 (book), 605
- SR-N1 hovercraft (Westland Aircraft), 169
- SR-N2 hovercraft (Westland Aircraft), 169
- SR-N4 hovercraft, 169, 741
- SR-N5 Hovercraft, 741
- SR-N6 hovercraft, 170, 741
- Srinivasan, S. A., on Basic Concepts in Signal Engineering (review), 125
- St. Edward's School, Oxford, applied science activities, 238
- St. Helier Hospital, foundation renewal work on, 648
- St. John Bosco School, applied science activities, 239
- St. Paul's Cathedral, scaffolding over (Big Ben Scaffolding Co.), 369
- St. Petersburg Times, computer typesetting for, 244
- Stability of frames, by M. R. Horne and W. Merchant (book), 605
- of systems (book), 478
- Stabilizing spoilers on Mako Shark II motor car, 485
- Stacker, drum, mobile (Barron & Shepherd Ltd.), 472
- Sta-Dri and Winsam Tractor, tractor cabs, 79
- Staedler, J. S., Ltd., Mars range of technical pens with eleven line widths, 787
- Staffordshire College of Commerce, symposium on training and development of top management, 73
- of Technology, computing science courses, 807
- Stainless steel beam, Baroni, 370
- Clad cadmium atomic reactor control rods, 12
- Cladding, prefabricated wall panel with (Hawthorn Leslie (Buildings) Ltd.), 660
- Convuluted hose (HNP Industrial Sales Ltd.), 634
- Hose clips (Bell's Asbestos & Engineering Ltd.), 435
- Machining of, cutting oil for, Rocol RTD, 500
- Martensitic, stress corrosion cracking of, by J. E. Truman, 691
- Staybrite FMB, 660
- Weld scale removal for, D-Scale Paste DS-25, 379
- Stainthorp, Dr. F., Science Research Council grant for research, 208
- Stal-Laval Turbin AB, turbines for modern power plants (trade publication), 190
- Standards, European, EEC-EFTA action on, 548
- for industry, by C. D. Woodward (book), 798
- Standards, preparation of, comment on, 738-739
- Standard Telecommunication Laboratories Ltd., solid state up-converter for 4 Gc/s, 115; Interpolated Data and Speech Transmission system (IDAST), 121; microwave oscillator using epitaxial construction, 244
- Standard Telephones and Cables Ltd., Selectronic 701 supervisory remote control equipment, 83; type 74254-A portable oscillator, 148; type 74255-A portable level measuring set, 148; NC100 Speedrill numerically controlled high speed drilling machine, 154; contract for microwave telephone link between Bristol and Exeter, 241; circuit building machine with numerical control, 271; submarine telephone cable from Canary Islands to Spain, 273; 74832 level measuring set, 472; Pico portable microwave communication terminal, 506; telephone multi-plexing equipment for Malaysia, 593; type 74834-A distortion measuring equipment, 599; radio manufacturing plant in Zambia, 721; see also *STC Semiconductor Division*
- Standard-Triumph, Triumph 1300 motor car with front-wheel drive, 524
- Standardization for electronic components, 97
- Standards, United States Bureau of. See *United States National*
- Stanelco Industrial Services Ltd., thyristor controlled RF induction generators, 570
- Stanford, Edward, Ltd., gravel and sand map of England, 560-561
- Stanhay-Bigbury pallet trailer, 79
- Stanley-Bridges Colourmatic variable speed drill, 384
- Husky portable saw, 384
- Stanley Machine Tool Co. Ltd., HS7 and HS13 centre lathes, 435
- Starrett, L. S., Co. Ltd., measuring instruments (trade publication), 94
- Starters, automatic, for asynchronous electric motors (AOIP), 685-686
- Boards, electric motor (trade publication), 190
- Electric motor, vacuum contactor for (AEI), 665
- Spring, Type SS, for diesel engines (Simms Motor Units Ltd.), 404
- Starting relay, Type 312, for small electric motors, (Magnetic Devices Ltd.), 597
- Static inverters, single-phase, Porta Power range of, 281
- Statics of granular media, by V. V. Sokolovskii (review), 29
- Statistical analysis of experimental data, by J. Mandel (book), 413
- Training kit, 718
- Statistics, engineering, introductory, by I. Guttman and S. S. Wicks (book), 382
- "Stato" anchors for oil-drilling rig, 205
- Stator winding for large turbo-alternators, new method of (AEI), 151
- Statormatic automatic starter for asynchronous electric motors (AOIP), 685-686
- Staybrite FMB stainless steel, 660
- STC Semiconductor Division, television video distribution amplifier (trade publication), 222; transistor bias circuits (trade publication), 446
- Stead, D. D., rolling mill for new Australian Mint, 174
- Steam engine, compound marine, presented to Plenty (R. & J. H. Red Ltd.), 625
- Cornish beam, by D. B. Barton (review), 765
- by R. J. Law (book), 822
- Running at Museum of Science and Technology (Birmingham), 416
- Generating units, boiling heat transfer in, symposium on (IME), 95
- Splendour of, by H. Ellis (review), 732
- Turbine. See *Turbine*
- Steel, aluminium coating of, by vacuum deposition, 181
- Bright, zinc spraying system for, Polyzinc, 242
- Steel Co. of Wales Ltd., hardness monitor for annealing line, 18; iron ore, import terminal project, 35; construction of harbour at Port Talbot for iron ore imports, 369; vacuum contactor for electric motor starters, 665; Automat tin-coating width gauges, 790
- Cold-forming of, 617
- Congress (Luxembourg), report of, 616-617
- Designs, structural (trade publication), 478
- Electrolytically-chromated, "Hi-Top", 617
- Foundry. See *Foundry*
- Furnace. See *Furnace*
- Future of, by D. Burn (pamphlet), 99
- House design competition, 624
- and Industrial Design, discussion on, 616-617
- Industry, nationalization of, 99
- Nationalization position, 673
- Position and prospects in, 673
- Low alloy, higher strength, Ducoil QT, 217
- Steel, Peech and Tozer, increased steel production, 496
- Steel pipes, radiography welded joints of, BS, 627
- Plates (trade publication), 734
- Processing, progress in, Congress on, 95, 616-617
- Protection in shipbuilding, 617
- Rail. See *Rail*
- Rope. See *Wire rope*
- Sections, fabricated steelwork and (trade publication), 670
- Pressed, to requirements (John Booth & Sons (Bolton) Ltd.), 401
- Sheet, coloured, Colour Coated Steel (Richard Thomas & Baldwins Ltd.), 664
- Information and Development Association (SSIDA), formation of, 336
- Stainless. See *Stainless steel*
- Strip, slitting machine for (B. Thornton Ltd.), 503
- Surface treatment of, 617
- Weather-resisting, for architectural purposes, by J. Dinkeloo, 617



- Steel Works Plant Association, steel industrialists visit from Latin America, 656
- Steelmaking, continuous process by oxygen spraying, 723
- Steels Engineering Installations Ltd., Instaclip range of boltless pipe clips, 346
- Steelwork, fabricated, and steel sections (trade publication), 670
- Prefabricated constructional, design in, 617
- Steelworks in Philippines, 813
- Steering gear, ship, electro-hydraulic ram type (Brown Bros. & Co. Ltd.), 243
- Stefenson, unitised reheat steam turbine, 521
- Stegun, I. A., on Handbook of Mathematical Functions (book), 62
- Steinbuch, K., on Automat und Mensch: Kybernetische Tatsachen und Hypothesen (review), 797
- Stellar Components Ltd., Krotos electronic alarm system, 434
- Stenner of Tiverton Ltd., VHR 48 in band resaw, 661
- Stephen, Alexander, & Sons Ltd., productivity scheme in engine department, 298; Bangka I non-propelled tin-mining dredge, 433
- Sternlight, B., on Lubrication and Wear (book), 158
- Stereo booster, X 3.5, for bench magnifier (Vision Engineering Ltd.), 814
- Sterile glove box, Bassaire, 311
- Steroscan scanning electron microscope, 747-748
- Stevenage Development Corp., automated car park information system for Stevenage, 272
- Stewart, I., Fairfield Engineering proposal, 769
- Stewart Wales, Somerville Ltd., Galvapas plastic metal coating, 346
- Stewarts and Lloyds Ltd., formation of George Fischer Plastics Ltd., 144; System 4/30 computer for (English Electric-Leo-Marconi Computers Ltd.), 465; welded tube capacity extension, 565; vacuum contactor for electric motor starters, 665; trading report, 812
- Stewartson, Prof. K., review of Theory of Laminar Flows, 509
- Stinton, Sqn. Ldr. D., review of The 40-knot Sailboat, 476
- Stobart, A. F., on invention, design and market research, 358
- Stock, Anthony D., and Partners, Baghdad city centre redevelopment scheme prize-winning design, 466
- Stoddart Electric Systems, type LF-SHF-2T field intensity analyser, 153
- Stokermatic F100s solid fuel boiler, 736
- Stokes, Sir Donald, philosophy of exporting, 641
- Stokvis, R. S., & Sons Ltd., Superautomatic 8-programme washing machine, 640; floor scrubber and polisher, 731; model 42 power sweeper, 731
- Stollery, J. L., review of Manned Satellites, 445
- Stone, multibladed frame saw for (Triefus Industries Ltd.), 51
- Stone, Dr. P. A., on standards, costs and priorities in urban renewal, 513
- Stone-Vapor 6145 gas oil boiler for gas reforming plant, 240
- Stop valve. See *Valve*
- Storage cabinet, microfilm (James H. Randall & Son Ltd.), 403
- Container, bulk, nylon collapsible, Big Bag, 792
- Rocabard, of corrugated fibreboard, 762
- Equipment, filing and (trade publication), 382
- Power assisted, PASE, 58
- Exhibition (advance notice), 159; exhibits at, 762
- Racking, adjustable, New Speedlock, 436
- Shelving (trade publication), 702
- System, Spacesaver, for parts, 184
- Storey, Thomas, Ltd., beam placing gantry, 112
- Stoving and dipping plant, automatic double-decker (Automatic Equipment Ltd.), 410
- Stowaway, Top Dog nylon coiled hose, 345
- Stowette, Top-Dog nylon coiled hose, 345
- Strachan, G. R., on John Brown & Co. (Clydebank) Ltd., 17
- Strachan & Henshaw Ltd., mechanical handling (trade publication), 254; mechanical handling equipment (trade publication), 413
- Straightening machine, roller, 80 in. (Lamberton & Co. Ltd.), 666
- Strain gauge, printed circuit (Fairley Surveys Ltd.), 403
- Tension link, EM50 (Coutant Electronics Ltd.), 148
- Indicating equipment (Westland Aircraft Ltd.), 371
- Strain, note on journal, 157
- Strain and Robertson, Cockenzie power station, 492
- Strainer cages, twin, for pipelines (Royles Ltd.), 21
- Pipeline, Type ORSI duplex, with fabricated steel bodies (Lancaster & Tonge Ltd.), 507
- Straining of metals, research into high rate of, 277
- Strathclyde University, study on activities of managers, 454
- Stratotherm terminals and splices, 247
- Strauss, G., on nationalization of steel, 99
- Street lamps, mercury-iodide, trial installation of, 24
- Strength calculations, dimensioning and, proceedings of the second conference on, by L. Kisbooskoi (book), 822
- of England, by Dr. B. N. Wallis, 293-297
- of materials, mechanics of solids and, by F. R. Warnock and P. B. Benham (review), 189
- Stress analysis in electric cable systems (ERA), 658
- Experimental, by J. W. Dally and W. F. Riley (review), 572
- Thermal, by D. J. Johns (book), 413
- Corrosion cracking of martensitic stainless steel, by J. E. Truman, 691
- Stress distribution, creep, in beams, by A. E. Johnson and J. Henderson, 571
- in structures and machinery, conference on, 823
- Stretch-forging machine, GFM, installation of (Hall & Pickles Ltd.), 627
- Stretch-forming machine, Type CU, Metal-export, 80
- Strikes in motor industry, proposals on (Electrical Trades Union), 386
- Public opinion and, 99
- of supervisory staffs at ITC, 230
- Strip measurements, contact gearbox for (Truemeter Co. Ltd.), 249
- Steel, slitting machine for (B. Thornton Ltd.), 503
- Stripper, weld flash, for butt welded tube (Burflex Ltd.), 794
- Strojimport, machine tools at Brno Fair, 437
- Structural steel designs (trade publication), 478
- Steelwork. See *Steelwork*
- Structure and properties of alloys, by R. M. Brick, R. B. Gordon and A. Phillips (book), 126
- and properties of materials, Vol. 3, by W. Hayden, W. G. Moffatt and J. Wulff (book), 413
- Structures, buildings and, wind effects on (book), 94
- Cantilever, for overhead electrification system, 644
- Column, beam and, numerical analysis of, by W. G. Godden (book), 542
- Laboratory at Farnborough, 620
- of least weight, design of, by H. L. Cox (review), 795
- Portal, for overhead electrification system, 644
- Reinforced concrete. See *Concrete, reinforced*
- Students, overseas, vacation training for. *Letters*, 261, 356
- Studer, Fritz, Ltd., RHU450 cylindrical grinding machine, 473
- Sturdee unit dust collector, 570
- Sturtevant Engineering Co. Ltd., Sturdee unit dust collector, 570
- Sub-frame system of Rolls-Royce Silver Shadow motor car, 586
- Submarine Cables Ltd., submarine cable system (trade publication), 574
- Submarine merchant ships, advantages of, 295
- Statistics of world powers, 295
- Substation, 400 kV, at Trawsfynydd atomic power station, 241
- Iron Acton, site assembled transformer at (Bruce Peebles & Co. Ltd.), 15
- for London Midland Region main line to Manchester and Liverpool, 455
- Package, 66 kV, for Hong Kong, 307
- Siting of, 408
- Typical cost of, 406
- Sud-Aviation, joint project for large capacity medium-range jet transport aircraft, 592
- Sulphur dioxide emission and control, 546
- Sulzer Bros., automatic oil free rotary compressor with water lubrication, 697
- Sumo Pumps Ltd., submersible electric motors, 695
- Sump pump, free-standing (Worthington-Simpson Ltd.), 695
- SumPak submersible pump, 817
- Sun, energy of, direct use of, by F. Daniels (book), 62
- Sunbeam Rapier and Alpine motor car, improved versions, 332, 484
- Sunderland Civic Centre, design for, 600
- Gilley Law estate project, 528
- Supasafir lightweight dust respirator, 786
- Super-4 and Super-6 four-wheel drive tractor (County Commercial Cars Ltd.), 493
- Super-7 vending machine for hot drinks (Joseph Sankey & Sons Ltd.), 730
- Super-8 Kodachrome II photographic colour cine film, 512
- Super-773 chain saw (Remington), 436
- Super Cinerama mobile theatre, 790
- Super Minx, motor car (Hillman), 332
- Super Permatrace drawing paper, 52
- Super-Plastics hammer (trade publication), 222
- Super Pumper high powered fire pump, 568
- Super Stork Marten angle grinding machine, 343
- Super VC10 airliner, developed versions of, 83; prospects of, 163
- Superautomatic 8-programme washing machine, 640
- Superconducting magnets (trade publication), 605
- Superslug electronic delay units, 815
- Supersonic Radio Zambia Ltd., radio manufacturing plant, 721
- Surface Finish and Measurements Ltd., surface finishing equipment (trade publication), 510; tool holder (trade publication), 766; inspection equipment (trade publication), 798
- Tester, Diavite Microtester, 761
- Finishing equipment (trade publication), 510
- Planing machine, concrete (Errut Products Ltd.), 434
- Roughness specimens (trade publication), 286
- Tactical and Blind Pilotage Trainer, 389
- Texture, the equation of the mean line of, found by an electric wave filter, by D. J. Whitehouse and R. E. Reason (book), 766
- Treatment, International Exhibition for (Basle 1966), 127
- of steel, 617
- Surfacing, boring and milling machine, horizontal, with numerical control, Model 724P (H. W. Kearns & Co. Ltd.), 315
- Surges in pipelines, symposium on (IME), 255
- Suppressors, selenium (trade publication), 574
- “Surlyn” A, ionomer resin, 90
- Surveying, topographical, textbook of (book), 318
- SUSIE telemetry system for underground equipment, 57
- Suspended platform, lightweight, Duralumin for (Palmer Travelling Cradle and Scaffolding Co. Ltd.), 149
- Suspension, front, design trends in, 585
- Motor car, design trends review, 584-586
- Research for four-wheeled railway wagons, 650
- Self-levelling system, 585-586
- Semi-trailing arm rear, 584
- Sussex Industries, Federation of, exhibition (Brighton), 400
- Sutcliffe, Richard, Engineering Systems Ltd., miller type ripping machine, 53
- Sutherland, F. N., in Marconi Co., 401
- Svenska Metalock AB, formation of consortium, 433
- Swan, Hunter & Wigham Richardson Ltd., manufacturing agreement with George Ellison Ltd., 368; losses on ship contracts, 432-433
- Sweden, Ågesta district heating project, 141
- Marviken atomic power station, 141
- Oskarshamn atomic power station, 141
- Swedish America, hovercraft ferry service, 674
- Swedish Lloyd, hovercraft ferry service, 674
- Sweeper, power, model 42 (R. S. Stokvis & Sons Ltd.), 731
- Swimming-pool filter, Hi-Rate, with permanent media, 768
- Swimming Pools (Filtration) Ltd., Hi-Rate swimming-pool filter with permanent media, 768
- Swindells, B., thermo-elastic effect in force measuring devices, 156
- Swinden, T. A., apprenticeship trends conference, 781, 809
- Swiss Federal Institute for Reactor Research, contract for uranium dioxide pellets for Swiss test reactor, 561
- Swisstool AG, Diavite Microtester surface finish tester, 761
- Switch, adjustable pressure, type PS/U (Londex Ltd.), 247
- Ceiling (trade publication), 318
- Control, photoelectric lift door (trade publication), 62
- Double pole rocker, with neon illuminated knob, 24
- Dry reed, MR203 (B & R Relays Ltd.), 282
- Emergency changeover (Westinghouse Electric International Co.), 402
- Light, based on fibre optics (Bausch & Lomb Optical Co.), 187
- Micro, snap-action, Type 18 (Plessey Components Group), 114
- Miniature illuminated push button, Series 01 range of (Highland Electronics Ltd.), 282
- Pressure (Texas Instruments Ltd.), 283
- Photoelectric (trade publication), 318
- Pressure, electrical  $\frac{1}{2}$  in. BSP (Martonnair Ltd.), 633
- Heavy duty miniature (Tehru Fluid Power), 568
- Pushbutton, with alternate action (Honeywell Controls Ltd.), 52
- Rotary, Type PL padlock attachment for (Craig Derricott Ltd.), 218
- Selector, with locking sleeve (Shawford Control Gear Ltd.), 282
- Solid state high speed (Marconi Co. Ltd.), 567
- Vacuum reed, DRVT-1 (Flight Refuelling Ltd.), 179
- See also *Microswitch*
- Switchgear, circuit breaker, air-break, 400 A (Reyrolle), 55
- Breakers for London Midland Region electrification, 455
- Breaker, magnetic, in Klixon protection system for fan-cooled equipment, 218
- Breaker, magnetic miniature, Heinemann type JA, 403
- Breaker, micro (trade publication), 62
- Switchgear & Cowans Ltd., circuit breakers for London Midland Region electrification, 455
- for power transmission applications, 373
- Switching diode, high power, type MV1892 (Celdis Ltd.), 146
- Sykes, Henry, Ltd., purpose-built pumps (trade publication), 670; contractors winches (trade publication), 798
- Symonds Engineering Co. Ltd., trading report, 145
- Symposium on centrifuges (Moscow), 785
- Synchro Development Ltd., Porta Power range of single-phase static inverters, 281
- Mounting, and servomotors (trade publication), 605
- Position analyser, type K-222-A (Muirhead & Co. Ltd.), 19
- Synchropak valve actuators, add-on units for, 815
- System 4 computer (English Electric Leo Marconi Computers Ltd.), 417, 753
- Systematic method for designers, by L. Bruce Archer (book), 702
- Systems analysis, engineering, by C. M. Haberman (review), 822
- Analysts, training programme for (Anne Shaw Organization), 449
- Engineering tools, by H. Chestnut (book), 638
- Stability of (book), 478
- T**
- TABLE, floating, magnetic-pneumatic, for machining operations, SMP, 503
- Tabre dividing and engraving machines, 569
- Tachometer equipment, electronic, Type S (Associated Electrical Industries), 90
- Tadco Autogard tapping attachment, 378
- Tailshaft failures in ships, 260
- Take-off and overshoot director for aircraft (Elliott-Automation Ltd.), 244
- Tallis, J. A., head losses in coiled pipes, 156
- Talurit hard setting plastic putty, 507
- Tangyes Ltd., hydraulic jacks (trade publication), 382
- Tanks, auto-transformer, in aluminium NP8, 210
- Cargo, all-welded aluminium alloy, for shipping ethylene (Gloster Saro Ltd.), 81
- Tanks, fuel oil, level warning device for (trade publication), 446
- Remote ullage measurement, Teledep, 133
- Tankastral compound for Volta River project, 364
- Tanker, *Beauregard*, 433
- Cargomaster cargo discharge system for, 132
- Design trends, discussion on, 459-461
- Liquefied gas carrier (Hawthorn Leslie), 305
- *North Sands* with “J” type diesel engine, 812
- *Phylene*, installation of Contour echo sounders, 276
- *Regent Pembroke*, Cargomaster cargo discharge times for, 132
- Steering gear for (Brown Bros. & Co. Ltd.), 243
- Tantalum and its alloys as engineering materials, by M. J. Cooper and D. J. Mannox, 501
- Taps and dies (trade publication), 605
- Tap and Die Corporation Ltd., Tadco Autogard tapping attachment, 378
- Eroder, ARC-OUT, for large components, attachment to, 410
- Helical, for blind hole tapping, Warrior Quick Jet, 280
- Tape, gummed paper, reinforced, Armourbond, 282
- for industry (trade publication), 286
- Punches and readers (trade publication), 638
- Recordings for operator training, 74
- Tapping attachment, Tadco Autogard, 378
- Box for Barduct busbar system, 310
- Tapogre system of silt prevention in condenser tubes, 475
- Targa motor car, Zuffenhausen, 399
- Tarmac (Civil Engineering) Ltd., Tiyweryn reservoir, 527
- Tate of Leeds Ltd., new headquarters, 400
- Taxation, motor car. See *Motor car*
- Taylor Electrical, activities of, 400
- Taylor, Robert, Machine Tools Ltd., Unimat single spindle automatic lathes, 598
- Taylor Splice Co., 25 ton hydraulic press, 567
- Taylor Woodrow-Anglian Ltd., industrialized building factory in Sunderland, 528
- Taylor Woodrow of Canada Ltd., new contract for Toronto underground railway, 177
- Taylor Woodrow Construction Ltd., monorails (trade publication), 254; contract for reconstruction of railway workshops, 337
- Taylor Woodrow (Overseas) Ltd., construction of Miraflores Dam, 808
- Taylor Woodrow of Sierra Leone Ltd., rutile mining project in Sierra Leone, 400; Guma Dam, 622
- Tayside Floorcoverings Ltd., notice boards (trade publication), 638
- “Teach-in”, comment on, 103
- Teachers, engineers as, 101
- Engineers as, in schools, survey of, 235
- Teaching, closed-circuit television in, 208
- Machine, Bristol Tutor, development of, 518-519
- Comparison with programmed books, 519
- See also *Course; Education; Training*
- Teaching Programmes Ltd., activities of, 518
- Tecalemit (Engineering) Ltd., Tecavent brake bleeder, 120
- Tecam density gradient unit, 19
- Tecavent brake bleeder, 120
- Techmation Ltd., Elhygen electrolytic hydrogen generator, 185; Melabs CPA-3 Pulse Polarographic analyser, 663
- Techne (Cambridge) Ltd., Tecam Density Gradient Unit, 19
- Technical Devices Co., wire stripping and cutting machine for small batches, 85
- Technical Prototypes (Sales) Ltd., statistical training kit, 718
- Publications Association, note on, 252
- Technical Representation Ltd., wire stripping and cutting machine for small batches, 85
- Technicians today and tomorrow, by J. T. Young (book), 542
- Technograph and Telegraph Ltd., roller solder coating machine, 153
- Technological aid to developing countries, 321
- Change, Automation and, Trades Union Congress (booklet), 289
- Fall-out, fact or fantasy, symposium on, 100
- Manpower. See *Manpower*
- Technologists and engineers, post-graduate courses for, enquiry into, 577
- Technology, changing, dynamics of a, by P. J. Fensham and D. Hooper (review), 540
- Effect of economic restrictions, 163
- in a Liberal Education, by J. C. Dancy, 324
- Ministry of, research grant for computer typesetting, 81; symposium on electronic control systems for industry, 127; criticisms and achievements, 129; research contracts, 129; formal comfort in industry, by Dr. R. H. Fox, 145; Industrial Liaison Officers' course on radioisotope techniques, 209; cooperative research study group visit to Denmark, 337; exhibition on design in engineering, 480; industrial liaison service of, 579; N11P study of industrial accidents, 592; activities of, 642; sponsorship of mechanical engineering and electrical engineering industries, 739; computer advisory centre, 770; activities of, 801; hydrostatic extrusion development, 811
- School approach to, by D. I. R. Porter, 515, 516
- and Society, conference on (Bath), 31
- of template, by W. E. Hoare, E. S. Hedges and B. T. K. Barry (book), 702
- Today, mobile exhibition for schools, 749
- Teddington Aircraft Controls Ltd., pressure regulators and shut-off valves (trade publication), 286
- Teddington Autocontrol Ltd., Belmont thermostatic radiator valve, 544
- Teddington Engineering Co. Ltd., Motivair LD compressor for small volume requirements, 87
- Tedlar polyvinyl fluoride film, 660
- Teesside, industrial estate outline plans, 776



- Tee-slot clamps for machine tables and test beds, 85
- Teflon FEP fluorocarbon film, 370
- Fluorocarbon heat-shrinkable tubing, 90
- TEF insulation for printed circuits, 692
- Tehalit cable trunking (trade publication), 318
- Tehtro Fluid Power, heavy duty miniature pressure switch, 568
- Tektro-Bruning sub-miniature high-pressure couplings, 634
- Tektro Fluid Power Ltd., Tektro-Bruning sub-miniature high-pressure couplings, 634
- Telcon Metals Ltd., thermostatic bimetals, 370
- Telcon Plastics Ltd., epoxy-resin powders (trade publication), 190
- Telecommande system for remote control in coal mining, 41
- Telecommunications equipment industry, National Plan impact on, 387
- Teleflex Products Ltd., new research and development centre at Wickford, 112
- Telegraph Condenser Co. Ltd., acquisition by Plessey Co. Ltd., 369
- Telehoist Ltd., automatic lubrication (trade publication), 222
- Telemeter Programmes Ltd., pay-television experiment abandoned, 130
- Telemetry systems, by LeRoy E. Foster (book), 605
- for underground equipment, SUSIE, 57
- Telephone cable networks, pneumatic protection of (trade publication), 30
- Pvc indoor (trade publication), 158
- Submarine, from Canary Islands to Spain, 273
- Circuit capacity of GPO Radio Tower, 482
- Exchange, automatic, at Euston Station, 401
- Push-button master unit for private automatic (Reliance Telephone Co. Ltd.), 729
- Dialling, all-figure system, 130
- Intercom (Reliance Telephone Co.), 473
- International service expansion (GPO), 66
- Interpolated data and speech transmission system (IDAST), 121
- Link, microwave, between Bristol and Exeter, contract for (STC), 241
- Loudspeaking, for mines, Bretelephone, 55
- Multiplexing equipment for Malaysia (Standard Telephones and Cables Ltd.), 593
- Power supply equipment for (Westinghouse Brake and Signal Co. Ltd.), 147
- Radio, equipment, miniature (Pye Telecommunications Ltd.), 434
- Transistorized pocket, Courier AM and Courier FM, 569
- Radiophone service in London, 49
- Traffic, connecting networks and, mathematical theory of, by V. E. Benes (book), 605
- Tequipment Ltd., D53 hybrid split-beam oscilloscope, 538
- Telescope, "Isaac Newton" 98 in, description of, 165-168
- Radio, new, at Lord's Bridge (Cavendish Laboratory), 106
- Teletronics Ltd., electric pencil sharpener (trade publication), 318
- Teletype page printers (trade publication), 350
- Television, BBC-2 programme, aerial requirements, 303
- Camera, Mark VII transistorized, for all colour systems (Marconi Co. Ltd.), 803
- Pye closed circuit, 594
- Channel capacity of GPO Radio Tower, 482
- Closed-circuit, in teaching, 208
- Colour, for Britain, 258
- Camera for all systems (Marconi), 803
- Policy on introduction of, 450-451
- Community system (trade publication), 62
- Pay, transmissions experiment (Pay-TV Ltd.), 130
- Photographic and, exhibition, industrial (Earls Court), exhibits at, 699
- Programme recording on film, systems of, 175. *Letter*, 356
- Recording on film, Gemini system of (MGM Teletudios Inc.), 175. *Letter*, 356
- on gramophone records, Phonovid system of, 288
- Satellite, 22-channel (Hughes Aircraft Co.), 564
- Ultra-high-frequency, international conference on (IEE), 576
- Telomex Ltd., checkweigher weighing machine, 816
- Temco Ltd., thermostatic bimetals, 370
- Tempair Ltd., Pacific 102 air conditioner, 224
- Tempark steel-framed demountable car park, 27
- Temperature control of the moulding of plastics, by V. A. Veselov (review), 61
- Controller (trade publication), 670
- Controller (Sangamo Controls Ltd.), 185
- with current limiting facilities, Sirect Mark II, 117
- for loads up to 6 kW (Eurotherm Ltd.), 569
- for moulding machines (Engineering Coordinated Ltd.), 247
- Phototransistor operated (Sifam Electrical Instrument Co. Ltd.), 663
- Precision thermocouple, Series 18-90 (Ether Ltd.), 506
- SR2 transistorized (CNS Instruments Ltd.), 631
- Indicating controller with thyristor power, Servotronic, 120
- Indicator, gas controlled, Indicator 194, 120
- Recorders (Foster Instrument Co.), 52
- Recording, multi-colour ribbons for (Ellams Duplicator Co. Ltd.), 52
- Sensing elements, platinum resistance, range of (Research and Engineering Controls Ltd.), 147
- Sensors, Dependatherm, for office buildings, 218
- See also *Thermocouple*; *Thermometer*
- Tempest Custom motor car with L6 engine, 196
- Temporary fly-overs in road construction, 98
- Tenasco 900 heavy gauge weather sheeting, 115
- Tensile tests, furnace attachment for (W. & T. Avery Ltd.) 214
- Tension link, strain gauge, EM50 (Coutant Electronics Ltd.), 148
- Teradyne, Inc., agreement with Livingston Electronics Ltd., 465
- Terminal blocks, test link and (trade publication), 446
- Boxes, wall bushing with (Ateliers de Constructions Electriques de Charleroi), 787
- Pico portable microwave communication, 506
- and splices, Stratotherm, 247
- Terrapin Ltd., two-storey system of industrialized building, 209
- Terrington, J. S., on Design of Non-Planar Concrete Roofs (review), 125
- Tesa Tapes Ltd., self-adhesive foam, 370
- Test. See under specific types of test and materials and items tested
- Frame, prestressed concrete, for simulation of flight loads, 620-621
- Link and terminal blocks (trade publication), 446
- Testing of electric blankets, 160
- Machine, servo-controlled universal (W. and T. Avery Ltd.), 280
- T60CT, for civil engineering and building specimens (Denison), 761
- See also under specific types of testing machine
- Service, non-destructive (International Research and Development Co.), 17
- Tewson, G. E., review of Ministers Talk about Science, 188; review of Management for Civil Engineers, 348; review of Construction Industry of Great Britain, 820
- Texas Instruments Inc., new clad coinage materials, 209
- Texas Instruments Ltd., warehouse and offices in U.K., 208; Klixon 2ST system of overheating protection for fan-cooled equipment, 218; miniature pressure switch, 283
- Texpol polyester drafting film for high quality drawings, 24
- Textiles, dyeing of, 139-140
- Equipment (Longclose), 139
- Industry, combined recorder-controller for (Veeder-Root Ltd.), 178
- Thalmanwerk, Ernst, packaged reversing cold rolling mills, 249
- Thames barrage scheme, 513
- Thames Board Mills Ltd., board and case-making (trade publication), 510
- Thames Conservancy, scheme for waterboring in chalk downs, 497
- Theatres, mobiles, space heater for, Pak-a-Way, 790
- Super Cinerama, 790
- Theory of elastic complexes, by A. I. Rousopoulos (review), 188
- of laminar flows, by F. K. Moore (book), 190
- Thermal comfort in industry, by Dr. R. H. Fox, 145
- Conductivity of gases and liquids, by N. V. Tserberg (book), 478
- Thermal Radiators Ltd., Thermalrad quick-heating radiator, 448
- Thermalastic insulation system for electrical machines, 629
- Thermalrad quick-heating radiator, 448
- Thermalux expanded polystyrene ceiling panels, 384
- Thermatool high-frequency resistance welding equipment, 380
- Process for lip welding of tubes, 380
- Thermax Two packaged boiler, 730
- Thermionic generator, development position and prospects, 741
- Thermistor, 2ST, in Klixon protection system for fan-cooled equipment, 218
- Thermo Plastics Ltd., new factory and equipment, 657
- Thermobloc, Wanson, air heater, 594
- Thermocouple, pipe (trade publication), 670
- Precision temperature controllers, Series 18-90 (Ether Ltd.), 506
- Thermodynamic equilibrium, compositions at, handbook of, by C. R. Noddings and G. M. Mullet (book), 446
- Thermodynamics and fluid mechanics convention (book), 822
- A Macroscopic-Microscopic treatment, by J. E. Lay (book), 126
- Thermo-elastic effect in force measuring devices, by R. C. Debnam and B. Swindells, 156
- Sealing for Vauxhall Cresta windscreen, 594
- Thermo-Fax infra-red copying equipment (trade publication), 638
- Thermo-Flo direct reading flow balancer, 146
- Thermometer, clearway (trade publication), 702
- Indicator control, flameproof casing for (British Rototherm Co. Ltd.), 217
- Magnetic, pocket size, model 595 (British Rototherm Co. Ltd.), 283
- Thermopiles, radiation (trade publication), 542
- Thermoplastic rubber, Cariflex K-101, 567
- Thermospray equipment, 563
- Thermostats, click dial (Perfection Parts Ltd.), 537
- Control and limit, Type GAT, for automatically fired heating system (Maclaren Controls Ltd.), 310
- Light-duty (White-Rodgers Ltd.), 185
- Thermotank Ltd., Dribore double skin steel chimney, 59; Mark II air-conditioning units for liner *Queen Elizabeth*, 784
- Theta Instrument Corp., analogue to digital converter (trade publication), 702
- Thetford, industrial development under expanding towns scheme, 9
- Thickness meter, vertical precision (trade publication), 638
- Thielsch, H., on Defects and Failures in Pressure Vessels and Piping (book), 574
- "Thirsty Cities" (film) (Constructors John Brown), 369
- Thomas, A. G., on Aluminium Busbar (book), 254; hot pressing of ceramics, 693
- Thomas, G. B., on are engineers too modest?, 453
- Thomas Industrial Automation Ltd., Timatron time interval meter, 20; Leveltrator continuous level contents indicator, 309
- Thompson, John, Ltd., boiler shells for Dungeness A atomic power station, 300
- Thompson, John (Wilson Boilers) Ltd., 68 ton shell boiler, 112
- Thompson, J. R., on Precision Electrical Measurements in Industry (book), 446
- Thompson L'Hospied & Co. Ltd., renamed Wellman Alloys Ltd., 240
- Thompson, W., on Peter Brotherhood Ltd., 529
- Thomson-Houston Co. television recording on film, 175
- Thor Hammer Co. Ltd., plastics hammer (trade publication), 222
- Thornton, B., Ltd., slitting machine for steel strip, 503
- Thornycroft, John I., & Co. Ltd., trading report, 657
- Thornycroft, J. W., on John I. Thornycroft & Co. Ltd., 657
- Thorpe Marsh power station, transformer noise suppression at, 723
- Thread rolling attachments (trade publication), 126
- Dies, Bridgeport copying machine for, 594
- See also *Screw thread*
- Threading machine, pipe, FoB 4MVB (J. C. Neville Ltd.), 281
- Thring, Prof., applied science in schools conference, 517
- Thruclone wet dust collectors (trade publication), 190
- Thwaites & Reed Ltd., clock for Crawley town centre, 724
- Thyristor controlled RF induction generators (Stanelco Industrial Services Ltd.), 570
- Driver and controller units for (trade publication), 574
- Power for indicating controller, 120
- Voltage regulators (AEI Electronics Ltd.), 695
- Tidal models for sea defence, 34
- Power schemes, energy storage considerations, 533
- Tidbury, G. H., on Advances in Automobile Engineering, Part 3 (book), 670
- Tietz, T. E., on Behaviour and Properties of Refractory Metals (book), 94; (review), 733
- Tileman & Co. Ltd., Birmingham GPO radio tower, 677
- Tilghman's Ltd., Wheelabrator automatic mechanical machine for deflashing rubber, 83
- Timatron time interval meter, 20
- Timber, building system, "680" prefabricated (W. C. Youngman Ltd.), 696
- Treatment (Celcure Ltd.), 259
- Pressure plant for (Industrial Pressure Vessels Ltd.), 259
- Vac-Vac process for treating, 660
- Time interval meter, Timatron, 20
- Time-Master TA6-50 dictating machine, 505
- Timer, analogue, transistorized (English Electric-Leo-Marconi Computers), 245
- Counter, digital, type TC4 (Advance Electronics Ltd.), 185
- Electronic, split second (Truemeter Co. Ltd.), 312
- Multi-circuit, Minicams, 310
- Seismic, R-117 (Soiltest Inc.), 309
- Timplex time-division-Multiplex data transmission system (SGE), 46
- Tin-coating width gauge, nucleonic, Atomat, 790
- Mining dredge, non-propelled, Bangka I, 433
- Superconducting, microwaves from, 339
- Tinning, electrode, in semiconductor diode production, 263
- Tinplate industry, by Ing. M. Nepper, 617
- Technology of, by W. E. Hoare, E. S. Hedges and B. T. K. Barry (book), 702
- Tinsley railway marshalling yard, 626
- Tipping gear, twin-ram three-stage, Edbro B and E model 15DN, 279
- Tirfor Ltd., Traveljack travelling jack, 762
- Titan paver-finisher machine for asphalt or concrete, 745
- "Titanic" chucks (trade publication), 478
- Titanium in the aircraft industry, by A. R. G. Brown and K. S. Jepson, 502
- by T. E. Green and C. D. T. Minton, 502
- Titanium Intermediates Ltd., titanium tetrachloride, 177
- Raw, improved process for production of, 177
- Tetrachloride (Titanium Intermediates Ltd.), 177
- Titrimeter (trade publication), 638
- Continuous automatic (George Kent Ltd.), 248
- Tobago-Trinidad submarine power cable, 625
- Tobias, Prof. S. A., on Advances in Machine Tool Design and Research (book), 350; on Machine-Tool Vibration (review), 477; high energy rate forging, 775
- Toilet seat, heated, low voltage (Reginald Clayton Ltd.), 576
- Tokai atomic power station on load, 689
- Tolman, F. R., multi-gauge for inspection of electrical connectors, 341
- Tomlinson, F. W., on Pyrotenax Ltd., 48
- Tools, air (trade publication), 798
- Cutting, for plastics (Trend), 661
- Diamond (trade publication), 126
- Fixing, Komet trigger operated cartridge, 661
- Hand, air turbine driven with air bearings (Westwind Turbines), 267
- Holders (trade publication), 126, 766
- Eccentric (trade publication), 222
- Screwed shank, Dormer Series 2 Helimatic, 154
- Magnetic (trade publication), 766
- Metal cutting, illustrated technical dictionary of, by T. Heiler (review), 61
- Power, for mining (Consolidated Pneumatic Tool Co. Ltd.), 54
- Turning, throwaway tip, report on (Produc-
- tion Engineering Research Association), 627
- Tooling, plastic, and manufacturing handbook, by F. W. Wilson (book), 542
- Unit (trade publication), 822
- Toothill, Sir John, Ferranti in Scotland, 618; automation and society, 651
- Top-Dog range of nylon coated hose, 345
- Topographical surveying, textbook of (book), 318
- Torna 765 electro-pneumatic rotary percussion drill (trade publication), 798
- Toro Snow Pup and Snow Husky hand-propelled snow ploughs, 640
- Toroids, nylon coated, Ferroxcube, 633
- Toronado, Oldsmobile, motor car, 485; 7 litre V8 front wheel drive, 430-431; suspension system of, 585
- Toronto, railcars for, 625
- Underground railway, new contract for, 177
- Torque converter for BMC Mini and 1100 motor car automatic transmission, 522
- in motor car transmission systems, 584
- Three stage, British Twin Disc, for diesel hydraulic locomotives, 26
- Transducers (trade publication), 286
- Torrington Co. Ltd., drawn cup roller clutch, 371; YST needle bearing universal joints, 539; ball and roller bearings (trade publication), 702
- Torrington Manufacturing Co., modular spring looping machine, 214
- Torrington-Robertson slab milling equipment, range of, 187
- Torsion meter, Maihak, modified system, 330
- Remote recording, without slip rings, by J. W. Drinkwater, 330
- Towers, access, mobile and static (SGB Building Equipment Division), 536
- Block, design for 850 storey, W. W. Frischmann, 440
- Crane. See *Crane*
- Tower Equipment, Gjerde circular saw, 598
- Radio. See *Radio tower*
- Towers, G. H. R., on John Readhead & Sons, 304
- Towler Bros. (Patents) Ltd., portable oil filter pack for hydraulic systems, 116; in-line high pressure oil hydraulic pumps, 119; new factory, 144; trading activities, 144, 401
- Towler, F. H., on chartered engineers, 261
- Towler Hydraulics Ltd., expansion programme, 432
- Town and Country Planning Association, national conference (London), 513
- Gas installation, new, at Newcastle upon Tyne, 182
- Plant for new process (Simon Engineering), 720
- Toy(s), technical, 800
- Toyo Kogyo Co., manufacturing agreement with Perkins Engines Group, 272, 347
- Toyota, description of Corona motor car, 772
- Tracemaster Type TM43D automatic profile milling machines, 378
- Trachtenberg, A., on Brooklyn Bridge: Fact and Symbol (book), 542
- Tractors, agricultural (County Commercial Cars), 78
- Cabs, Sta-Dri and Winsam Tractor, 79
- County Super-4 and Super-6 four-wheel drive, 493
- Crawler, TD-25 series B 230 hp, with planetary steering (International Harvester Co. of Great Britain Ltd.), 118
- Cultivator, F30, powered by GII30 petrol engine (Honda (UK) Ltd.), 727
- Exhibits at Royal Show, 78
- Forward Control 654 (County Commercial Cars Ltd.), 494
- Implement coupling for, Insta-Hitch, 79
- Industrial, Model RD1 (Brush Electrical Engineering Co. Ltd.), 731
- Lightweight horticultural, 79
- Mark 3 fork lift unit for (H. Cameron Gardner Ltd.), 346
- McCormick International-806, 744
- Mini-tractor (British Motor Corp.), 744
- Mini-tractor, 15 bhp, description of (BMC), 711
- Mounted adjustable ripper, 21R (Allis Chalmers), 599
- Sea Horse, for use through water (County Commercial Cars Ltd.), 494
- Seat (George Fritzmeier KG (England)), 79
- Shovel, four wheel drive, Hough H-50B Payloader, 410
- HD-7G (Allis-Chalmers), 536
- International Hough Payloader Model H-65B, 793
- with power steering, Payloader H-25B, 537
- Super-4 and Super-6 four-wheel drive (County Commercial Cars Ltd.), 493
- and trucks, 500 series range of (Dodge Bros. (Britain) Ltd.), 431
- Wheels, welding unit for reconditioning (Hagglund Industrial Ltd.), 213
- Trade, Board of. See *Board of Trade*
- in Europe, technical barriers to, 548
- Exhibition. See *Exhibition*
- Export. See *Export*
- Mission to Middle East (Ship Boat Builders' National Federation), 720
- to North America (EIA), 689
- Union attitudes to Industrial Training Act, 137
- Discussions on amalgamation, 259
- Negotiating machinery in engineering, 737
- See also under names of specific unions
- Trades Union Congress, "Health at Work" (publication), 98; annual report, 259; Automation and Technological Change (booklet), 289
- Traffic control by computer in London, 642
- Link international competition, Zealand Funen, 145
- to London docks, 8. *Letter*, 261
- in London, report on, by Prof. Buchanan, 131
- Management study for Leeds, 194
- Trailers, motor vehicle, direction indicator



- relay unit for (Joseph Lucas & Co. Ltd.), 246
- Trailers, pallet, Stanhay-Bigbury, 79
- Permeable-filling (Alvan Blanch Development, 79)
- for Super Pumper fire pump (Mack Trucks Incorporated), 568
- and trucks (trade publication), 478
- Train. See *Railway train*
- Training courses in instrumentation (A.C.E.-Hartons Ltd.), 49
- of designers, F. Metcalfe on, 420
- and development of top management, symposium on, 73
- of draughtsmen (Mather & Platt Ltd.), 614
- for export management, by G. Sharman, 580
- Grants under Industrial Training Act, 580
- Industrial, films on (Rank), 206
- Level, appeals procedure, 38
- Management, F. Metcalfe on, 420
- of modern engineer, 257
- Officers, activities of, 781
- Training of, F. Metcalfe on, 420
- for operators by recorded tapes, 74
- Professional, in mechanical engineering practice for chartered engineers (book), 257
- Sales, application of programmed instruction to, 519
- Skills analysis, course on, 136
- of training officers, F. Metcalfe on, 420
- Vacation, for overseas students. *Letters*, 261, 356
- See also *Course; Education*
- Trans World Helicopters Ltd., Hughes Model 500 helicopter, 601
- Transair motor car air conditioning, 399
- Transall C-160 aircraft. *Correction*, 7
- Transcap miniature disc ceramics (trade publication), 286
- Transdata magnetic flow converters, 276
- Transdata 153 series controllers, 276
- Transducers, DR68 wire-wound potentiometric displacement (Intersonde Ltd.), 439
- Force, printed circuit (Fairley Surveys Ltd.), 403
- Pressure, CE26 (Coutant Electronics Ltd.), 470
- Torque (trade publication), 286
- Transfer machine order (Kearney & Trecker-CVA Ltd.), 401
- Transfil-Torbal weigh filling machine, 435
- Transformer breather, Visi-Breather, 696
- Bushings, production and testing unit for (Ferranti Ltd.), 440
- for Cockenzie power station (Bruce Peebles & Co. Ltd.), 492
- for Cruachan power station (Ferranti Ltd.), 489
- with distribution pillars (Associated Electrical Industries Ltd.), 182
- Electronic, by H. M. Nordenberg (review), 764
- Fireproof, 300 kVA (Associated Electrical Industries Ltd.), 441
- Noise suppression at Thorpe Marsh power station, 723
- for portable welding guns, 475
- for power transmission applications, 373
- Site assembled, at Iron Acton substation (Bruce Peebles & Co. Ltd.), 15
- for South African Railways electrification system, 754
- See also *Auto-transformer*
- Transformers (Watford) Ltd., Visi-Breather transformer breather, 696
- Transistor bias circuits (trade publication), 446
- Curve display 8100 for semiconductors (Elliott Automation Ltd.), 213
- Power, NPN silicon planar (Marconi), 759
- Selection guide (trade publication), 350
- Transistorized analogue timer (English Electric-Leo-Marconi Computers), 245
- Intercom system, two-way (Claymore Manufacturing Co.), 448
- Photo-electric equipment (Electronic Machine Control Ltd.), 213
- Pocket radio-telephones, Courier AM and Courier FM, 569
- Transit range of light commercial motor vehicles with V4 engine (Ford Motor Co. Ltd.), 453
- Transmatic battery-operated lifting magnet (Esel Automation Ltd.), 816
- Transmission, automatic, for BMC Mini and 1100 motor cars, 522
- for Mini motor cars, 584
- Equipment (trade publication), 254
- Motor car, design trends review, 584
- Semi-automatic, for Simca-1000 motor car (Ferodo France), 584
- Towers, design and construction of, 715-716
- Designers and consultants for (Blaw-Knox Ltd.), 715
- History of development of, 715
- Testing at Chelm's Coombe, 596-597
- Testing procedure and sites, 716
- Types of, 715-716
- See also *Drive*
- Transmitter, facsimile, Automation Electrowriter (Shipton Automation (Sales) Ltd.), 730
- Transocean Drilling Co., oil-drilling rig, 204
- Transport, air. See also *Air; Aircraft; Airport*
- and communications exhibition, International (Munich), exhibits at, 202-203
- Costs, comparison of land and sea, 293-294
- Exhibition, World (Munich), exhibits at, 202-203
- Ministry of, railway accident at Henwick Hall, 547
- Planning for the future in US, 33
- Railway. See *Railway*
- Road. See also *Motor; Road*
- Sea. See *Ship; Shipping*
- Urban, position and prospects of, 417
- Transportation engineering conference, report of (ICE), 8. *Letter*, 261
- of heavy equipment, shallow draught ship for, 13
- Transporter, underground, for men and materials, Huntrider, 55
- Transverse testing machine for civil engineering and building specimens (Denison), 761
- Transveyor conveyor equipment (J. Collis & Sons Ltd.), 113
- Traveljack travelling jack, 762
- Travel-Master dictating machine, 505
- Trawsfynydd atomic power station, 400 kV substation at, 241
- Trays and bins (trade publication), 734
- Trencher digger, barge mounted, for riverside maintenance (T. Harrison Chaplin Ltd.), 312
- Trend Industrial Equipment Ltd., Trend Wall Chaser Mark 4 wall cutting machine, 344; TR/DVFR high speed electric motors, 470; MH25 portable electric cutting machine for plastics, 473; woodworking and plastic cutting tools, 661
- Trend Wall Chaser Mark 4 wall cutting machine, 344
- Trennjaeger (Great Britain) Ltd., pneumatic feed for friction saw, 503
- Triaxial chamber for testing soils T-8040 (Soiltest Inc.), 309
- Trident aircraft for BEA (Hawker Siddeley), 273
- Landing system in (Hawker Siddeley), 334-335
- Triefus Industries Ltd., multibladed frame saw for stone, 51; diamond tools (trade publication), 126
- Trigger tube, cold cathode, ZC1030 (Mullard Ltd.), 759
- Trinidad-Tobago submarine power cable, 625
- Trist, Hubert H. P., & Co. Ltd., Top-Dog range of nylon coiled hose, 345
- Trist, Ronald, Controls Ltd., humidistat for control of relative humidity, 118
- Triumph Spitfire Stage 2 motor car at Goodwood, 554
- Triumph 1300 motor car, with front-wheel drive, 524; semi-trailing arms suspension, 585
- Triumph 2000 Estate motor car at Goodwood, 554
- Trog battery-powered truck (P. S. Gardiner Equipment), 79
- Trolley, roller, Trundler, 726
- Trollope & Colls Ltd., 400 kV substation at Trawsfynydd atomic power station, 241
- Troon, proposed desalination research centre at, 530
- Trow, V. J., on Abwood Machine Tools Ltd., 337
- Truck, battery-powered, Trog (P. S. Gardiner Equipment), 79
- Bedford, record exports of, 240
- for die handling (Greenwood & Batley Ltd.), 694
- Dump, AEC Dumphtruck, for El Cadillan dam project, 91
- Caterpillar 769, 817
- Fork lift. See *Fork lift truck*
- Skylift, for BOAC aircraft overhaul department, 152
- and tractors, 500 series range of (Dodge Bros. (Britain) Ltd.), 431
- and trailers (trade publication), 478
- See also *Bogie; Motor truck; Motor vehicle*
- Truman, J. E., stress corrosion cracking of martensitic stainless steel, 691
- Trumeter Ltd., counters (trade publication), 222; contact gearbox for strip measurements, 249; split second electronic timer, 312
- Trundler roller trolley, 726
- Trunking, cable (trade publication), 318
- Truxal, Prof. J. G., on applied science in schools in USA, 559
- Tryweryn Dam, description of, 526
- Reservoir, description of, 526; inauguration of, 526
- Tschebotarioff, G. P., on Russia My Native Land (review), 253
- Tsederberg, NV, on Thermal Conductivity of Gases and Liquids (review), 478
- Tsing Yi power station, Hong Kong, 120 MW turbine generators for, 465
- Tube bending machine, 617
- Butt welded, weld flash stripper for (Burflex Ltd.), 794
- Clamp, Rota-Lock, 569
- Condenser, silt prevention for, 475
- Tube Investments Group, BISRA cantilever rolling mill, 151; expansion of vitreous enamel interests, 400
- Tube Investments Ltd., research laboratories (trade publication), 542; tubemaking modernization programme, 625; plans for seamless tube mill, 625; trading report, 813
- Lip welding of, Thermoatool process for, 380
- Mill, seamless, plans for (Tube Investments Ltd.), 625
- Preheater, glass (trade publication), 638
- Pump, type WAB (Glen Creston Ltd.), 729
- Welded, capacity extension (Stewarts & Lloyds Ltd.), 656
- See also *Pipe*
- Tubemaking modernization programme (Tube Investments Ltd.), 625
- Tubes Ltd., brake-bleeding unit, 726
- Tubing, fluorocarbon heat-shrinkable, Teflon FEP, 90
- Tubular and disc ceramics (trade publication), 286
- Tuft Cove No. 1 power station, 528
- Tugs for Mount Goldworthy iron ore development, 251
- Tuloma, River, underground hydroelectric power station, 624
- Tungsten-bromine lamps (Osram (GEC) Ltd.), 628
- Tungsten carbide ball plug gauges (Insley Industrial Ltd.), 187
- Tungsten, by D. P. Hargrave, 501
- Tungsten-iodine lamp for lighting of airfields (Osram (GEC) Ltd.), 245
- Light bulbs, Mazda, 331
- Tunnel, Channel, geological survey progress, 450
- Tunnel diodes at microwave frequencies (Mullard Ltd.), 506
- Tunnel sections for Rotterdam metro railway, 782-783
- Turbines, air, development and application in drilling and grinding (Westwind Turbines), 265-267
- Blades, electrochemical machining of, 469
- Steam, design and material position and prospects, 552
- and compressors, aerodynamics of, by W. R. Hawthorne (book), 94; (review), 636
- Disc produced by high-energy rate forging, 775
- Flowmeter (trade publication), 702
- Gas bearing, flowmeters (Westwind Turbines), 267
- Freon-21 exhaust heat cycle, 142
- Generator for New Zealand, 753
- for Indonesia (Allgemeine Elektrizitäts-Gesellschaft), 784
- Motor car, position and prospects of, 69
- for Pakistan power station, 208
- Production agreement between John Brown & Co. and GEC (US), 17
- Rover-BRM motor car, heat exchanger discs for, 82
- Rover-BRM motor car at Le Mans, 68-69. *Letter*, 103
- See also *Aircraft engine*
- Generators, 120 MW, for Hong Kong power station, 465
- Marine industry, position and prospects of, 546. *Letter*, 613
- for modern power plants (trade publication), 190
- Pump. See *Pump, centrifugal*
- Steam, atomic reactor installation trends, 552
- Comparison with diesel engine for ship propulsion, 459-461. *Letter*, 613
- Design trends in (English Electric Co. Ltd.), 552
- Steam/Freon binary cycle, 142
- Steam, and high availability, by H. Watson, 704
- Marine, design development trends, 461
- Marine, reliability of, 461
- for Oldbury power station, 563
- Reheat effects on fuel consumption, 461
- Reheat marine installation design study (Pametrad), 426
- Reheat ship propulsion installation, MST-14 (GEC (US)), 427
- Single cylinder direct coupled (trade publication), 190
- for Sizewell atomic power station, 70
- Two-cylinder, for Lots Road power station, 602
- Unitized reheat, by T. B. Hutchison, 520-521
- Water, Deriaz, 91
- Wheel made by high-energy rate forming, 756
- Turbo-alternators for Eggborough power station, 151
- Large, stator winding for, new method of (AEI), 151
- for Sizewell atomic power station, 70
- Turbo-compressor. See *Compressor, centrifugal*
- Turbo-generator set, 100 MW, for Tuft Cove No. 1 power station, 528
- for Pickering atomic power station (C. A. Parsons & Co. Ltd.), 302
- Turbomotor fluid couplings, 371
- Turbo-Static 300 oil-fired heater, 761
- TS800 oil-fired space heater, 436
- Turbulence amplifier for logic functions, 135
- Turin Motor Show, exhibits at, 611-612; coachwork exhibits at, 652-653
- Turnall asbestos secret fix ceiling panels, 660
- Colourbest asbestos cement sheets surfaced with Tedlar, 660
- Turner, B., Dunchurch Lodge training college, 681
- Turner & Brown Ltd., Turbovent powered roof ventilation unit in fire resistant polyester resin glass fibre, 50; prefabricated glass-fibre drain channels with acid resistant lining, 307; ring mounted propeller fan, 375; Turbo fume cabinet for tall apparatus, 599
- Turner, B. T., on design policy formulation, 359
- Turner, C. E., on Introduction to Plate and Shell Theory (review), 189
- Turner, F. H., on Design of Non-Planar Concrete Roofs (review), 125
- Turner & Newall Ltd., asbestos (trade publication), 446
- Turner, R. H. S., on definition of a professional engineer, 225
- Turners Asbestos Cement Co. Ltd., asbestos cement products, 660
- Turning and boring mill, large vertical, TMS1-60/130 (O-M Ltd.), 635
- Device, radius, Holdridge, 90
- Tools, throwaway tip, report on (Production Engineering Research Association), 627
- Turntable for flash removal, Powerblast Mark 1, 535
- Turr-e-Tape AB1118 numerically controlled drilling machine, 376
- 20th Century Electronics Ltd., ultra high vacuum equipment (trade publication), 702
- Twin airless shot blast plants, 402
- Strainer cages for pipelines (Royles Ltd.), 21
- Two-dimensional problems in hydrodynamics and aerodynamics, by L. I. Sedov (book), 510
- Tyagudre Ltd., ptfе/glass fabric laminate, 310
- Tyley, R. S., & Co., demolition of Lydbrook railway viaduct, 240
- Tyna Mite air-turbine hand grinding tool, 793
- Typesetting of chemical formulae, Chemform system for, 284
- Computer, research grant for, 81
- Newspaper, by computer, Stet technique for, 244
- Typewriter, portable, Dora, 505
- Tyre building from woven strips (Goodyear Tyre & Rubber Co.), 339
- Powergrip, for Dumphtruk dumper truck, 279
- Roadtrak Major, for Dumphtruk dumper truck, 279
- UCAN Development Ltd., Komet trigger operated cartridge fixing tool, 661
- Udal, J. P., Ltd., automatic blank loader, 409; press unloaders (trade publication), 605
- Ullage, measurement, remote tank, Teledep, 133
- Ulstron synthetic fibre, 568
- Ultipor 2 Type SU cartridge type compressed air and gas filters, 22
- Ultrasonic burner, 306
- Cleaning equipment, Pulsatron series type KG850, 21
- Delay lines, quartz (MEL Equipment Co. Ltd.), 338
- Generator for scaring vermin and birds, Soniscare, 786
- Sensing and control equipment, Sonac, 54
- Ultrasonics, high-intensity, by B. Brown and J. E. Goodman (review), 220
- for industry, conference, 223-224
- School of British Railways, Derby, 38
- Undercarriages and hydraulics equipment for HFB320 Hansa executive jet aircraft (Lockheed Precision Products Ltd.), 246
- Underground railway, Toronto, new contract for, 177
- See also *London Transport Executive*
- Underwater shapes, echos from, 58
- Unemployment, automation and, 297
- UNESCO, engineering education conference proposed, 206
- Unicenter modular rack system of standard motor control centres, 179
- UNICrimp crimping equipment, 55
- Unified circuit theory in electronics and engineering analysis, by J. W. Head and C. G. Mayo (review), 252
- Unilever, investigation into ocean resources, 80
- Unilok Partitions Ltd., demountable partitions (trade publication), 382
- Unilok combination rail/road locomotive, 694
- Combined shunter, crane and fork lift truck, 58
- Unimat single spindle automatic lathes, 598
- Union Carbide Corp., gaseous helium refrigerator for testing atomic propulsion system components, 401
- Union, trade. See *Trade Union* and under name of specific unions
- Unit-plan central heating for farmhouses, 37
- Unit Swimming Pools Ltd., Diatom water filters, 792
- Tooling (trade publication), 822
- United Aircraft Corp., Beacon Model ADC-ALT-4 encoder for automatic altitude reporting systems, 179
- United CO<sub>2</sub> Ltd., atmosphere generators (trade publication), 798
- United Coke & Chemicals Co., record coke production, 496
- United Dominions Trust Ltd., effects of taxation changes, 177; export service, 177
- United Feed Mill Engineers Ltd., feed mill engineering consortium, 721
- United Filters & Engineering Ltd., Guma Dam, 623
- United Kingdom Atomic Energy Authority, liquid-metal flowmeter, 89; Industrial Liaison Officers' course on radioisotope techniques, 209; Perspex model of outlet header for reactor research, 244; broad range multi-gap spectrograph for Yale University, 433; radioisotope technique for flow measurements, 442; water desalination plant design, 451; electromagnet for neutron diffraction, 500; contract for uranium dioxide pellets for Swiss test reactor, 561; Boiling Water Irradiation Loop in Materials Testing Reactor at Dounreay, 563; Kahl reactor experiment, 689; agreement with AB Atomenergi, 784; hydrostatic extrusion development, 811
- United Lubricants Ltd., Forlife (CH) anti-freeze for central heating, 544
- Nations Food and Agriculture Organisation, investigation of water resources in Saudi Arabia, 560
- United Refineries Ltd., Canvey Island refinery, 813
- United States, applied science in schools, 559
- Army PATA (pneumatic all-terrain amphibian) cargo motor vehicle, 442
- Atomic Energy Commission, establishment of Space Nuclear Propulsion Office, 401
- Information resources in, directory of, 316
- National Aeronautics and Space Administration, flight of Gemini-Titan 5 spacecraft, 290; establishment of Space Nuclear Propulsion Office, 401
- National Bureau of Standards, paint analysis by polarography, 149; dye systems for radiation detection, 342; facilities for precise calibration of large force measuring devices, 595; computer analysis of plasma light, 628; microwave discharge cavities, 723; modular high-frequency measuring instruments, 788
- Petroleum industry, supply and costs in, by F. M. Fisher (book), 766
- United States Steel Corp., aluminium coating of steel by vacuum deposition, 181
- Transport system of the future, 33
- Treasury Department, new clad coinage materials, 209
- Urban railways study, 417
- See also *America; American*
- United Steel Cos. Ltd., 231 R-V analogue computer, 209; record steel production, 496; automatic billet inspection, 819
- Unitrode Corp., avalanche diodes by direct bonding, 475
- Univac Swallowglide range of pumps (trade publication), 670
- Universal Asbestos Manufacturing Co. Ltd., plastics building products (trade publication), 822
- Universal Industrial Appliances Ltd., vacuum extraction equipment, 731



- Universal joints, needle bearing, YST (Torrington Co. Ltd.), 539
- Universal Power Drives Ltd., Hustler fork lift truck with attachments, 409
- University(ies) and industry liaison development organization (CBI), 771
- Laboratory technicians, pay dispute of, 385
- Mechanical engineering at, symposium on, 823
- See also under names of specific universities
- Unloaders, press (trade publication), 605
- Unochrome Ltd., trading report, 625
- Unversagt, Adolf, visit to England of German industrialists, 17
- Unwin, Rear Admiral J. H., on Product Knowledge Ltd., 73
- Up-converter. See *Converter*
- Uracel urethranized cellulose enamel, 439
- Uranium dioxide pellets for Swiss test reactor, contract for, 561
- Recovery from irradiated fuels, 392
- Urban developments, study of long-term costs of, 513
- Urbanina town motor car, 652
- Urwick Management Centre, course on Skills Analysis Training, 136; VISA simulator for production control, 458
- Urwick Orr. See *Urwick Management Centre*
- US Industrial Chemicals Co., patent on vinyl acetate process, 151
- US Industries Inc., hot platen hydraulic press, 82; UK sales reorganization, 432; termination of sales agreement with Rockwell Machine Tool Co., 496; USI-Vickers joint production project on high-energy rate forging, 774
- V**
- VACATION training for overseas students. *Letters*, 261, 356
- Vacseal range of muffle vacuum furnaces, 278
- Vacsyn slow speed synchronous electric motor, 375
- Vactic Control Equipment Ltd., servo drive unit, 278; aviation gearbox accessories (trade publication), 286; Vacsyn slow speed synchronous electric motor, 375; components (trade publication), 382
- Vacuair Engineering Co. Ltd., Compact activated carbon air filters, 343
- Vacu-Blast Ltd., 24/24 dry honing machine for critical surfaces, 535
- Vacuum contactor for electric motor starters (Associated Electrical Industries Ltd.), 665
- Deposition, aluminium coating of steel by, 181
- Equipment, ultra high (trade publication), 702
- Extraction equipment (Universal Industrial Appliances Ltd.), 731
- Forming, expanded polyethylene, Plastazote, 181
- Vacuum Industrial Applications Ltd., Halotec leak detector for vacuum systems, 281; VIA-VAC FV39 high temperature vacuum furnace, 598
- Measuring instruments (trade publication), 318
- Pump. See *Pump*
- Systems, leak detector for, Halotec, 281
- Vac-Vac process for treating timer, 660
- Valco (Volta Aluminium Co.), 362
- Vales Plant Register Ltd., Jan-aire portable space heater, 504
- Valllunga, Ghia, motor car, 484
- Value engineering, course in (PERA), 615
- Valve actuators, Synchronop, add-on units for, 815
- Air extract, RPB50 (Bahco Ltd.), 144
- Ball, diaphragm, Acquasave Mark 2, 64
- Plug, type MS (Saunders Valve Co.), 146
- Butterfly, for water supplies (Loewy Engineering Co. Ltd.), 464
- Changeover, Autoflo, for carbon dioxide cylinders, 814
- Compact deadweight fire, 598
- Control, series 104 and 116 (British Arca Regulators Ltd.), 155
- Mercury-arc, research on (CEGB), 142
- Motorized, Satchwell 1 in SML Minival, 544
- Oil control, BM30W, for water heaters (BM Control Valves), 224
- Pneumatic control, single impulse, type S786C (Martonair Ltd.), 179
- Pressure operated flow control, type 15AS (Ether Ltd.), 309
- Reducing, with carbon rings, type 501 (Samuel Birkett Ltd.), 115
- Radiator, thermostatic, Belmont, 544
- Relief and control, RAV137 (Hymatic Engineering Co., Ltd.), 471
- Shut-off, pressure regulators and (trade publication), 286
- Type-1010, for operator control of liquids and gases (Drallim Industries Ltd.), 148
- Water, Sliptechnik, with intake for chemical additives, 187
- Vancil, R. F., business management courses, 391
- Van den Bosch Ltd., Fiberglas AW glass-fibre insulating material, 64; visual alarm (trade publication), 446
- Vanderbijl Engineering Corp., 8,500 hp converter fed mine winders, 442
- Van der Post, J. L., Gas Council research station, 819
- Vane Electrical Instruments Ltd., battery chargers, 278
- Van Iiterbeek, A., on Physics of High Pressures and the Condensed Phase (review), 669
- Van Raalte, H. A., numerical control of machine tools, 732
- Van Riemsdijk, J. T., on Science Museum: 50 Things to See (book), 126
- Vanrow Engineering (Pty) Ltd., acquisition by George Ellison (Pty) Ltd., 368
- Vapormatic automatic starter for asynchronous electric motors (AOIP), 685-686
- Vapour, inhaled particles and, International symposium on, 191
- Vapour-phase process for vinyl-acetate production, 151
- Variator, Kopp, 370
- Remote control (trade publication), 734
- Variflux system for mine winders, 442
- Vatric Control Equipment Ltd., Beacon Model ADC-ALT-4 encoder for automatic altitude reporting systems, 179
- Vaughan, R. D., Oldbury nuclear power station, 172
- Vauxhall Motors Ltd., Veromatic turret drilling machine with programme control, 116; record exports of Bedford trucks, 240; Cresta motor car revised styling, 525; Viva-90 motor car versions, 525; motor car transmission systems, 584; Cresta motor car, thermo-electric sealing for windscreen, 594; quality control centre at Luton, 752
- VEB Kaltverformungsmaschinenwerk, KVM range of draw benches, 51
- Vector analysis, by B. Spain (book), 286
- and scalar fields, by R. B. McQuistan (review), 572
- Veeder-Root Ltd., combined recorder-controller for textile industry, 178; Mini-counter miniature open frame counter, 726
- Vending machines (trade publication), 638
- Super-7, for hot drinks (Joseph Sankey & Son Ltd.), 730
- Veneer, wood, industrial, Industrial Flexwood, 345
- Venesta Lead Plymax for partition units and doors, 10
- Venetian blind, mono-cord, Brockhouse, 597
- Ven Te Chow, on Handbook of Applied Hydrology (review), 60
- Ventilation ducting, fire access door for (James Green Developments Ltd.), 439
- Equipment for motor cars, 557
- Variable-pole induction motors for, Gold Seal, 722
- Unit, roof, powered, in fire resistant polyester resin glass fibre, Turbovent, 50
- Ventilators, automatic, FR (Colt Ventilation & Heating Ltd.), 215
- Draught, 560
- Ventura series of diesel engines (Davey Paxman & Co. Ltd.), 778-780
- Verdict Gauge (Sales) Ltd., gauges (trade publication), 638; precision measuring equipment (trade publication), 702
- Veriflux magnetic flow detector heads, 276
- Vermiculite (trade publication), 413
- Vermin and birds, ultrasonic generator for scaring, Soniscare, 786
- Vero Machine Tool Co. Ltd., Veromatic turret drilling machine with programme control, 116; automatic drilling machine, 280
- Verolme United Shipyards, MST-14 reheat steam turbine ship propulsion system, 427
- Veromatic turret drilling machine with programme control, 116
- Verson Allsteel Press Co., manufacturing agreement with Head Wrightson Machine Co. Ltd., 497; presses (trade publication), 766
- Vertical microscope (trade publication), 638
- Scale indicator (Kollman Instrument Ltd.), 283
- "Verto-Mix" vertical epicycloid screw mixer (trade publication), 510
- Veselov, V. A., on Temperature Control of the Moulding of Plastics (review), 61
- Viaduct, Bow, BBRV post-tensioning system for, 241
- By-pass, Cowbridge, progress of, 112
- Lydbrook railway, demolition of, 240
- Sections for Rotterdam metro railway, 782-783
- See also *Bridge*
- VIA-VAC FV39 high temperature vacuum furnace, 598
- Vibrashock mounting for Rolls-Royce Silver Shadow motor car, 586
- Vibrating and separation equipment (trade publication), 574
- Vibration, boiler tube, at Oldbury atomic power station, 173
- Machine-tool, by S. A. Tobias (review), 477
- by K. Magnus (review), 349
- Matrix analysis of, by R. E. D. Bishop, G. M. L. Gladwell and S. Michaelson (book), 62
- Monitor, continuous (Dawe Instruments Ltd.), 729
- Noise and, isolation and (trade publication), 574
- Test system, hydraulic, packaged (Fairey Surveys Ltd.), 793
- See also *Anti-vibration*
- Vibrational modes, spectroscopic studies of, meeting on, 127
- Vibratory feeding equipment with plastic springs (Burgess and Associates Inc.), 277
- Vibro-Meter Corporation, torque transducers (trade publication), 286
- Vice jaws (trade publication), 478
- "Viceroy", Crabtree, rotary newspaper presses, 600
- Vickers-Armstrongs (Engineers) Ltd., USI-Vickers joint production project on high-energy rate forging, 774
- Vickers, A. W., automation for space age, 823
- Vickers-Detroit balanced-vane pumps for Peco-Loewy 20/90R injection moulding machine, 77
- Vickers Ltd., hot platen hydraulic press, 82; heavy load hover-vehicle for weak bridges and roads, 182; radiation machine for testing of castings, 242; circulating water pumps for Longannet power station, 368; Seerdrum refuse plant, 791
- Vickers Seerdrum Ltd., refuse compaction by wet drum, 791
- Vickers Spherocyl Corrector, for correction factors in hardness testing on curved surfaces, 411
- Vickers Super VC10 airliner, prospects of, 163; landing system in, 334-335
- Victoria Line. See *London Transport Executive*
- Video and audio signals on record, 288
- Videodisc records for Phonovid system, 288
- Vigers, Stevens & Adams Ltd., reinforced polyester flooring (trade publication), 413
- Viggen strike aircraft Head-up display systems for, 241
- Vignale, exhibits at Turin Motor Show, 652
- Viking vane type truck pump for liquefied petroleum gas industry, 88
- Villiers Engineering Co. Ltd., purchase of industrial engine business from Birmingham Small Arms Co. Ltd., 177
- Vinyl-acetate production, vapour-phase process for, 151
- Vinyl soled industrial boot (Honeywell Footwear Ltd.), 51
- VISA simulator for production control (Urwick Management Centre), 458
- Visi-Breather transformer breather (Transformers (Watford) Ltd.), 696
- Vision Engineering Ltd., Type 100 optical instrument for inspection of internal surfaces, 248; X3.5 stereo booster for bench magnifier, 814
- Visual Approach Slope Indicator, 334
- Vitaloid Products (Manchester) Ltd., Armour-bond reinforced gummed paper tape, 282
- Viva motor car. See *Vauxhall Motors Ltd.*
- Voculaire technique, by F. Cusset (book), 822
- Vodden, H. A., pure silicon, 502
- Voith, hydrokinetic torque converter transmission system, 584
- Volkswagen, production of 10 millionth car, 399
- Volta River hydroelectric power scheme, 336, 361-365
- Voltage regulator, automatic, for Brush type 4 diesel electric locomotive (Hawker Siddeley Dynamics Ltd.), 441
- Thyristor (AEI Electronics Ltd.), 695
- Voltmeter, digital, ac/dc, Model 355 (Livingston Laboratories Ltd.), 20
- Integrating digital (trade publication), 542
- See also *Microvoltmeter*; *Millivoltmeter*
- Voluntary Service Overseas, activities of, 646; technical requirements for developing countries, 646; appointment of liaison officer, 646; projects by ex-apprentices, 646; selection and training for VSO, 647
- Volvo LM218 industrial loader, 792
- Von Brun, A., on Graphische Methoden zur Lösung von Wechselstromproblemen (review), 157
- Vorob'yava, T. M., on electromagnetic clutches and couplings (review), 349
- W**
- WADKIN Ltd., Mark 2 TH drilling machine, 313; woodworking machinery (trade publication), 766; numerical control of drilling machine (trade publication), 822
- Wagons, coupled railway, dumper for (Link-Belt Co.), 25
- for delivery of boiler drums (British Railways), 340
- Fatigue failure of laminated springs in, 650
- Railway, for Ministry of Defence, 563
- Refrigerated, for inter-European food transport, 560
- Suspension research on four-wheeled, 650
- Wajda, R. L., creep in concrete at high temperatures, 122
- Wales, Stewart, Somerville Ltd., Galvaplas plastic metal coating, 346
- Walker, B., on the Moulton bicycle, 453
- Walker, D. N., on pumpless injection for diesel engines, 103
- Walker, G. E., on Mechanics of Machines, Vol. 1 (review), 29
- Walking dragline shafts, liquid nitrogen shrinkage of, 724
- Wall cladding (trade publication), 318
- Cutting machine, Trend Wall Chaser Mark 4, 344
- Extension, Sparlite concrete panels for, 384
- Panels, concrete, Chevron battery casting method for (BRS), 566
- Concrete, mortar spraying process for (BRS), 566
- Concrete, press for (BRS), 566
- Prefabricated, with stainless steel cladding (Hawthorn Leslie (Buildings) Ltd.), 660
- Rigid foam cored (Lacal Building Products), 180
- Sawing unit (Concrete Sawing Equipment Ltd.), 410
- Wallace and Tiernan Ltd., dissolved oxygen meter, 72
- Walley, B. H., on Performance and Profitability (book), 670
- Wallingford Grammar School, applied science activities, 239
- Wallis, Dr. B. N., on strength of England, 293-297
- Wallis, D. E., "Isaac Newton" telescope, 165
- Wallsend Slipway and Engineering Co. Ltd., MST-14 reheat steam turbine ship propulsion system, 427
- Walsh, J. W. T., on Photometry (book), 478
- Walton Electronics Ltd., attachment to ARC-OUT tap eroder for large components, 410
- Wand, M., award for Thames barrage scheme, 513
- Wandsworth Stonemasonry Works Ltd., multi-bladed frame saw for stone, 51
- Wankel, F., on Rotary Piston Machines (book), 574; (review), 603
- Wankel rotary engine at Frankfurt Motor Show, 399
- Wanson Thermobloc air heater, 594
- Wantage Radiation Laboratory, radioisotope technique for flow measurements, 442
- Ward, E. P., planning and marketing consultant, 632
- Ward, H. W., & Co. Ltd., AutoWard programmed capstan lathes, 314
- Ward, J. D., review of Communications in the Building Industry, 382
- Warehouse, automatic, with keyboard control, 762
- Warfare, naval, simulation by Surface Tactical and Blind Pilotage Trainer, 389
- Warm air curtain and door for foundry, 594
- Curtain unit (Mercian Electric Co. Ltd.), 214
- Heating. See *Heating*
- Warner electromagnetic clutches and brakes, 179
- Warner, F. E., on UK membership of FEANI, 198
- Warner Swasey Asquith Ltd., Type AC single spindle chucking automatic machine, 271
- Warning device, audible direction flasher, for motor cars, Atracta, 633
- Warnock, F. V., on Mechanics of Solids and Strength of Materials (review), 189
- Warren, A. P., Ltd., Mini-Sine sine bar, 787
- Warren, N., review of Learning for Leadership, 284
- Warren Spring Laboratory, radioisotope analyser for ore slurry, 183
- Warrier Quick Jet helical tap for blind hole tapping, 280
- Warship. See under specific types of warship
- Washing machine, Superautomatic 8-programme, 640
- Wastes, radioactive, management of, by C. A. Mawson (book), 190; (review), 668
- Water and air heaters, oil-fired, N400 (C. M. Hess Ltd.), 672
- Conditioner, magnetic-field (Polar), 691
- Desalination, International Symposium on (Washington), 272, 383, 451
- Plants using AGR reactor, 451
- Engineers' Handbook 1965, by D. Wilkinson and N. Squire (book), 605
- Filters, Diatom, 792
- Hammer research (BRS), 256
- Heaters, BM 30 W oil control valve (BM Control Valves), 224
- for Canvey Island methane terminal, 753
- Thermal storage, approval of, 640
- Level, Ebstot, 695
- Gauge, micrometer (Hilger & Watts Ltd.), 249
- Lubrication for rotary compressor (Sulzer), 697
- Mains, portable leak detection equipment for (WRA), 26
- Meter, measurement type (trade publication), 702
- Pollution Research Laboratory, open days, 482; reduction in river pollution by Dr. B. A. Southgate, 482
- Pressure booster, automatic (Broadwall Engineering Co. Ltd.), 21
- Research Association, portable leak detection equipment for water mains, 26; symposium on yield estimation for water-supply reservoirs, 128
- Water Resources Board, scheme for assessing information by computer, 276; annual report, 707
- Development: planning, engineering and economics, by E. Kuiper (book), 574; (review), 797
- in Saudi Arabia, investigation of, 560
- Storage cistern in plastics, Aspect, 128
- Supply, butterfly valves for (Loewy Engineering Co. Ltd.), 464
- Freetown, effect of Guma Dam, 622
- for Liverpool Corp., 526-527
- London, new scheme for, 497
- Regulations and requirements. *Letter*, 37
- Scheme, Yorkshire Derwent, Westronic automatic control and data logging system, 442
- Reservoirs, yield estimation for, symposium on, 128
- Turbines, Deriaz, 91
- Valve, Sliptechnik, with intake for chemical additives, 187
- Vapour removal from air, 694
- Waterboring in chalk downs, scheme for, 497
- Waterloo station boilerhouse, chimney installation at, 59
- Watermills, international symposium on (Estoril-Cascais, Portugal), 684
- Waterways, inland. See *Inland waterways*
- Wates (London) Ltd., 11 storey system built block of flats at Bramley Hill, Croydon, 698
- Watkins, B., zirconium alloy pressure tubes, 501
- Watkins, S. B., on Chemical Engineering Practice (Vol. 8) (book), 350
- Watson, Charles, & Co., Zealox synthetic rubber rotary pump seal, 371
- Watson, H., steam turbines and high availability, 704
- Watson-Marlow Ltd., portable effluent sampler, 118; micro-metering pumps, 631
- Watts, R. D., elements of design, 358
- Watweare Overseas Ltd., Remington chain saws, 436
- Wave-form converter, 438A Squareshaper, 470
- Wave spectra provides best basis for offshore rig design, by L. Draper, 124
- Waycom Ltd., electronic components (trade publication), 30; mobile display, 465; export marketing division, 465
- WCB Containers Ltd., Rocbord storage containers of corrugated fibreboard, 762
- WDS Tooling Aids Ltd., vice jaws (trade publication), 478
- Wear, friction and, by I. V. Kragelskii (book), 254; (review), 573
- Friction and, in machinery (book), 702
- Friction and, of materials, by E. Rabino-wicz (book), 94; (review), 509
- Lubrication and, by D. Muster and B. Sternlight (book), 158
- Resisting materials, epoxy resin (Devcon Ltd.), 371
- Weather chart recorder, Mufax (trade publication), 350
- Sheeting, heavy gauge, Tenasco 900, 115
- Weathermaster Spray-gun, 213
- Webber, G. W., on landing of aircraft safely in all weathers, 333
- Webster, H., Triumph 1300 motor car, 524
- Wedderburn, G., *Redundancy and the Railwayman*, 226-227
- Wedevag WL1B twist drill point grinding machine, 473
- Weigh filling machine, Transfil-Torbal, 435
- Weighing machine, Autocrat (W. & T. Avery), 551
- Checkweigher, general purpose, Driver Southall 0215, 423-424
- Checkweigher (Telomex Ltd.), 816



- Weighing machine, industrial, for continuous weighing and totalizing (Herbert & Sons Ltd.), 730
- Weights and Measures Act (1963), requirements of, 423-424
- Weil, N. A., on Lunar and Planetary Surface Conditions (review), 508
- Weingarten percussion presses, 662
- Weir, G. & J., Ltd., contract for Longannet power station, 337; boiler feed plant for Longannet power station, 368; reheat marine steam turbine installation, 426; feasibility study on unitized reheat steam turbine, 520-521; TWP type deaerator and feed pumps for liner *Queen Elizabeth*, 784
- Weir Westgarth Ltd., water desalination plant design, 451; proposed desalination research centre at Troon, 530
- Welbourn, D. B., review of Mechanics of Machines, Vol. 1, 29; review of Enzyklopädisches Fachwörterbuch Spanende Werkzeugmaschinen, 61; review of Illustrated Technical Dictionary of Metal Cutting Tools, 61; review of Mechanical System Design, 93; review of Rubber in Engineering Design Practice, 93; on cam design, 328. *Letters*, 356, 419; review of Machine-Tool Vibration, 477; on Concepts of Engineering System Design, 541; review of Introduction to Engineering and Engineering Design, 541; review of Rotary Piston Machines, 603; review of Measurement and Suppression of Noise 668; review of Engineering Systems Analysis, 822; review of Physical Networks, 822
- Welby, G. C., on Vauxhall Motors Ltd., 240
- Weld flash stripper for butt welded tube (Burflex Ltd.), 794
- Scale removal for stainless steel, D-Scale Paste DS-25, 379
- Tester, stud, non-destructive (Crompton Parkinson (Stud Welding Ltd.)), 118
- Welded fabrication, castings in, symposium on, 823
- Welding appreciation, on-site course in, 580
- Arc, carbon dioxide shielded consumable electrode, by A. A. Smith (book), 62; (review), 541
- Submerged, A2 Automat welding machine for, 249
- Brazing and soldering, metallurgy of, by J. F. Lancaster (review), 732
- CO<sub>2</sub> in reconditioning civil engineering equipment (Distillers Co. Ltd.), 530
- Shielded consumable electrode arc, by A. A. Smith (book), 62; (review), 541
- Electron beam, handbook of, by R. Bakish and S. S. White (review), 253
- Equipment, high-frequency resistance, Thermatool, 380
- Semi-automatic, with constant-voltage and constant current, 85
- Fair, Essen, 127
- Gun, design changes (Ford), 474
- Spot, lightweight (Portable Welders Ltd.), 630
- Lip, of tubes, Thermatool process for, 380
- Machine, electron beam (Sciaky Electric Welding Machines Ltd.), 213
- Multi-Spot, for panel radiators (Danish Welder Co. Ltd.), 211
- Projection, 569
- for submerged arc welding, A2 Automat, 249
- of new steel qualities, by H. M. Schnadt, 617
- Resistance, control equipment (Ford), 474
- Studies on (Ford), 474
- School of British Railways, Derby, 38
- Seam, equipment renewal (Ford), 474
- Set, Quasi-Arc LD 180 ac, 117
- Technology, British Steelmakers' Bursaries in, 73
- Postgraduate course at Cranfield, 73
- Tools, plastic (Welwyn Tool Co. Ltd.), 794
- Torch, KGM argon-arc (Interlas Ltd.), 155
- Unit for reconditioning tractor wheels (Hagglund Industrial Ltd.), 213
- Wire, welder power unit for (Westinghouse Electric International Co.), 630
- Wellington Engineering Works Ltd., water heater for Canvey Island methane terminal, 753
- Wellman Alloys Ltd., formation of, 240
- Wellman Crane & Machine Co. Ltd., replaced by Wellman Machines Ltd., 240; renamed Wellman Machines Ltd., 496
- Wellman Engineering Corp. Ltd., new name and reorganization of group, 240; new name for Wellman Smith Owen, 496
- Wellman Incandescent Furnace Co., Ltd., formation of, 240
- Wellman Incandescent International Ltd., 240
- Wellman Machines Ltd., formation of, 240; new name for Wellman Crane & Machine Co., 496
- Wellman Rolling Mills Ltd., replaced by Wellman Machines Ltd., 240
- Wellman Selas Ltd., formation of, 240
- Wellman Smith Owen Engineering Corp. Ltd., renamed Wellman Engineering Corporation Ltd., and reorganization of group, 240; renamed Wellman Engineering Corp. Ltd., 496
- Wellman Steelworks Engineering Ltd., formation of, 240
- Wellman Structures Ltd., renamed Wellman Selas Ltd., 240
- Wels, T. A., PERT symposium, 105
- Welsh College of Advanced Technology, stabilization of very low pressures, 123; symposium on thermal insulation, 319
- Weltronic Co. Ltd., welding equipment for Ford of Britain, 475
- Welwyn Tool Co. Ltd., plastic welding tools, 794
- Weser AG, MST-14 reheat steam turbine ship propulsion system, 427
- West Burton power station, trial coal delivery, 529
- West, E. G., copper and its alloys, 502
- West Germany, education of professional engineers in, by Dr. Ing. G. Brenken, 74
- West Hyde Developments, Brightlife miniature neons, 114; No. 1277 nylon-coated instrument case, 217; TPX-A, -B, -C range neon lamps, 471; Auto-Chemistaltic peristaltic pump, 537
- West Indies, contract for electricity supply system in (English Electric Co. Ltd.), 241
- West Instrument Ltd., insulated glands, 402
- West Kent Main Drainage Sewage Board, automatic operation for sewage penstocks, 754
- West Midlands survey for regional planning, 162
- Westdeutsche Getriebewerke GmbH, Type NZH hydraulic keyseating machine, 378
- Western Engineering & Manufacturing Co., manufacturing agreement with Henry Hope & Sons Ltd., 560
- Western Red Cedar spray eliminators for cooling tower, 275
- Westernport refinery, automatic blending system for, 25
- Westinghouse Brake & Signal Co. Ltd., actuators and exhausters for diesel hydraulic locomotives, 26; power supply equipment for telephones, 147; silicon diodes (trade publication), 350; Westronic automatic control and data logging system, 442; driver and controller units for thyristors (trade publication), 574; selenium surge suppressors (trade publication), 574
- Westinghouse Electric Corp., radar system for Royal Australian Air Force, 16; equipment for aluminium coating of steel by vacuum deposition, 181; Phonovid system of television recording on gramophone records, 288; Videodisc records for Phonovid system, 288; Thermalastic insulation system for electrical machines, 629
- Westinghouse Electric International Co., gas turbine for Pakistan power station, 208; scanning electron microscope, 306; emergency changeover switch, 402; superconducting magnets (trade publication), 605; welder power unit for wire welding, 630; electrical equipment for steelworks in Philippines, 813
- Westinghouse Electric International of New York, projector lamp with flat wound filament, 51
- Westinghouse Lighting Division, road lighting unit, 283
- Westinghouse Research Laboratories, oxygen generation from carbon dioxide, 411
- Westland Aircraft Ltd., hovercraft developments, 169; photostress techniques (trade publication), 286; strain indicating equipment, 371; Black Arrow launching vehicle, 514; SR-N4 passenger/car ferry hovercraft service, 674; SR-N5 hovercraft overturning accidents and plough-in resistance, 680; Hovercraft development progress, 741
- Westool Ltd., Sonac ultrasonic sensing and control equipment, 54; Warner electromagnetic clutches and brakes, 179; company resources (trade publication), 446
- Westronic automatic control and data logging system, 442
- Westwind Turbines Ltd., development of air bearings, 265-267; Silentair drill with air bearings and air turbine drive, 265; grinding spindles with air bearings, 265-266; operational characteristics of air bearings, 266; high-speed drilling developments, 266-267; air turbine driven hand tools with air bearings, 267; gas bearing turbine flowmeters, 267; future developments, 267
- Wharrad, C., on Britachrome Co. Ltd., 561
- Wheels, carbide, range of (Insley Industrial Ltd.), 570
- Diamond, with single layer surface (Norton), 409
- Tractor, welding unit for reconditioning (Hagglund Industrial Ltd.), 213
- Wheelabrator automatic mechanical machine for deflashing rubber, 83
- Whessoe Ltd., penstocks for Volta River project, 364
- Whicheloe MacFarlane and Towing Hill, Baghdad city centre redevelopment scheme prize-winning design, 466
- Whisker welding and forming machine for semiconductor diode production, 263
- White, Sir Bruce, Wolfe Barry and Partners, shallow draught vessel for heavy equipment transportation, 13
- White, C. H., on advanced nickel-chromium base alloys, 501; nickel-chromium alloys, 501
- White, J. Samuel, & Co. Ltd., reorganization and closure of shipyard, 144
- White, O. M. on Essentials of Electricity and Magnetism (review), 412
- White Paper on coal industry, 610
- on fuel policy, 545
- on National Plan, 579
- on technological manpower policy, 577
- White, R. B., on Prefabrication: A History of its Development in Great Britain (book), 542
- White-Rodgers Ltd., light-duty thermostat, 185
- White, S. S., on Handbook of Electron Beam Welding (review), 253
- Whitehall and Parliament Square, redevelopment scheme for, 131
- Whitehorn, J., on Confederation of British Industries, 353
- Whitehouse, D. J., on the Equation of the Mean Line of Surface Texture Found by an Electric Wave Filter (book), 766
- Whiteley Lang & Neill Ltd., level detector for food and chemical industries, 117. *Correction*, 278
- Whiteshell Nuclear Research Establishment, WR-1 atomic reactor, 690-691
- Whitlock Bros. Ltd., 405C mobile slewing light crane, 598
- Whittaker, E., on rolling bearings in electrical rotating machines, 42
- Wickham, D. & Co. Ltd., railway inspection cars, 251
- Wicks, S. S., on Introductory Engineering Statistics (book), 382
- Width gauge, nucleonic tin-coating, Atomat, 790
- Wild, A. G., & Co. Ltd., PASE power assisted storage equipment, 58
- Wild, Thos. C. (Machinery) Ltd., KVM range of draw benches, 51; packaged reversing cold rolling mills, 249
- Wildman and Meguyer, vitreous enamelled products discontinued, 400
- Wilkinson, D., on Water Engineer's Handbook 1965 (book), 605
- Wilkinson, P., management development seminar, 683
- Williams, A., on Steam Locomotives (review), 94
- Williams, Dr. C. G., applied science in schools conference, 515
- Williams, J. A. C., review of Mechanics of Automobiles, 220
- Williams, J. L., pure silicon, 502
- Williams, T. R. G., variable loading and fatigue life of aluminium alloy L73, 571
- Williamson, H. and D. M., & Sons, Soldermaster electric jointing tool for copper pipes, 155
- Williamson, James, & Partners, Longannet power station, 337; Cruachan power station, 489; Cockenzie power station, 492
- Wilmot Breeden Ltd., WB1200SL process for micro-cracked chromium plating, 628
- Wilson, A., market research seminar, 681
- Wilson, Sir Alan, on smoke control and SO<sub>2</sub> emission, 546
- Wilson, F. W., on Die Design Handbook (review), 252; on Plastic Tooling and Manufacturing Handbook (book), 542
- Wilson, G. A., Transportation Engineering Conference, 8; on traffic to the docks, 261
- Wilson, H., on industrial disputes, 386
- Wilson, J. D., & Partners, member of feed mill consortium, 721
- Wilson, J. W., on Behaviour and Properties of Refractory Metals (book), 94; (review), 733
- Wilson, Dr. M. G. F., review of Variational Techniques in Electromagnetism, 60
- Wilson Taylor cathodic protection of oil-drilling rig, 205
- Wilson, W. E., on Concepts of Engineering System Design (review), 541
- Wimpey, George, & Co. Ltd., contract for clearing site for Hong Kong power station, 240; Guma Dam, 622; liquid nitrogen shrinkage of walking dragline shafts, 724
- Winches, contractors (trade publication), 798
- Wind effects on buildings and structures (book), 94
- Tunnel, low-speed, for V/STOL aircraft research (Hawker Siddeley Aviation Ltd.), 495
- Winder controller, mine (Associated Electrical Industries Ltd.), 57
- Mine, converter fed, 8,500 hp (AEI), 442
- Winding plant, skip, Newstan Collieries, 657
- Windmills, international symposium on (Estoril-Cascais, Portugal), 684
- Window frames, Modolite, 660
- for prefabricated wall panels, 660
- Reversible horizontally pivoted, 367
- Safety casement, stay in moulded nylon (Embo Ltd.), 64
- Standard metal development of (Hope, Henry, & Sons), 366
- Module 4 (Hope, Henry & Sons), 366
- Windscreen, Vauxhall Cresta, thermo-electric sealing for, 594
- Winfrith Heath, Dragon reactor, 392; zirconium alloy pressure tubes for SGHW reactor, 501; see also *Dragon atomic reactor*
- Wingard Ltd., Freeway safety belt, 431; motor insurance scheme, 431
- Winget Gloucester Ltd., annual report, 432
- Winget Poclain Ltd., hydraulic excavators, 410
- Winn, Charles, & Co. Ltd., new factory at Sunderland, 304; fire appliances (trade publication), 574
- Winsford, industrial development of, 462-463
- Salt production at, 462
- Wipers, rear window, Rear Vista, for Mini motor car, 180
- Wire-loop induction communication system for railways, 649
- Wire rope clamp, JF Strong-Grip, 87
- Stripping and cutting machine for small batches (Technical Representation Ltd.), 85
- Welding, welder power unit for (Westinghouse Electric International Co.), 630
- Wiring, computer, coincidence check for (International Computers and Tabulators Ltd.), 338
- Kits, pvc, for industrialized building (British Insulated Callender's Cables Ltd.), 594
- Wisbech and District Water Board, lightweight baffle wall for Bexhill reservoir, 210
- Wispru haymaker, 79
- Wolek, F. W., on Administering Research and Development (book), 318
- Wolsingham Steel Co., 7,500 kVA electric arc melting furnace, 380
- Women's Engineering Society of Great Britain, international conference, 191
- Womersley, P., reinforced concrete football stand at Galashiels, 466
- Wondermix sintered metal oil-retaining bearings, 634
- Wood, J., on Nation Not Afraid: The Thinking of Enoch Powell (review), 285
- Wood, K., Kenwood food mixer, 804
- Wood veneer, industrial, Industrial Flexwood, 345
- Wood, W., on nucerite, 501
- Wood wool slab, Marlith, lightweight insulation system for roofs, 183
- Woodhead, R. W., on Critical Path Methods in Construction Practice (book), 638
- Woodhouse Grammar School, applied science activities, 239
- Woods' Engineers (Ramsbottom) Ltd., range of vertical and horizontal Gorator pumps, 21
- Woodson, W. E., on Human Engineering Guide for Equipment Designers (review), 477
- Woodward, C. D., on Standards for Industry (book), 798
- Woodward, J., on Industrial Organization: Theory and Practice (book), 190; (review), 669
- Woodward, R. A. C., on vacation training for overseas students, 261. *Letter*, 356
- Woodworking machinery (trade publication), 766
- Tools (Trend), 661
- Work study courses (Engineering Employers' West of England Association), 73
- Working Group on Intermediate Technology (Inter-tech), activities of, 321
- Loads, safe, of lifting table, by L. Linder (book), 222
- Metals, new ways of, by D. Fishlock and K. W. Hards (book), 254; (review), 701
- Workshop notes, laboratory and, 1962-1964, by R. Lang (book), 605
- Technology, fundamentals of, by G. J. Jones (book), 30
- World Power Conference (Tokyo), advance notice, 799
- Transport Exhibition (Munich), exhibits at, 202-203
- Worthington-Simpson Ltd., centrifugal pumps (trade publication), 446; free-standing sump pump, 695
- WR-1 atomic reactor, operation of (Atomic Energy of Canada Ltd.), 690
- Wren House, new exchange for transatlantic telephone service via Early Bird, 66
- Wrenches, impact (trade publication), 190
- Wright, Dr. D. L., review of Inertial Guidance Sensors, 476
- Wrightson, Sir John, Bt., on Head, Wrightson & Co. Ltd., 15
- Wulff, J., on Structure and Properties of Materials, Vol. 3 (book), 413
- Wynn, R. A., review of Physical Testing of Rubbers, 444
- Wynne-Edwards, Sir Robert, chairman, EIJC, 4; chairman of CEI, 197; on professional engineer, 198-199; applied science in schools conference, 515; on CEI, 609

## X

X-RAY radiographic equipment, safety standards for (Davey, Paxman & Co. Ltd.), 10

## Y

YAK heavy duty rock drill, 410

Yale Materials Handling Equipment Division, DP51 diesel fork lift truck, 818

Yale & Towne Inc., fork lift trucks (trade publication), 798; new factory for tractor shovels, 813

Yale University, broad range multi-gap spectrograph for, 433

Yarn, nylon, Mattingly head in AMI false twist machine for, 727

Yarrow Admiralty Research Department, 547

Yarrow, Sir Eric, on rationalization of shipbuilding firms, 547

Yield and fracture, physical basis of, conference on, 223

York, University of, building progress, 206

Yorkshire Copper Works (Holdings) Ltd. trading report, 813

— Derwent water supply scheme, automatic control and data logging system, 442

Yorkshire Imperial Metals Ltd., trading report, 813

Young, J. T., on Technicians Today and Tomorrow (book), 542

Youngman, W. C., Ltd., Master range of oil fired heaters, 570; "680" prefabricated timber building system, 696

Youth employment officer, activities of, 807

— Service, Albemarle Report on, 807

## Z

Z-DRIVE for boats, 347

Zackay, V. F., on High-Strength Materials (book), 670

Zagato Lancia Fulva sport motor car, 652

Zagnoni, M., electronic artificial arm, 65

Zalmanzon, L. A., on Components for Pneumatic Control Instruments (book), 126

Zandman photoelectric coating technique (trade publication), 286

Zarotti, Prof., electronic artificial arm, 65

Zdakov arch bridge, construction details, 414

Zealand Funen traffic link international competition, 145

Zealox synthetic rubber rotary pump seal, 371

Zeiss reflectance spectrophotometer (trade publication), 62

ZF automatic transmission system, 584

Zhukov on international control of space, 195

Zinc spraying system for steel, Polyzinc, 242

Zirconium alloy pressure tubes, development of, by B. Watkins and R. E. Cockaday, 501

— by T. E. Green and C. D. T. Minton, 502

Z-Mat automatic air filters, 631

Zonax activated carbon filter pads for plating solutions, 539

Zoo, London, plenum heating system for, 16

Zuffenhausen Targa motor car, 399

Zwicky, G. (London) Ltd., Schweizer drilling device for small holes, 86; Christen drill grinding machines, 86; Type UW1 multi-purpose machine tool, 377

Zwicky Ltd., Viking vane type truck pump for liquefied petroleum gas industry, 88