

INDEX

A

- A590 industrial diesel engines (AEC Ltd.), 782-784
- A690 industrial diesel engines (AEC Ltd.), 782-784
- Aberconway, Lord, on Sheepbridge Engineering Ltd., 277; on Wickman Ltd., 277; on John Brown and Co. Ltd. and subsidiaries, 349
- Aberdare Cables Ltd., automatic cable covering machine installed, 53
- Aberthaw power station, application made to Ministry of Power, 173
- Abraham, L. H., on Structural Design of Missiles and spacecraft (review), 250
- Abrasive belt "skiving" machine with air bearings (English Abrasive Corp. Ltd.), 710
- Abu Dhabi Marine Areas Ltd., *Adma Constructor* barge for (Sheepbridge Equipment Ltd.), 305
- AC. See *Alternating Current*
- Accelerator, linear, tuning up, 361
- Van de Graaf, tandem, at Liverpool University, 762
- Accelerometer tests on motor cars, 832
- Access Equipment Ltd., Longjohn mobile staging, 506
- Accidents in industry, statistics on, 365
- Prevention courses, 785
- Road, statistics, 832
- Accles & Pollock Ltd., formation of TI Stainless Tubes Ltd., 477
- Accumulator, rechargeable, Deac, 732
- Vehicles. See *Motor vehicle; Motor truck*
- Accured height gauge (Amar Gauge & Tool Co. Ltd.), 440
- ACE Machinery Ltd., construction equipment (trade publication), 792
- Acme-Efco Ltd., deburring machine, 841
- Acme Manufacturing Co., deburring machine, 841
- Acorn Anodizing Co. Ltd., 10 year guarantee on anodizing, 689
- Acoustics and noise, by W. Furrer (review), 790
- Architecture and music, by L. L. Beranek (book), 856
- Acrow (Engineers) Ltd., position and prospects, 477; acquisition of E. H. Bentall and Co. Ltd., 477
- Actane damp courses (Cambridge Timberproofing Laboratories), 789
- Damp-proof renderings and damp courses (Cambridge Timberproofing Laboratories), 789
- Action, ideas into: plea for plan and teamwork, by P. C. Blount (book), 456
- Activair heater unit (Roberts Electrical Co. Ltd.), 292
- Acton Laboratories Inc., transmission delay measuring set, 364
- Acton Society Trust, investigation into management training, 382; *Training Managers*, 382; report on training centres, 617
- Actuators, Annin (Gloucester Controls Ltd.), 431
- Linear, lubrication of (Teleflex Products Ltd.), 61
- (Pye Ltd.), 800
- Pneumatic (Kinetro Ltd.), 35
- Valve, Jones-Tate (Dewrance Co. Ltd.), 379
- Adamson, Daniel, & Co. Ltd., aluminium bronze reaction vessel, 249; aluminium bronze process vessels, 789; deep-diving research installations for Royal Navy Physiological Laboratory, 793
- Adamson, V. H., appointed managing director of Montgomerie Reid Engineering Co. Ltd., 177
- Addison, J. D., on distillation of sea water at Kuwait, 130-132
- Addison Tool Co. Ltd., tool finishing machine (trade publication), 124
- Adhesion, forces involved in, 837
- Adhesive for concrete, 839
- for metal, 838
- Resorcinol resin, Aerodux 500 (CIBA (ARL) Ltd.), 203
- Structural, for civil engineers, by A. O. Frearson, 837-839
- Tif-Tak (Ucan Development Ltd.), 453
- for timber, 837
- Adler, G. W. F., appointed manager of Marconi's Mechanical Products Division, 845
- Adma Constructor* barge (Sheepbridge Equipment Ltd.), 305
- Administration, industrial, introduction to, by F. R. J. Jervis and W. F. Frank (book), 252; (review), 727
- of large research establishments, by Dr. J. V. Dunworth, 701
- Admiralty, valve for use with Telstar satellite, 96
- Adrema Ltd., Bradma Inserta mailing machine, 14
- Advance Components Ltd., acquisition of share capital of Nagard Ltd., 645
- Advel Ltd., titanium self plugging blind rivet, 296
- Adventure Underground: Story of the World's Great Tunnels, by J. Gies (review), 855
- Advertising by colour television, 1
- in action, by R. Harris and A. Seldon (review), 623
- Advocate camera (Ilford Ltd.), 119
- AEC Ltd., engines for Routemaster bus, 385; air suspension for motor vehicles, 401; A590 and A690 industrial diesel engines, 782-784; historical note, 782
- AEI-Birlec Ltd., roller hearth annealing furnace for Whitehead Iron & Steel Co., 269; continuous hardening and tempering equipment for Fafnir Bearing Co. Ltd., 779
- AEI Engineering*, 384
- AEI-Hotpoint Ltd., use of Parkinson Cowan gas fired infra-red radiation units, 780; 6040 cooker, 860
- AEI Ltd. See *Associated Electrical Industries Ltd.*
- AEI-Sulzer-Birmingham Railway Carriage & Wagon Partnership, Lion diesel electric locomotive, 799
- Aerazur, air bags for soft lifts, 107
- Aerial, ILS localizer (Standard Telephones & Cables Ltd.), 736, 761
- Steering system, Goonhilly, 826
- Television, at Croydon for ITA, 773
- Aero Controls Ltd., centrifuge units, 296
- Aero-engine. See *Aircraft engine; Turbine, gas*
- Aerodrome requirements (ICAO), 775
- Aerodux 500 resorcinol resin adhesive (CIBA (ARL) Ltd.), 203
- Aerodynamics, airplane, by D. O. Dommasch, S. S. Sherby and T. F. Connolly (book), 456
- Aerofoil axial flow fans, silencer for (Woods of Colchester Ltd.), 380
- Aerograph-DeVilbiss Co. Ltd., steel partition panels, 579
- Aeronautical industry, use of austenitic iron in, by J. Morrison, 620
- Research Laboratories, coal fired gas turbine investigation, 563
- Sciences, progress in, by A. Ferri, D. Kuchemann and L. H. G. Sterne (book), 482
- Aeronautics, Sir George Cayley's, by C. H. Gibbs-Smith (book), 422; (review), 654
- Aeroplane. See *Aircraft*
- Engines. See *Aircraft engine; Turbine, gas*
- Aeroplane and Motor Aluminium Castings Ltd., delivery of molten aluminium by road, 644
- Aerospace systems, application of optimization techniques to, by G. Leitmann (book), 856
- Afghanistan, checking perennial floods and droughts in, 266
- Hydroelectric schemes in, 266
- Multiple purpose river basin development: water resources development in (UN Survey), 266
- River basins and irrigation areas of, 266
- Table of catchment areas, 266
- UN survey of, 266
- African Metals Corp., coking plant ordered from Woodall-Duckham Construction Co. Ltd., 73
- Aga Dictating Machine Co. Ltd., Teledictation dictation system, 476
- Agesta atomic power and district heating plant test operation in Stockholm, 626
- Reactor, development of, 94
- Agnew, J., on Apprenticeship in Eire, 824
- Agricultural Engineers' Association, export statistics on agricultural machinery, 232; upward trend in exports of agricultural machinery, 673
- Industry, use of austenitic iron in, by J. Morrison, 620
- Machinery export statistics, 232
- Sales at high level, 673
- Welding of, course on, 787
- Agriculture. See *Irrigation; Tractor*
- Ahlborg, F., on optimum position of pylons by computer, 698
- Air bag. See *Bag*
- Blower. See *Blower*
- Bubbles to dampen underwater shock waves (Atlas Copco Ltd.). See *LETTER*, 70
- Clean. See *Clean Air*
- Cleaner, electronic (Honeywell Controls Ltd.), 564
- Compressor. See *Compressor*
- Conditioning, ductless, Airajust (Carter Thermal Engineering Ltd.), 662
- heating and ventilating exhibition, 380
- Marinair, for *Northern Star* liner (Carrier), 34
- Units (trade publication), 792
- Control handbook, refrigeration and (book) (Refrigeration Press), 184
- Curtain canopy, Canopair (F. Bracey & Sons of Bennington Ltd.), 800
- Cycle cooling system (Sir George Godfrey & Partners Ltd.), 294
- Filter. See *Filter*
- Float conveyor (Sheepbridge Equipment Ltd.), 662. See *LETTERS*, 738, 770
- Gauging. See *Gauging*
- House (RFD Co.), 153
- Intake unit (Robertson Thain Ltd.), 475
- Air-Hydro pump unit (Charles S. Madan Ltd.), 653
- Air Nip pneumatic pliers (Consolidated Pneumatic Tool Co. Ltd.), 78
- Pollution. See *Clean Air; Smoke*
- Preheaters (trade publication), 24
- Boiler, glass tubes for, report on QVF Ltd.), 115
- Air Preheater Corp., visit by D. R. S. Turner, 469
- Screws. See *Propeller*
- Show, Farnborough. See *Farnborough*
- Supported tables for machine tools, 346
- Traffic control centre, London, 332
- Control centre, Southern, 332
- Water analogue of; wet wind tunnel (Boeing Co.), 489. See *LETTER*, 602
- Airajust ductless air conditioning (Carter Thermal Engineering Ltd.), 662
- Aircon container (Airtech Ltd.), 21
- Aircraft, all weather landing system—the last 100 feet, 761
- Arrestor barriers, Safeland, 293
- Automatic landing systems, 736, 761
- Avro Avon, 247
- Avro Vulcan, 247
- Bristol T188, research, 259
- Buccaneer, order placed by South Africa (Blackburn Aircraft Ltd.), 501
- Bulldog (Bristol Aeroplane Co.), 245
- Car ferry, Carvair (Aviation Traders (Engineering) Ltd.), 81
- Civil jet, Safeland barrier for (Borgs Fabriks (BEFAB)), 260-261
- Closed circuit television for rear vision (EMI Electronics Ltd.), 361
- Comet 4C, flight simulator (General Precision Systems Ltd.), 295
- Components behind, 294-295
- Concord supersonic airplane, 661, 734
- Control linkages (Teleflex Products Ltd., 295
- de Havilland Trident, on order by BEA, 258
- DH 125 for Ministry of Aviation, 372
- Electrics, developments in (English Electric Co. Ltd.), 64
- Engine, Avon, as gas generator, 262
- Gnome, for helicopters (Bristol Siddeley Engines), 201
- Leading buyers of, 469
- Nimbus, shaft turbine (Bristol Siddeley), 201
- Olympus turbojet (Bristol Siddeley Engines Ltd.), 245-247
- Spey, Government aid for (Rolls-Royce Ltd.), 708
- for supersonic transport aircraft, 363
- Executive (de Havilland), 163
- Experimental methods and, high speed problems of, by A. F. Donovan, H. R. Lawrence, F. E. Goddard and R. R. Gilruth (book), 156
- Exports, 469
- at Farnborough Air Show, 258-259
- Freight lashing fitting Short Bros. & Harland Ltd. and H. K. Porter & Co. (Great Britain) Ltd., 296
- Fuselage conditions at Mach 4, 625
- Hawker P1127, VTOL, 259
- Helicopters, Augusta Bell, for Royal Netherlands Navy, 201
- Gas-turbine powered, for Royal Navy, 372
- Grasshopper (Rotorcraft Ltd.), 367
- Herald, sales of (Handley Page Ltd.), 813
- Instrument landing system, 736, 761
- Jet Provost, for Venezuelan Air Force, 372
- Landing system, BLEU, 761
- Landings, better guidance for, 736
- Light, (Beagle Group), 372
- M218 (Beagle Aircraft Ltd.), 259
- Aircraft-Marine Products (Great Britain) Ltd. pin and socket connectors (trade publication), 552
- Morava, 425
- One-Eleven, for Kuwait Airways, 201
- One-Eleven, on order, 136
- One-Eleven, ordered for Central African Airways, 469
- Research, 363
- Safety glass (Triplex Safety Glass Co. Ltd.), 294
- Short Belfast, automatic landing system for, 222
- Spraymat ice protection system for (D. Napier & Son Ltd.), 90-92
- Stability and control, by A. W. Babister (review), 287
- Steerable nose undercarriage (Dowty Group Ltd.), 294
- Supersonic airliners, evolution of, 734
- Transport, 329
- Transport, engines for, 363
- Transport, materials for, 362
- Transport, noise of, 363
- Transport, problems facing, 362-363
- Transport, structural problems in, 362
- Transport, systems in, 363
- Titanium fire walls for, 676
- Transmitter/receiver (Burndept Ltd.), 294
- 206Y (Beagle Aircraft Ltd.), 259
- Undercarriage, nose, with built-in steering (Dowty Group Ltd.), 400
- V bomber of RAF, 246
- Vickers VC 10 airliner, flight simulators for BOAC (Redifon Ltd.), 827
- VC 10 airliner, order by BOAC, 258
- Wing, laminar flow, Handley Page, 462
- See also *Aeronautics; Aviation*
- Airlines, worlds', operating losses of, 329
- Airlock, rotary (Derion Productions Ltd.), 268
- Airmix mixing unit (Gardners of Gloucester), 735
- Airplane aerodynamics, by D. O. Dommasch, S. S. Sherby and T. F. Connolly (book), 456
- Airport, Gatwick, use of glued and nailed beams, 838
- London, use of 360° X-ray equipment, 703
- Prestwick, use of Ferranti Apollo computer, 273
- Requirements (ICAO), 775
- Airtech Ltd., Aircon container, 21; tilt testing of large vehicles, 100
- Akroyd, T. N. W., on Concrete Properties and Manufacture (review), 391; review of Ultimate Load Analysis of Reinforced and Prestressed Concrete Structures, 391; review of Design Charts, 391; biographical note, 392; review of Non-Destructive Testing of Concrete, 550; review of Concrete Technology, 550; biographical note, 552
- Alarm bell system for bearing wear (Göta-verken), 799
- Fire, Ducal (Ducal Appliances), 700
- and warnings, 700
- Albion Sugar Co. Ltd., use of epoxy resin to cure leaks in tanks, 557
- Albright & Wilson Ltd., PD8 chemical preparation, 132; licence for Kanigen plating process, 479
- Alcan Industries Ltd., Noralock aluminium planks, 19; aluminium plates for Daphne atomic reactor, 51; aluminium plates for methane tanker ships, 115; aluminium transformer tanks, 321; aluminium pipe made by helical welding, 409; aluminium extrusions for heat sinks, 418-419; research on chemical dip for smoothing aluminium, 589
- Alcan (UK) Ltd., magnesium die-castings (trade publication), 856
- Alcock, J. F., presidential address to Institution of Locomotive Engineers, 429
- Alcomax magnets (James Neill & Co. (Sheffield) Ltd.), 580
- Aldersley Engineers Ltd., Aldersley-Shaw air lift dryer, 208
- Aldersley-Shaw air lift dryer (Aldersley Engineers Ltd.), 208
- Aldis Bros. Ltd., use of Loctite sealant resin, 388
- Aldridge Tool & Engineering Co. Ltd., layout fixture, 440
- Alesa-Elme oil refinery, agreement between Nigerian Government and BP-Shell Petroleum Refining Co., 173
- Alexander, George H., Machinery Ltd., automatic recessing heads (trade publication), 24
- Alexander, W., on Metals in the Service of Man (book), 592
- Alfa Romeo, mass production factory, 633; historical note, 633
- Algebraic formulae, prepared by computer, Massachusetts Institute of Technology, 274
- Algol data processing language, 827
- Alkan, M. L., Ltd., use of fibreboard clad polyethylene containers, 189
- Allam, E. P., Ltd., liquid propane fuelled generating set, 406
- Allan, R. K., on Systematic Slide Rule Technique (book), 124
- Allen, Edgar, & Co. Ltd., position and prospects, 241; expansion policy, 241; Stag Allenite Tiptaker toolholders, positive and negative rakes, 578
- Allen, G. C., on Structure of Industry in Britain (review), 23
- Allen, J., on some thoughts on university teachers, 383
- Allen Keir Ltd., automatic indexing table, 410
- Allen, Dr. R. G., on water conservation, 606
- Allen, W. H., Sons & Co. Ltd., alternators for *Northern Star* liner, 34; integration of research with Gwynnes Pumps Ltd., 685
- Allied Ironfounders Ltd., mechanization of bath tub production, 52; automatic solid fuel boiler, 524; tests on vitreous enamels, 588
- Allied Research Co. of America, licence to Forestal Industries (UK) Ltd., 389
- Alligator type shearing machine for scrap (Weldall & Assembly Ltd. and George Cohen Sons & Co. Ltd.), 80
- Allis-Chalmers Manufacturing Co. boiling water atomic reactor power project with USAEC, 31
- Allot, C. S., & Son, cooling water intakes for Sizewell atomic power station, 712
- Alloy(s), engineering, by N. E. Woldman (book), 817
- Influence of temperature and the mechanical properties of, by E. M. Savitsky (book), 482
- Production, rapid analysis during, 492
- See also under *specific alloy types*
- Alloying elements in steel, by E. C. Bain and H. W. Paxton (book), 220
- Allplas spheres (Lacrinoid Products Ltd.), 432
- Allum, E. P., & Co. Ltd., use of Loctite sealant resins, 388
- Alluvial mining for tin and gold, by H. L. H. Harrison (book), 324
- Allweather Paints Ltd., zinc-rich paint, 51; rust converting primer paint, 192; Pitan-Corroless steel primer paint, 853
- Alpha die tryout press (Rockwell Machine Tool Co. Ltd.), 410
- Alpha-Molykote Corp., solid molybdenum disulphide lubricants, 757; new London factory for, 757; formation of Molykote Great Britain Ltd., 757

- Alsonar Trading Co. Ltd., visit by D. R. S. Turner, 469
- Alternating current devices with iron cores, by P. F. Van Eldick and P. Cornelius (book), 760
- and network analysis, by R. H. Nau (book), 184
- Alternator, mobile (Onan Corp.), 406
- for *Northern Star* liner (W. H. Allen Sons & Co.), 34
- See also *Generator; Diesel; Turbo*
- Altimeter, radio, 736
- Alumina, ceramic, chemical pump of, 146
- Roydalox (Doulton Industrial Porcelains Ltd.), 146
- Roydalox, hydrocyclone nozzles from, 146
- Users' comments on, 146
- Aluminium bronze reaction vessel (Daniel Adamson & Co. Ltd.), 249
- in building industry, 809
- Clad chimneys, comments on, 216
- Chimneys (F. E. Beaumont Ltd.), 216
- Aluminium Co. of America, report on turbine lubrication, 127
- Development Association, symposium on aluminium in structural engineering, 770; research scholarships, 851
- Extrusions for heat sinks (Alcan Industries Ltd.), 418-419
- Iridite chromate coating for (Forestal Industries (UK) Ltd.), 389
- Aluminium Laboratories Ltd., spot-welding of aluminium, 21; aluminium pipe made by helical welding, 409; research on chemical dip for smoothing aluminium, 589
- Molten, delivery by road, 629, 644
- Noralbryte chemical dip for smoothing (Walterisation Co. Ltd.), 589
- Pipe made by helical welding process, 409
- Planks, Noralock (Alcan Industries Ltd.), 19
- Plates for atomic reactor, 51
- for methane tanker ships, 115
- Sheet for vehicle body building (James Booth Aluminium Ltd.), 389
- Spot welding of (Aluminium Laboratories Ltd.), 21
- in structural engineering, symposium on, 770
- Structural uses of (Institution of Structural Engineers publication), 809
- Superstructures for ships, underwriters' concern with, 429, 432
- Tanks for liquid oxygen (BOC Ltd.), 83
- Transformer tanks (Alcan Industries Ltd.), 321
- Tube, for typewriter platens (Elm Engineering Ltd.), 249
- Welded fabrications in (Controlled Heat & Air Ltd.), 589
- Alvis Ltd., Stalwart motor vehicle, 296, 526
- Alwayse Castor Co. Ltd., heavy duty ball castors, 642
- Analogs Co. Ltd., use of Metamic metal/ceramic material, 18
- Amar Gauge & Tool Co. Ltd., Accuread height gauge, 440
- Amaratunga, M., on tests on models of concrete structures, 62-63
- Ambassador remote control printing machine (R. W. Crabtree & Son Ltd.), 577
- Amber, G. H., on Anatomy of Automation (review), 420
- Amber Light Engineering Co., metal finishing machine, 610
- Amber, P. S., on Anatomy of Automation (review), 420
- Ambulance, Citroen Safari, 433
- Wrigley (Wessex Industries (Poole) Ltd.), 508
- America. See *United States*
- American and British Technology in the 19th Century, by H. J. Habakuk (review), 726
- Astronautical Society, Report No. 1, 420
- American Optical Co., laser welding trials, 764
- Society for Testing Materials, turbine lubrication, 127; electronic wiring at low temperatures, 159; effects of radiation on metals, 492; Ultra-High Purity Metals (book), 792
- Space programme, 193
- American Telephone & Telegraph Co., Telstar radio relay satellite, 45
- See also *United States*
- Amery, J., on Concord supersonic airliner, 735
- AMF International, radioactive waste disposal (trade publication), 124
- AMG, on prolific inventor, 634-635
- Amigo Engineering Products Ltd., feed hopper, 507
- Amini, E., on cutting of metals, 504
- Ammunition, armour-piercing, 630
- Amos, C. W., appointed sales manager of Marconi's Mechanical Products Division, 845
- Amphibious vehicle, Alvis Stalwart, 526
- Amplifier, DC (trade publication), 760
- Electrometer DC (Vacuum Generators Ltd.), 715
- Microwave (GEC Ltd.), 415
- Optical maser (Bell), 290
- Amplivox Ltd., Secrette hearing aid, 732
- AMX tank, 631
- Anaesthetic machine, Cape-Waine (Cape Engineering Co. Ltd.), 702-703
- Anaesthetists, simplifying the work of, 702-703
- Analogue computation, by R. W. Williams (review), 512
- Analyser, Microscan X-Ray (Cambridge Instrument Co. Ltd.), 732
- Analysis, rapid, during alloy production, 492
- Analytical machine of Charles Babbage, 198
- Anchors, earth (W. E. Waite Ltd.), 573
- Anderson, H. H., on Centrifugal Pumps (book), 88
- Anderston Clyde Engineers Ltd., mobile gantries, 507
- Anderton Springs, position and prospects, 81
- Anderton, W. R., & Co. Ltd., power take-offs, 143
- Andover, USA, signal horn at, 45
- Andrew Air Conditioning Ltd., heating and ventilating system, 100; licence from Buensod-Stacey Corp., 100
- Andrews Bros. Ltd., plastic barrel, 147
- Andrews Housewares Manufacturers Ltd., Moulinex vacuum cleaners, 32
- Andrews, R. S., on Carrier Engineering Co. Ltd., 781
- Andy-Lad combination ladder (Crossley Bros.), 224
- Angle, building (Apton Ltd.), 492
- Slotted, Dexion, 436
- Anglian Products Ltd., formation of Taylor-Woodrow-Anglian Ltd., 74
- Anglo-Japanese commercial treaty, 733
- Angus, R. B., on Electrical Engineering Fundamentals (book), 482
- Animator, Movotron (T.D. Animation Ltd.), 12
- Anion exchange resin, De-Acidite, 807
- Annealing furnaces for Spencer Steelworks, 652
- Line, bright, vertical (Republic Steel Corp.), 338
- Annin actuators (Gloucester Controls Ltd.), 431
- Anodes, titanium, for cathodic protection, 678
- Anodising, ten-year guarantee on (Acorn Anodising Co. Ltd.), 689
- Ansar canopy (Narvida Appliances Ltd.), 564
- Anthropometric design, 660
- Anti-corrosion fluids. See *Fluids*
- Anti-seize compound, Led-plate, lead based (Constructional Products (Chadderton) Ltd.), 389
- Apex Construction Ltd., vibratory ball mill, 714
- Apold, A., on Carbon Oxidation of the Weld Pool During the Metal-Arc Welding of Plain Carbon Steels (book), 624
- Apollo computer at Prestwick airport (Ferranti Ltd.), 273
- Appleby-Frodingham Steel Co., continuous casting at Scunthorpe plant, 140-141
- Appleton & Howard Ltd., Gush chemical pump, 703
- Applied mechanics, energy methods in, by H. L. Langhaar (book), 760
- Apprentice competition at Gijon University, 211
- International, awards in, 415
- Day of John Laing & Son Ltd., 787
- in European Coal and Steel Community, 211
- Foundry, certificate of craftsmanship, City and Guilds, 383
- Graduate, scope for, 150
- (G. N. Haden & Sons), 448
- Potential, group, reorganizing, 242-243
- Training on the Continent, 849
- Value of, 316
- of the Year Award, 57
- Apprenticeship, building, shorter ones confirmed, 211
- Craft, training for a skilled craft or trade (Industrial Training Council booklet), 243, 244
- in Eire, by J. Agnew, 824
- Graduate, 351
- Industrial mobility and, 414
- Training, conference on trends in, 824. See *Correction*, 850
- Whence and whither? 824-825. See *Correction*, 850
- Apton Ltd., building angle, 492
- APV Co. Ltd., aluminium plates for Daphne atomic reactor, 51
- Aqua-Clear water treatment (Kinnis & Brown Ltd.), 479
- Aquamobile Perspex submarine (Submarine Products Ltd.), 600
- Aquavion hydrofoil craft (International Aquavion (GB) Ltd.), 100
- Craft, Waterman (Duncan Macneill & Co.), 228
- Craft, Waterman (Wallace Bros. (Holdings) Ltd.), 228
- Arc-furnace. See *Furnace, electric*
- Arc Manufacturing Co. Ltd., merger with English Electric Co. Ltd., welding division, 645; formation of English Electric-Arc Welding Co. Ltd., 645
- Welding. See *Welding*
- Arch process control system for Steel Co. of Wales (Elliott-Automation Ltd.), 779
- Architect, practical training of, by E. Layton (RIBA publication), 461
- Architect and His Office* (RIBA publication), 461
- Architecture, acoustics and music, by L. L. Beranek (book), 856
- and decoration, glass in, by R. McGrath and A. C. Frost (review), 123
- Industrial, Plain Words on, 102
- Arcon buildings (Taylor Woodrow & Co. Ltd.), 407
- Arcoy (Liverpool) Ltd., power plane, 396
- Arctic Institute of North America, Delta 1 observation post at South Pole, 658; use of Perkins diesel generating sets, 658
- Area Gas Boards, carburizing and carbonitriding with town gas (trade publication), 728
- Argomix gas for shielded welding (British Oxygen Co. Ltd.), 19
- Argonne National Laboratory, tuning up Zero Gradient Synchrotron, 361
- Argus computer (Ferranti Ltd.), 273
- Argus-100 computer (Ferranti Ltd.), 827
- Argus radar (Marconi), 568
- Argyle, M., on training managers, 382; on Society: Problems and Methods of Study (book), 656
- Aric, position and prospects, 81
- Ariel electro-pneumatic gauge (Sigma Instrument Co. Ltd.), 441
- Arkon differential pressure gauge (Walker Crossweller & Co. Ltd.), 47
- Arlington Bodybuilders Ltd., aluminium sheet for bodybuilding, 389; truck bodies for J & H Transport Services (Peckham) Ltd., 389
- Arm, artificial, Hugh Steeper (Hugh Steeper Ltd.), 317-319
- Arma/Brown gyro compass (S. G. Brown Ltd.), 798
- Armatures and field coils, by K. Wilkinson (review), 87
- Armit Laboratories, Led-plate lead based anti-seize compound, 389
- Armour-piercing ammunition, 630
- Armour Research Foundation, optical probe for medical research, 30; Symposium on the Physics of Failure in Electronics, 192; finding tougher materials for cutting tools, 491; magnostatic frictionless permanent magnet bearing, 521; non-contact gauge, 564; new press forging techniques, 626
- Armourseal coating (Griffiths Bros. & Co. London Ltd.), 217
- Armstrong Cork Co. Ltd., gaskets (trade publication), 392
- Armstrong, J. R., on Supervisory Training Services, 619
- Armstrong Whitworth (Metal Industries) Ltd., Unipactor soil compactor, 674; Auto-pactor soil compactor, 674; Isopactor soil compactor, 674; Pullpactor soil compactor, 674
- Army, Plain Words on, 370
- Arnot, W. D., on engineers as translators, 102. See *LETTER*, 134; on improving translation for industry, 334
- Arnott & Harrison (Toolmakers) Ltd., NEOP air powered press, 810
- Aronsohn, A., of Rotterdam, depot for British-Borax (Holdings) Group, 305
- Arrol, Sir William, & Co., Spencer Steel Works, 535; Cockenzie power station, 713; member of consortium of Associated Bridge Builders Ltd., 789
- Art, early, approach to, from psychology of technical drawing, by Dr. R. E. Heymann, 553
- Artificial arm, Hugh Steeper (Hugh Steeper Ltd.), 317-319
- Legs (Chas. A. Blatchford & Son Ltd.), 317
- Limbs (Ideal Limbs Ltd.), 317
- Sky at Cambridge University, 809
- Arup, Ove, & Partners, new London offices for British Petroleum Co., 404; Smithfield Poultry Market, 640
- Ascot water heater, 596
- Ash and dust handling plant for Rodenhuize power station (John Thompson Group of Companies), 269
- Ashbee, P., on closed circuit television techniques, 253
- Ashton, N. C. Ltd., experimental work with alloys, 249
- Asquith Electrics (Colne) Ltd., master switch, 142
- Associated Bridge Builders Ltd., River Severn suspension bridge, 789; members of consortium, 789
- Associated Bridge Co., Severn Bridge, 695
- Associated British Machine Tool Makers Ltd., illustrated brochure, 529; formation of, 529; companies comprising, 529; new factory at Zagreb for Rade-Koncar, 740
- Associated Electrical Industries GRS Ltd., early warning signs for motorways, 705
- Associated Electrical Industries Ltd., production of niobium-zirconium, 31; transformers for CEBG, 44; group project training, 57; triode valve, 110; gas turbine power station (trade publication), 156; butyl/hypalon cable, 189; 1010 computer installation, 198; photomultiplier tube, 206; electrical equipment (trade publication), 220; automatic telephone exchange equipment for Jordan, 232; generating plant for Malim Nawar power station, 232; overhead projector, 384; use of aluminium extrusion as heat sinks, 418; diesel electric locomotives for British Railways, 436; transformer and turbo-generator testing, 494-495; impulse generator, 495; dynamic test rig for car seat belts for British Standards Institution, 501; Clearcall communications system for Spencer Steel Works, 536; transistorized electro-encephalograph, 563; indoor terminal box, 642; cable making, 645; Bo-Bo electric locomotives, 735; large brushless synchronous motor, 799; paper on hot strip mill tension control by loopers, 844
- Associated Engineering Group, deliveries of molten aluminium by road, 629, 644; industrial research, 670-671; plasma spraying equipment, 670; piston ring pressure measurements, 670; noise and vibration measurement, 671; piston performance telemetry system, 671; optical gauging system, 671
- Associated Industrial Consultants Ltd., conference on salaries paid to executives, 335
- Associated Octel Ltd., use of austenitic iron castings, 620
- Associated Portland Cement Manufacturers Ltd., report, 445; Nigerian subsidiary to increase size, 445
- Association of British Chambers of Commerce, *Industrial Charter-Status and Security at Work*, 414
- of Supervising Electrical Engineers, presidential address by Prof. Sir Willis Jackson, 555; sponsorship of exhibition, 802
- Astral Industrial Meters Ltd., use of austenitic iron castings, 620
- Astronautical engineering, handbook of, by H. H. Koelle (review), 286
- A. T. & E. (Bridgenorth) Ltd., use of Trisecc process, 320
- Ateliers GSP, GSP-Matic jig-boring machine, 204
- Atkins, W. S., & Partners, Spencer Steel Works, 535
- Atkinson, Octavius, & Sons Ltd., position and prospects, 749
- Atkinson, W. O., on Octavius Atkinson & Sons Ltd., 749
- Atlas computer inauguration (Ferranti Ltd.), 827
- Atlas Copco Ltd., air bubbles to dampen underwater shock waves. See *LETTER*, 70
- Atlas Lighting Ltd., position and prospects, 241; lighting for Hyde Park/Marble Arch road improvement scheme, 544
- Atlas Preservative Co. Ltd., aluminium/kraft paper insulation, 83
- Atmospheres, inert, in the chemical, metallurgical and atomic energy industries, by P. A. F. White and S. E. Smith (review), 122
- Atmospheric pollution. See *Clean air; Smoke*
- Atoms and the Universe, by G. O. Jones, J. Rotblat and G. J. Whitrow (book), 252
- Atomic battle: graphite versus water, by J. H. M. Sykes, 696-697
- Energy, catalogue of courses on, 384
- Atomic Energy Co. of Sweden, development of Agesta and Marviken atomic reactors, 94
- Education in, 448
- Industry, inert atmospheres in, by P. A. F. White and S. E. Smith (review), 122
- Research and development, education for, by Dr. F. A. Vick, 448
- Research Establishment, Harwell, Industrial Chemical Group, beta-ray radiation shield, 128; optical dilatometer, 508
- Excavation experiment, Project Chariot (USAEC), 396
- Generator, simple (Martin Co.), 96
- Atomic Laboratories Inc., electron spin resonance spectrometer, 159
- Power and district heating plant, Agesta, test operation in Stockholm, 626
- Electricity from, 300
- Engineering training for, by Dr. J. M. Kay, 448
- Atomic Power Group, Wyfla atomic power station, 364
- Station, Bradwell, 300
- Stations of CEBG, 225
- Station, Dungeness, accident at, 233; no delay at, 233
- Station, Hunterston, progress at, 857
- Station, Latina, closed circuit television for (Pye TVT Ltd.), 793
- Station, Oldbury, 305; tidal reservoir for, 138
- Station, Sizewell, model tests on cooling water intakes, 712
- Station, Wyfla, increased power for, 364
- Systems, space demands, by B. C. Lindley, 457-458
- See also *Power*
- Propulsion of cargo and passenger vessel *Savannah*, 4
- Propulsion of ice breaker *Lenin*, 4
- Ship, European Nuclear Energy Agency Survey, 397
- Ship, Götaverken's proposals for, 4
- Submarine *Dreadnought*, 828
- Reactor, Agesta, development of, 94
- Boiling water, power plant project of USAEC, 31
- Calder Hall type, 696
- Consort II, for London University (GEC (Engineering) Ltd.), 780
- Daphne, aluminium plates for, 51
- DIMPLe, in operation at Winfrith Atomic Energy Establishment, 32
- Doubling-time determination (UKAEA), 521
- Dounreay, details of 561; type of the future, 561; problems encountered, 696
- Fast, civil, 561
- First, twentieth anniversary of going critical, 701
- Halden, modifications to, 222
- Heat source, 457
- Hunterston A, progress on, 126
- for Ispra Establishment of Euratom, 659
- Marine, 4
- Marviken, development of, 94
- Medical research, for Walter Reed Army Institute of Research, 699
- Metals, 276
- Safeguards, by C. R. Russell (book), 856
- for space, ground test on, 458
- for submarine *Dreadnought*, 828
- Water moderated, 696
- Water moderated (Westinghouse), 828
- ZEBRA, 860
- Storage processes for electricity, 767
- Atomics International, medical research atomic reactor for Walter Reed Army Institute of Research, 699
- Atwater, F. A., on Industrial Organization and Management (review), 759
- Aubury, E., on Bailey Bridge and Uniflote Handbook (book), 817
- Auckland University, wind tunnel tests of wind pressures on multi-storey buildings, 10-11
- Audco Ltd., valves (trade publication), 88; stainless steel valve, 321; valves (trade publication), 360
- Augusta Bell helicopters for Royal Netherlands Navy, 201
- Austenitic iron. See *Iron*
- Castings. See *Castings*
- Austin, development of electrometer dc amplifier, 715
- Austin Motor Co., Ltd., use of plastic coated assembly trolleys, 82; Healey motor car, convertible body for, 263
- Austinlite Ltd., rotary switches, 672; use of Moly slip G lubricant, 672
- Austral Development Ltd., Broken Hill (trade publication), 624
- Australia, opening of Phytotron plant laboratory, 395
- to build Radio heliograph, 61
- Railway progress, 169
- Science in, by Prof. D. Fleming, 553
- Auto-Airflow powder-handling system, 738
- Auto Diesel freight handler (Braby Group), 745
- Auto Midac viscous air filter (Midland Heating & Ventilation Co. Ltd.), 380
- Autoconstruzioni Spa, Mille Coupe Bertone motor car fitted with Dunlop disc brakes, 740; Iso Rivolta GT Coupe motor car fitted with Dunlop disc brakes, 740
- Autoheat fan heater (Findlay, Irvine Ltd.), 292
- Autoland test rig for Short Belfast aircraft (Ministry of Aviation), 222
- Automated control in mineral treatment at Parc Mine, 742-743
- Automatic Equipment Ltd., electrostatic paint gun mover, 239; platen press, 542
- Indexing table (Allen Keir Ltd.), 410
- Machine, single spindle (Wickman Ltd.), 47
- Automatic Telephone & Electric Co. Ltd., position and prospects, 17; acquired by Plessey Co. Ltd., 781

- Automation, anatomy of, by G. H. Amber and P. S. Amber (review), 420
- Centre, National, proposals for, by D. B. Foster, 565
- Computation and control, handbook of, by E. M. Grabbe, S. Ramo and D. E. Wooldridge (review), 286
- Electronics and scientific instruments, six-language dictionary on, by A. F. Dorian (book), 456
- by L. L. Goodman (review), 855
- in industry, 565
- Metalworking, by G. H. DeGroat (book), 24; (review), 513
- Organization and society, by R. A. Brady (review), 480
- by Dr. H. A. Thomas, 818
- Automobile design, current contrasts in, by G. Wilkins, 466
- Electrical equipment, by A. P. Young and L. Griffiths (book), 482
- Production, research applied to, 670-671
- See also *Motor car*
- Automotive industry, austenitic iron in, by J. Morrison, 620
- Products Group, Lockheed Scholarship, 787
- Autonomous group functioning: an exploration in behaviour theory and measurement, by P. G. Herbst (book), 624
- Autopactor soil compactor (Armstrong Whitworth), 674
- Auxiliary Rolling Machinery Ltd., steel slitting and cutting equipment, 109; rotary cross trimming machine, 507
- Avanti motor car, Studebaker, 498
- Avco-Everett Research Laboratory, MHD experiment, 255
- Aveley Electric Ltd., Surfindicator surface indicator, 112; signal generator, 142; DuMont photomultiplier tube, 393
- Aveling-Barford Ltd., GC road roller, 353-355; historical note, 353; formation of, 353-354
- Aveling & Porter Ltd., steamrollers, historical note on, 353; merger with Barford & Perkins Ltd., historical note on, 355
- Aveling, Thomas, invention of steamroller, 353
- Avery-Hardoll bulk meters, 562
- Aviation, Ministry of, Blind Landing Experimental Unit, Autoland test rig for Short Belfast aircraft, 222; order placed for DH125 aircraft, 372; Spadeadam Rocket Establishment, 405
- Aviation Traders (Engineering) Ltd., use of propane, 81; Carvair car ferry aircraft, 81
- Avo Ltd., historical note, 201; new factory to be built, 201
- Avon aircraft, Avro, 247
- Jet engine as gas generator, 262
- Avro Avon aircraft, 247
- Vulcan aircraft, 247
- Aylesbury Automation Ltd., rotary disc feeders, 580
- Ayr, River, bridge over, 503
- Azikiwe, Dr., opening of Warri dockyard in Nigeria, 305
- Azoflex copying machine (Ilford Ltd.), 476
- B**
- BABBAGE, C., analytical machine, 198; and his calculating machines, by P. Morrison and E. Morrison (book), 288
- Babcock & Wilcox Ltd., boilers for *Northern Star* liner, 34; Donkeyman compact water tube boiler, 228; association with Chantiers Augustin-Normand, 397; Cyclone furnace, 717; boiler plant for Reed Paper Group's new extension, 842
- Babister, A. W., on Aircraft Stability and Control (review), 287
- Bach, S. M. A., review of Sound and Television Broadcasting: General Principles, 791; biographical note, 792
- Badenia miniature office, 628
- Badger Meter Manufacturing Co., non-contact gauge, 564
- Badisch Maschinenfabrik AG., moulding units, 52
- Bag, air lifting (Aerazur), 107
- Bagnall, Maj. W. G., development of Lansing Bagnall Co. Ltd., 584
- Bagrit, Sir Leon, to succeed R. de Trafford as chairman of Elliott-Automation Ltd., 717
- Baguley, E. E., Ltd., Bo-Bo electric locomotives, 735
- Bailey Bridge and Uniflote Handbook, by E. Aubury (book), 817
- Bridging (trade publication), 592
- Bailey, D. J., on conflicting status symbols, 707
- Bailey, L. W., & Partners Ltd., course on materials handling, 264; course on plant layout and materials handling, 315
- Bailey Meters & Controls Ltd., use of Loctite sealant resin, 388
- Bain, A., electric clock patent, 666
- Bain, E. C., on Alloying Elements in Steel (book), 220
- Baird Machine Co., licencing agreement with High Precision Equipment, Ltd., 336
- Baker, Sir John, address to Loughborough College, 150
- Baker Perkins Granbull Ltd., die head, 306
- Baker Perkins Ltd., practical machine work for girl students, 619
- Balancing machine (C. F. R. Giesler Ltd.), 642
- Baldwin, H. J., Bulldog Pushmatic circuit breakers, 79
- Balfour, Arthur, & Co. Ltd., amalgamation with Darwins Group Ltd., 209
- Balfour Beatty & Co. Ltd., Tilbury B power station, 104; equipment for Malim Nawar power station ordered from AEI Ltd., 232
- Balfour & Darwins Ltd., formation of, 209; position and prospects, 209; Lord Riverdale appointed chairman, 209
- Balfour Group of Companies, new pressure vessel shop, 779
- Ball bearings. See *Bearings*
- Ball, K., on evolution of university engineering 650-651; on engineering science in perspective, 721-722
- Ball mill, vibratory (Apex Construction Ltd.), 714
- Balzars High Vacuum of Liechtenstein induction melting units, 644
- Bamford, J. C., design of excavators, 449; biographical note, 449
- Bamford, J. C. (Excavators) Ltd., JCB3 excavator, 449-451; Hydra-Digga Loadall excavator/loader, 449
- Bamford, W. D., on Control of Airborne Dust (review), 287
- Bandsaw. See *Saw*
- Bank Bridge Rubber Co. Ltd., neoprene road-side markers, 147
- Bansback, C. H., on Holophane Ltd., 581
- Banwell, Sir Harold, committee on civil engineering contracts, 597
- Bar, flexible, by R. Frisch-Fay (review), 590
- Barbican building scheme, 138
- Barford & Perkins Ltd., merger with Aveling & Porter Ltd., historical note on, 355
- Barford, William, patent on water ballast roll, 353
- Barge, *Adma Constructor* (Sheepbridge Equipment Ltd.), 305
- Barker, B., award of plaque by Prague University, 585
- Barker, J. A., on formation of local Society of Engineers, 570
- Barking Brassware Co. Ltd., hydraulic test bench installed, 30
- Barlow, H. M., on Radio Surface Waves (review), 218
- Barlow-Whitney Ltd., vacuum ovens, 541
- Barnard, P., constant strain testing machine, 172
- Barr, A. W. C., on building systems, 461
- Barr, C., on precast housing, 502
- Barr & Stroud Ltd., Expansometer optical dilatometer, 508
- Barr, W., on specifications, 797; Harold Wright Memorial Lecture, 797
- Barras, H., on evaluations of determinants, 834-835
- Barrell finishing equipment, "Carbotrol 7" (Carborundum Co. Ltd.), 205
- Plastic (Andrews Bros. Ltd.), 147
- Barrier, aircraft arrester, Safeland, 293
- for civil jet aircraft, Safeland (Borgs Fabriks (BEFAB)), 260-261
- Safety, Darfen Arrester, for motorways (British Ropes Ltd.), 433. See LETTER, 570
- Barron & Shepherd Ltd., service elevator, 14
- Barwell, Dr. F. T., development of linear induction motor, 731
- Bashforth, G. R., on Physical Chemistry and Metallurgical Processes (book), 184; on Manufacture of Iron and Steel (book), 792
- Bath, fluidized (Technique Cambridge) Ltd., 508
- Tub production mechanized (Allied Ironfounders Ltd.), 52
- Battelle Memorial Institute, development of thermo-electric materials, 255
- Battery charger, miniature (Multitone Electric Co. Ltd.), 732
- Solar, 683
- See also *Accumulator*
- Vehicles. See *Motor vehicle; Motor truck*
- Baxenden Chemical Co. Ltd., Spandofam polyurethane foam, 357; polyurethane foam for cavity filling, 479
- Baxi Ltd., Burnall open fire with back boiler, 796
- Baxter Woodhouse & Taylor Ltd., high altitude flying suit, 295; flexible air ducting, 703
- Bayham Ltd., level controls, 744
- Beacon flasher, Omniflasher (Stone-Chance Ltd.), 714
- Beagle Aircraft Ltd., M218 aircraft, 259; 206Y aircraft, 259
- Beagle Group, light aircraft, 372
- Beam, glued and nailed, at Gatwick Airport, 838
- and plate, combined, manual of properties of (US Dept. of Commerce publication) (book), 156
- Roof, of laminated timber (Kingston (Architectural Craftsmen) Ltd.), 203
- Supplies, high energy (Brandenburg Ltd.), 238
- Beamlock racking (Steel Equipment Co. Ltd.), 208
- Beard, James, Ltd., resin formulations, 284
- Bearing, air, for abrasive belt "skiving" machine, 710
- Design and applications of, by H. L. Wunsch, 345-348
- Instrument applications of, 347
- Load capacity of, 346
- Machine tool applications of, 253, 346
- Principles of, 345
- in processing of industrial diamonds, 347
- for rotary table (Rolls-Royce Ltd.), 348
- Ball, linear, Hans-Worm Unimatic (H. G. Stevens Co. Ltd.), 777
- Sealed (Pollard Ball & Roller Bearing Co. Ltd.), 663
- Spheriseal units (Ransome & Marles Bearing Co. Ltd.), 811
- Split, 459
- Fluid film: survey of their design, construction and use, by P. J. Geary (book), 392
- Frictionless permanent magnet, Magnostatic (Armour Research Foundation), 521
- Gas, circulators (trade publication), 56
- Compressor for (Bristol Siddeley Ltd.), 345
- Principles of, 345
- Pump for (Bristol Siddeley Ltd.), 345
- Ribbon, pte sleeves for (Crane Packing Ltd.), 389
- Thrust, tilting-pad (Glacier Metal Co. Ltd.), 567
- Wear alarm bell system (Götaverken), 799
- Beaumont, F. E., Ltd., aluminium-clad chimneys, 216
- Bebb, R. H., on Plastic Mould Design (book), 220
- Beckwith, T. G., on Mechanical Measurements (book), 184
- Beech, A. S., on Foundry Equipment and L. and Y. Holdings Ltd., 845
- Beeching, Dr. R., plans for British Railways, 65; on British Transport Commission, 461; major policy statement, 597; plans to improve British Railways, 609
- Beer, A. E., & Partners, Manchester HQ building of Co-operative Insurance Society Ltd., 573; new office block for Prudential Assurance Co. Ltd., 804
- Beer, S., review of Guide to Operational Research, 250; biographical note, 252
- Beever, C., on trade unionism, 612
- Behaviour, exploration in theory and measurement of: autonomous group functioning, by P. G. Herbst (book), 624
- and physique, by R. W. Parnell, 264
- Belfast aircraft, automatic landing system for, 222
- Bell Aerosystems Co. *Rendezvous*, 54; moon project, 293
- Bell, electric (GEC), 700
- Underdome (V & E. Friedland Ltd.), 700
- (V. & E. Friedland Ltd.), 700
- Founding, 797
- Bell, G., on marque for mark, 530
- Bell ringing, 797
- Bell Telephone Laboratories, Telstar radio relay satellite, 45; telephone system which finds its own faults, 94; data from Telstar satellite, 221; optical maser amplifier, 290; unique visual identification of voices, 291; low cost satellite communication station, 428; photographing rapid changes, 659
- Bell Toys Ltd., position and prospects, 81
- Bellamy, R. G., on trends in apprenticeship training, 824. See *Correction*, 850
- Bellman, R., on Adaptive Control Processes: A Guided Tour (review), 219
- Bell's Asbestos & Engineering Ltd., steel panel radiators (trade publication), 360
- Belmos Co. Ltd., motor control gear, 508
- Belt, car seat, Britax, 433
- Seat, DSIR report on, 769
- Seat, dynamic test rig for (British Standards Institution), 501
- Conveyor. See *Conveyor*
- Fan (trade publication), 592
- High speed, research on, 627
- BEN Patents Ltd., air compressor, 508
- Bench, work, Sormel 62 (Henri Picard and Frère Ltd.), 207
- Bender, H. M., on do crash barriers make roads safer, 570
- Bending and folding machine for plate (Scottish Machine Tool Corp.), 14
- Bendix cleaning system (W. Bryan Savage Ltd.), 506
- Bendix Corp., Fluidal valve, 132; licence to Newman Hender & Co. Ltd., 132; cleaning system, 506
- Benedikt, O., on Nomographic Computation of Complicated and Highly Saturated Magnetic Circuits (book), 156
- Benelux party, visit to British Steel Works Plant Association, 436
- Benguela Railway, 225
- Bennett, H., Hyde Park/Marble Arch road improvement scheme, 543
- Bennett, J. D., on Reinforced Concrete Members Subjected to Bending and Direct Force (book), 288
- Bennett, T. P., & Sons, Smithfield Poultry Market, 640
- Bennie, John, Ltd., business transferred to Marryat & Scott, Ltd., 509
- Benningfield, L. M., on Control System Theory: Feedback Engineering (book), 288
- Bentall, W. A., & Co. Ltd., acquired by Acrow (Engineers) Ltd., 477
- Bentley motor car, four headlights for, 468
- Bernek, L. L., on Music, Acoustics and Architecture (book), 856
- Berberian, S. K., on Introduction to Hilbert Space (book), 88
- Berg, J. W., & Co. Ltd., Hindmarch/Berg controllable pitch propeller, 848
- Berge, C., on Theory of Graphs and its Applications (book), 220
- Bergsten, R., on Chicago International Trade Fair, 469
- Berk, F. W., & Co. Ltd., shotblasting unit, 52; new laboratory for, 209; products of, 209; Graco Power-Flo spraying equipment, 689; Graco Hydro-Spray spraying equipment, 689
- Bernadette hearing aid (Bernadette Ltd.), 732
- Bernadette Ltd., Bernadette hearing aid, 732
- Berns, H., on Ziechnerische Darstellungs-methoden (book), 792
- Berrick Bros. Ltd., slide rule (trade publication), 124
- Berridge Aircraft Ltd., DRAT vertical traverse unit, 341; stencil washer, 541; rotary indexing unit, 745
- Berridge, D. R., on Calder Hall type atomic reactor, 696
- Berridge, H. H., film on work sampling, 686
- Besi. See *Bus Electronic Scanning Indicator*
- Bessel functions, integrals of, by Y. L. Luke (book), 792
- Beta-ray radiation shield (Spemby Ltd.), 128
- Bethel, L. L., on Industrial Organization and Management (review), 759
- Bettis Atomic Laboratory, development of water moderated atomic reactor, 828
- Bevan, D., group apprenticeship, 243
- Bevins, E., new "house style" for General Post Office, 747
- Beyer Peacock Gorton Ltd., diesel electric locomotives for British Railways, 436
- Bibo submersible pump, Flygt (International Pumps Ltd.), 840
- Bicycle, Moulton, 598. See LETTERS, 635, 706, 770, 802
- Revived by fresh design, 598-599
- Bidard, Prof. R. A., on super-pressurized boiler, 639
- Biddle, Sir Reginald, British delegation to International Road Federation, 746
- Bijou electric clock movement (Smiths English Clocks Ltd.), 666
- Bikini temperature indicator (Fielden Electronics Ltd.), 80
- Bill of quantity prepared by computer, 272
- Billett, H., on present state of energy converters, 254-256
- Billiards mathematically treated, by G. W. Hemming, 738
- Mechanics of, 196, 298, 738
- Billington, N. S., review of Heating and Humidifying Load Analysis, 512; biographical note, 514
- Bilton, Percy, Ltd., trunk road to join M6 Motorway with A34, 201
- Binks-Bullows Compact spray painting plant (Alfred Bullows & Sons Ltd.), 112
- Binnie, Deacon and Gourley, water supply for Hong Kong, 105
- Binnie, G. M., Portage Mountain Dam, 641
- BIP Chemicals Ltd., formation of, 558
- BIP Engineering Ltd., Bipel automatic press, 471; Bipel moulding machine, 541; Bipel compression moulding press, 558-560; formation of, 558
- BIP Tools Ltd., formation of, 558
- Bipel automatic press (BIP Engineering Ltd.), 471
- Compression moulding press (BIP Engineering Ltd.), 558-560
- Moulding machine (BIP Engineering Co. Ltd.), 541
- Birefringence, studying laminar flows by, by K. O. Kemp, 157
- Birkett, Billington & Newton Ltd., use of austenitic iron castings, 620
- Birkett, T. M., Billington & Newton Ltd., position and prospects, 717
- Birlec-Efco (Melting) Ltd., electric arc furnaces for English Steel Corp., 302-303
- Birlec Tama furnace, 18
- Birmidal Developments Ltd., use of austenitic iron castings, 620
- Birmingham and District Industrial Safety Group, safety training courses, 279
- College of Advanced Technology, course on statistical quality control and acceptance sampling, 244
- Birmingham Small Arms Co. Ltd., position and prospects, 717
- University, creation of Institute of Advanced Studies in Engineering Sciences, 97; Institute for Advanced Studies, 178-180; International Machine Tool Design and Research Conference, 504; tests on machine tools, 730; civil engineering research, 851
- Bishop, D., on precast housing, 502
- Bishop, Prof. R. E. D., on basic causes of rough riding on railways, 29-30. See LETTERS, 602, 706
- Biswas, A. K., on Physical Chemistry and Metallurgical Processes (book), 184
- Bits, rock (trade publication), 324
- BKL Alloys Ltd., delivery of molten aluminium by road, 644
- BKS Air Survey Ltd., move to Northern Ireland, 315; formation of Survey Technical Services Ltd., 315
- Black-Clawson International Ltd., use of plastic coated rollers and parts, 453
- Black & Decker Ltd., portable electric drill, 112; portable electric handtools, 306; portable electric drill, 379; portable drills, 541
- Black Moly grease (John W. Miller & Son Ltd.), 19
- Molybdenum disulphide lubricants (John W. Miller & Son Ltd.), 249
- Black, Sir William, on AEC Ltd., 784
- Blackburn Aircraft Ltd., order from South Africa for Buccaneer aircraft, 501
- Blackman, Keith, Ltd., propane burners, 108
- Black's Mining Equipment Ltd., glandless hydraulic rams, 367
- Blades, gas turbine, tests and redesign of roots, 852
- Turbine, materials for, 852
- Blast furnace. See *Furnace*
- Blatchford, Chas. A., & Son Ltd., artificial legs, 317; historical note, 317
- Blaw Knox Ltd., Gyramixer concrete mixing machine, 611; paver finisher, 674; Auto-Airflow powder handling system, 738
- Blending system using digital control (Jiskoot Auto-Control Ltd.), 562
- BLEU aircraft landing system, 761
- Blocks, brake, Ferodo, for rail tank wagons, 432
- Blount, P. C., on Ideas into Action: a Plea for a Plan and Teamwork (book), 456
- Blower, air, improvements in design (W. C. Holmes & Co. Ltd.), 163
- Blue Moppie power boat, 329
- Blue Star Line, Guardian cathodic protection of ship *Gladstone Star*, 621
- Blue Streak rocket as satellite booster, 405
- Blue Water guided missile, future of (English Electric), 161
- Bluebird motor car, first public appearance of, 101
- B.M.S. (Sales) Ltd., position and prospects, 749
- BNS (Australia) Pty Ltd., agreement with ICI of Australia and New Zealand Ltd. and British Nylon Spinners Ltd., 436
- Board, corrugated (Albert E. Reed & Co. Ltd.), 756
- Board of Trade, firms who do not export, 404; *How to Export*, 572; Journal Supplement, 797
- Boart & Hard Metal Products S.A. Ltd., diamond drill rig, 713
- Boat, high speed power, built to win a race, by P. Du Cane, 226-227
- Speed power, hull form of, 226
- Speed power, machinery for, 227
- Speed power, navigation of, 227
- Speed power, propulsion of, 227
- Speed power, rudder for, 227
- Speed power, steering gear for, 227
- Speed power, structure of, 226
- Speed power, *Tramontana* (Vosper Ltd.), 226-227
- Hydrofoil, Grunberg, 831
- Ideal lifting mediums, 831
- Loss of lift in, 830
- Platforming ocean waves on, by C. Hook, 830-831
- Strut design of, 830
- Supramar, 830
- Test tank models, 831

- Boat, NSU/Wankel rotary engines in, 567
 — Patrol, *Pfeil*, for Federal German Navy (Vosper Ltd.), 637
 — *Strahl*, for Federal Germany Navy (Vosper Ltd.), 637
 — Power, *Blue Moppie*, 329
 — *Daily Express* Off-Shore Race for, 226-227
 — *Tramontana*, winner of *Daily Express* Offshore Power Boat Race, 329
 — Race, power, offshore, *Daily Express*, 329
 — Show, International, Friedrichshaven, 567
 — Transome drive for, Z-Drive (Perkins Group), 572
 — Turbocraft (Dowty Marine Ltd.), 527
 — See also *Dinghy*; *Yacht*
- BOC-Ferranti flame cutting equipment, 577
 Body, human, vibration effects on, 32
 — Motor car, convertible, for Austin Healey, 263
 — Vehicle, aluminium sheet for building of (James Booth Aluminium Ltd.), 389
- Boeing Co., wet wind tunnel: water analogue of air, 489; Dyna-Soar orbital glider, 659
 Boel, Joseph, & Sons, of Tamise, prefabricated oil refinery for Port Brega, 695
 Bofors A.B., stainless steel castings, 689
 Boiler air preheaters, glass tubes for, report on (QVF Ltd.), 115
 — Back, for housewarming and hot water, 796
 — Compact water tube, Donkeyman (Babcock & Wilcox Ltd.), 228
 — Control systems for, 3
 — Drums for Komati power station (G. A. Harvey & Co. (London) Ltd.), 268
 — Egg, Oprim (Improved Appliances and General Engineering Co. Ltd.), 128
 — Feedwater treatment for, 4
 — House and power station chemistry, by W. Francis (book), 422
 — Metallurgy problems in, 4
 — Mobile, Clayton (English Electric Co. Ltd.), 708
 — For *Northern Star* liner (Babcock & Wilcox Ltd.), 34
 — Oil firing for (trade publication), 656
 — Package steam (trade publication), 760
 — Packaged, Multopac (John Thompson (Wilson Boilers) Ltd.), 379
 — Stone-Vapor (J. Stone & Co. (Deptford) Ltd.), 750-752
 — Plant, self-contained (Houseman & Thompson Ltd.), 708
 — Potterton Diplomat, 596
 — Solid fuel, automatic (Allied Ironfounders Ltd.), 524
 — Super Ultrasonic (Davey, Paxman & Co. Ltd.), 142
 — Supercritical, for Drakelow C power station (International Combustion Ltd.), 2-4
 — Turbine and superheater by-pass system for, 4
- Bolt, friction, load indicating (Guest, Keen & Nettlefolds Ltd.), 76
 — Self-locking (Long-Lok Ltd.), 757
 Bolton Gate Co. Ltd., use of Stelvetite for shutter doors, 453
 Bomb, atomic, Project Sky High, probable cancellation of, 365
 Bombay Port, improvement scheme for, 136
 Bonar, Long & Co. Ltd., Cockenzie power-station, 713
 Bond motor car, 250 G 3-wheeler, road test on, 669
 Bonnet Djet motor car, 498
 Books on dated mathematics, 314
 — on electrical engineering, 314
 — on engineering mechanics, 314
 Bookshelf, Cambridge Don examines his, 314-315 See LETTERS, 402, 496, 530, 602, 634, 707
- Booth, Dr. A. D., review of Digital Computers, 123; biographical note, 124; on place of Computing Machine in a Modern University, 200
 Booth, E. S., on gas-turbine and steam generation of power, 639; on Calder Hall type atomic reactor, 696
 Booth, James, Aluminium Co. Ltd., aluminium plates for methane tanker ships, 115; new rolling mill installed, 132; aluminium sheet for vehicle body building, 389
 Boothby, Lord, on roads and lorries, 829
 Borax NV, formation of, 305
 Borg, S. F., on Fundamentals of Engineering Elasticity (book), 56
 Borgs Fabriks AB (BEFAB), Safeland barrier for civil jet aircraft, 260-261
 Boring bar, high ratio overhang, 521
 — Machine, jig, GSP-Matic (Ateliers GSP), 204
 — and profiling head, Seleromat (Solar Weld Languepin Ltd.), 270
 Boron-10 supply to UKAEA (20th Century Electronics Ltd.), 860
 Borough Polytechnic, diplomas and associate-ships, 753
 Bostik Ltd., use of fibreboard clad polyethylene containers, 188
 Botterill, J. S. M., on university applied science maze, 554
 Boulton Paul Group News, 218
 Boulton Scaffolding Ltd., scaffold to timber frame fittings, 377
 Boulton, William Ltd., Podmore-Boulton Vibro Energy Mill, 83
 Boundary layer equations, laminar by N. Curle (book), 422
 Bowater Packaging Co., new factory (John Laing & Son Ltd.), 17
 Bower, T., & Co., internal micrometers, 411
 Bowle, Prof. J. E., on challenge to mankind, 485
 Bownams Chemicals Ltd., use of fibreboard clad polyethylene containers, 189
 Boxes, terminal, for Nelson High Power Laboratories (Lancashire Dynamo & Crypto Ltd.), 589
 Boyd, G. M., review of Brittle Fracture Story, 183; biographical note, 184; on design hazards in brittle fracture, 530; on data retrieval from service reports, 545-548
 Boyer Scharz track relaying gantry, 573
 Boyle, Sir Edward, on the Future Challenge and Response, 485; inquiry into day release, 687
- Boys, training in industry—the non-apprentice (Industrial Training Council booklet), 244
 BP Oil Co. Ltd., to form joint company with Esso, Mobil, Regent, Shell-Mex for pipeline construction, 774
 BP-Shell Petroleum Refining Co., agreement with Nigerian Government on oil refinery at Alesa-Eleme, 173
 BP Tanker Co. Ltd., *British Bombardier* tanker for (Alexander Stephen & Son Ltd.) 296; *British Merlin* tanker (Harland & Wolff Ltd.), 479; 100,000 ton tanker for (Vickers-Armstrongs Ltd.), 703; *British Hussar* tanker, 858
 BP Trading Ltd., contract to J & S Pumps Ltd. for development of turbine generator units, 399
 BP. See also *British Petroleum Co. Ltd.*; *Shell-Mex and BP*
- BPS Machinery & Spares Co., Ltd., Staehely gear hobbing machine, 341
 Brabazon, Lord, on proposed supersonic air transport, 329; on AEC Ltd., 784
 Braby Group, Auto Diesel mobile freight handler, 745
 Bracey, F., & Sons, of Bennington Ltd., Canopair air curtain canopy, 800
 Bradford Corp., new waste disposal plant (Heenan & Froude Ltd.), 305
 — Institute of Technology, course on powder technology, 315
 Bradley & Co. Ltd., position and prospects, 177
 Bradley, J. N., on Shock Waves in Chemistry and Physics (book), 220; (review), 655-656
 Bradma Inserta mailing machine (Adrema Ltd.), 14
 Bradwell atomic power station, 300
 Brady, R. A., on Organization, Automation and Society (review), 480
 Bragg, S. L., on Rocket Engines (review), 358
 Brain as computer, by F. H. George (review), 791
 Braithwaite & Co. Engineers Ltd., position and prospects, 381; Tasman Bridge, 381; partnership with Reed & Mallik Ltd., 381
 Braithwaite & Co. Structural Ltd., structural steelwork (trade publication), 422
 Brake blocks, Ferodo, for rail tank wagons, 432
 — Control system, Magneti Marelli (Trico-Folberth Ltd.), 433
 — Disc, Dunlop, cars fitted with, 740
 — Trials on railway rolling stock, 661
 — (Wichita Ltd.), 610
 — Electro-magnetic (trade publication), 252
 — Folding, Universal (Keeton, Sons & Co., Ltd.), 541
 — See also *Dynamometer*
- Braking device, anti-lock, Dunlop, 601
 — System, Maxeret, Dunlop, 601
 — Railway train, Westcode (Westinghouse Brake & Signal Co. Ltd.), 398
 Braman Investments Ltd., new name for Plow-right Bros. Ltd., 581
 Brand, Arthur, Refrigeration Ltd., to be renamed Gardiner Presicold (Western) Ltd., 49
 Brand, Charles, & Co. Ltd., Belfast refinery for BP Co., 73
 Brandenburg Ltd., regulated power supply, 79; high energy beam supplies, 238
 Braniff International Airlines, orders placed for six One-Eleven aircraft, 136
 Brasshouse, Peter, Ltd., PB aligning press, 441
 Braunstone pneumatic press (A. A. Jones & Shipman Ltd.), 142
 Brazing and soldering of metals, by N. F. Lashko and S. V. Lashko-Avakyan (book), 88; (review), 854
 "Bread Board" unit for paper research (Albert E. Reed & Co. Ltd.), 756
 Breaker, impact, Wakefield (Construction Machinery Ltd.), 674
 Breakwater, perforated (National Research Council of Canada), 775
 Brecon immersion heater (Santon Ltd.), 292
 Bren Manufacturing Co., development of high speed tinplate classifying machine, 778-779
 Brett Daniels, position and prospects, 81
 Brewer, F. J., on paint drying by gas fired infrared radiation, 780
 Brewery vessel made from stainless steel clad steel, 453
 Brewing system, Steinecker Hydro-Automatic, 453
 Bridge, alloy steel, brittle fracture of, 375
 — Bailey, and Uniflote handbook, by E. Aubury (book), 817
 — Concrete, design, by R. E. Rowe (book), 817
 — Over River Ayr, 503
 — Plastic coating for (E. Earnshaw & Co. Ltd.), 75
 — Girders. See *Girders*
 — King Street, repairs to, 375
 — Medway, safety nets for (London Spinning Co.), 203
 — River Hackensack, 105
 — Road, at Floriston (British Railways), 203
 — Severn, 695. See *Correction* 747
 — Steel girder, BS 153, Part 3B—Stresses, revision in part by British Welding Research Association, 695
 — Girder, by J. McHardy Young, 839
 — Suspension, River Severn, steel cables for (Dorman Long (Steel) Ltd.), 789
 — Tasman (Braithwaite & Co. Engineers Ltd.), 381
 — Tower, use of Spandofomo in repairs to, 357
 — Vincent Thomas, Los Angeles, 605
 — Waterloo, realigning approaches, 641
 — Yakima, Delta girder construction of, 267
 — See also *Viaduct*
- Bridges, Stanley, Ltd., cabinet set of tools, 396
 Bridgewater, G. & T., Ltd., chocolate wafers, 28
 Bridgman, P. W., on Logic of Modern Physics, 754
 Bridging, Bailey (trade publication), 592
 Brierley, J., on Parking of Motor Vehicles (book), 692
 Brightside Engineering Holdings Ltd., G. Firth appointed deputy chairman, 813
 Brightside Group, Graham Firth Steel Products Ltd. to join, 813
- Bristol Aeroplane Co. Ltd., Bulldog aircraft, 245
 "Bristol-fashion" work study training, 586-587
 Bristol Siddeley Engines Ltd., Randalrak tool store installed, 21; heat treatment furnaces from BWG Furnaces Ltd., 175; Gnome engines for helicopters, 201; Nimbus shaft turbine engine, 201; gas turbine stand by generating plant for CEGB, 232; Olympus turbojet engine, 245-247; historical note, 245, 247; development of engine for Concord supersonic airliner, 734
 Bristol Siddeley Ltd., gas bearing pumps and compressors, 345
 Bristol Street Motors Ltd., first UK outlet for Gulf petrol, 436
 Bristol T188 research aircraft, 259
 Britain, anatomy of, by A. Sampson (review), 359
 — Structure of industry in, by G. C. Allen (review), 23
 Britain's Motor shop window, 401
 Britannia House, Brussels, to be built by Jackblock building system, 775
 Britax (London) Ltr., cinema film, The Other Fellow, 769
 Britax motor car seat belt, 433
 British Aircraft Corp., One-Eleven aircraft ordered by Mohawk Airlines and Braniff International Airlines, 136; aircraft for Kuwait Airways, 201; orders from Farnborough Air Show, 372; Concord supersonic airliner, 661; agreement with Sud Aviation on design of Concord supersonic airliner, 734
 British Aluminium Co. Ltd., aluminium/kraft paper insulation, 83; mobile exhibition vehicle, 404
 — and American technology in the 19th Century, by H. J. Habakuk (review), 726
 — Association (Manchester Meeting), 293; presidential address by Sir John Cockcroft, 293; presidential address by W. B. Reddaway, 293; Manufacture of Flat Glass at Pilkingtons, by L. H. A. Pilkington, 308-310; Use of Radiation to Improve Materials, by Dr. R. Roberts, 311-312
 — for Commercial and Industrial Education, annual conference, 244; presidential address by Sir Willis Jackson, 429; conference, 446, 447; course for training officers, 483-484; conference on White Paper on industrial training, 765; conference on trends in apprenticeship training, 824
 — of Corrosion Engineers, summer school, 211
 — of Machine Tool Merchants, annual luncheon, 701
 British Bombardier tanker, stopping tests on, 296
 British-Borax (Holdings) Group, new depot in Rotterdam, 305
 British Broadcasting Corp., research scholarship awarded to D. M. Kitching, 315
 British Celophane Ltd., Pentaphane plastic tank lining, 589
 British Central Electricity Co. Ltd., deconstructors, 79
 — Chemical Plant Manufacturers Association, chemical plant (trade publication), 456
 — Coal Utilization Research Association, coal utilization, 225; annual report, 225
 — Columbia Hydro & Power Authority, Portage Mountain Dam, 641
 — Commonwealth. See *Commonwealth*
- British & Commonwealth Shipping Co., *Clan Macgillivray*, cargo ship, 331
 — Constructional Steelworks Association, Composite Construction for Steel Frames Buildings, 107; Notes on the Use of BS 153:3A (1954) and parts 3B and 4 (1958) (Including Amendments 1, 2, 3 and 4) for Steel Girder Bridges, 839
 — Council, Overseas Students in Britain, 585
 — Electrical and Allied Manufacturers Association, joint mission to Sweden with British Engineers' Association, 372
 — Development Association, Cosier in Winter, 764
 British Electrical Engineering Co., radio telescope for Manchester University, 436
 British Electronic Industries Ltd., position and prospects, 613
 — Engineers' Association, joint mission to Sweden with BEAMA, 372
 British European Airways, de Havilland Trident aircraft on order, 258; use of dismantling fluids, 356
 — Exhibition at Stockholm, 104
 — Firms, making them European minded, 612
 — Fortnight Exhibition at Geneva, 104
 British Hoist & Crane Co. Ltd., heavy duty lift truck, 79
 British Home Entertainment Ltd., television by slotmeter payment, 65
 British Hussar tanker (BP Tanker Co. Ltd.), 858
 British Hydrocarbon Chemicals Ltd., use of plastic coated pipework, 82
 British Hydromechanics Research Association, open days at, 712; model tests on Sizewell atomic power station cooling water intakes, 712
 British Indicators Ltd., Concentri-Chek instrument for checking hole location, 672
 British Indicators (Sales) Ltd., dial indicator holders, 411
 British Industrial Equipment Exhibition, Bucharest, 529
 British Industrial Plastics Ltd., historical note, 558; formation of BIP Chemicals Ltd., 558; formation of BIP Tools Ltd., 558
 — Industry, disincentives within, by A. J. M. Sykes, 167-168
 — Pattern of research in, conference on, 77, 103
 — and town planning, by A. Goss (review), 758
 — Institute of Management, opening address to conference by Sir Robert Shone, 150; speakers for annual conference, 384; course in management practice, 649;
- national conference, 687; conference on Common Market, 738
 — Institution of Radio Engineers, symposium on masers and lasers, 770
 British Insulated Callender's Cables Ltd., Rotocrimp crimping tool, 207; cable car control equipment for NCB, 277; masts for Decca radar stations, 573; overhead line crossing of River Forth, 605. See *Correction*, 713; shareholding of Mount Lyell Investments Ltd. in Metal Manufacturers Ltd. acquired, 645; cables for Liverpool University tandem Van de Graaf accelerator, 762
 British Insulated Callender's Construction Ltd., new television aerial for ITA at Croydon, 773; electrification of Euston/Crewe railway line, 804
 — Interplanetary Society, symposium on materials in space, 231
 — Iron and Steel Federation, courses on foreign languages, 33; technical dictionaries, 33; comparison of standards of wrought steel, 621; Management College, senior sales course, 637
 — and Steel Research Association, experimental rolling mill, 21
 British Jeffrey-Diamond Ltd., self-loading dump truck, 840
 — Junior Chambers of Commerce, Apprentice of the Year Award, 57
 — Launderers' Research Association, prototype automatic laundering machine, 100
 — Lighting Council, advice on lighting, 428
 British Merlin tanker for BP Ltd. (Harland & Wolff Ltd.), 479
 British Motor Corp. Ltd., agreement with Etablissements Willem of Paris, 44; Morris 1100 motor car, 194-195; Dunlop Pneuride suspension for commercial vehicles, 333; orders from US and Canada 529; standard range of diesel motor cars, 669; three millionth export vehicle as gift to League of Red Cross Societies, 708; 500,000th Mini motor car, 836; improved performance Mini-Cooper motor car, 836
 — Nuclear Energy Society, Education in Nuclear Energy, 448
 British Nylon Spinners Ltd., nylon mooring ropes, 217; agreement with ICI of Australia and New Zealand Ltd., and BNS Australia Pty. Ltd., 436; nylon products (trade publication), 817
 — Occupational Hygiene Society, conference of, 397
 British Overseas Airways Corp., Vickers VC10 aircraft on order, 258; deficits, 461; Vickers VC10 aircraft flight simulators (Redifon Ltd.), 827
 British Overseas Fairs Ltd., British Exhibition at Stockholm, 104; British Fortnight at Geneva, 104
 British Oxygen Co. Ltd., Argomix gas for shielded welding, 19; cinema film on propane, 73; propane installation for Aviation Traders (Engineering) Ltd., 81; aluminium tanks for liquid oxygen, 83; computer controlled automatic flame cutter, 274; centralized oxygen plant for Colvilles Group, 338; Tonnox oxygen equipment for Spencer Steel Works, 534; acquisition of electrode and equipment business of Cooper & Turner Ltd., 845
 British Oxygen Engineering Co. Ltd., automatic plant for drying insulant powder, 338; liquid gas storage vessels, 338
 British Petroleum Co. Ltd., contracts awarded for Belfast refinery, 73; Ferranti Mercury computer used for planning overhaul of refinery, 159; vacation training for undergraduates, 244; new London head office for, 404
 British Petroleum. See also *BP*
 — Plain Words on, 264
 — Productivity Council, togetherness and training in National Productivity Year, 722
 — Radio Valve Manufacturers Association, formation of Electronic Industries Supply Board, 413
 British Railways, Dr. Beeching's plans for, 65; use of prefabricated level crossings, 107; road bridge at Floriston, 203; redundancy in, 257; timetable, computer prepared, 273; modernization plans of, 365; diesel electric locomotives for, 436; diesel-electric locomotives for (Clayton Equipment Co. Ltd.), 527; loss of traffic, 565; potential traffic, 565; use of Boyer Scharz track relaying gantry, 573; plans to improve, 609; replacement of Harringay West/Hornsey viaduct, 641; trials of disc brakes on rolling stock, 661; route statistics, 701; modernization programme, 740; use of point heaters to combat snow and ice, 797; Type 4 diesel electric locomotive, 799; electrification of Euston-Crewe line (British Insulated Callender's Construction Co. Ltd.), 804
 — Road Services, cooperation with Road Haulage Association for quick turn round of lorries campaign, 493
 British Ropes Ltd., prestressing wire and strand (trade publication), 360; Darfen Arrestor Safety Barrier for motorways, 433. See *LETTER*, 570
 — Ship Research Association, ship stopping tests, 293, 296; tanker stopping tests, 296
 British Space Development Co. Ltd., contribution by Decca Radar Ltd., 413
 British Spares Corp. Ltd., Muller sheet pile driver, 776
 — Standards Institution, pressure vessel nozzles, 66. See *LETTER*, 496; *Glossary of Terms in Work Study*, 416; dynamic test rig for car seat belts, 501; austenitic iron castings, 620; comparison of standards of wrought steel, 621
 — Steel industry, history of, by J. C. Carr and W. Taplin (review), 251
 British Steel Piling Co. Ltd., aluminium pipe made by helical welding, 409
 — Steel Works Plant Association visit by Benelux party, 436
 — Stone Federation, booklet on fixing structural claddings, 173

- British Thermostat Ltd., subsidiaries of, 313
 — Trade in the Common Market: Plain Facts about the Common Market, by C. Clark (book), 288
 — Fair, Bucharest, orders placed with Parkinson Cowan International Ltd., 772
 — Transistor, Diode and Semi-conductor Devices Data Annual, 1962-63, by G. W. A. Dummer and J. M. Robertson (book), 456
 — Transport Commission, development of linear induction motor, 97; disposal of disused railway lines, 503; studies of flow of rail traffic and other transport systems, 565; pilot scheme for automatic records of wagon movements, 632; demonstration of linear induction motor for rail traction, 731
 British United Airways, World's first Hovercraft service, 65; Hovercraft scheduled service, 98-99; Hovercraft service, 525
British Welding Journal, 278
 British Welding Research Association, investigation of fatigue resistance of welded steel plate girders, 11; investigation of projection welding for NATO, 31; fatigue tests on bridge girders, 105; functions of, 278; laboratory furnace, 325; training conferences, 485; revision of part of BS 153—Steel Girder Bridges, Part 3B—Stresses, 695
 Brittain, Dr. R., on river technology and historical development, 553
 Brittle fracture of alloy steel bridge, 375
 — Design hazards in, by G. M. Boyd, 530
 — of steel, 594
 — Story, by C. F. Tipper (review), 183
 Britton, G. B., & Sons Ltd., new production building (John Laing & Son Ltd.), 17
 BRM motor car, by B. Lister, 833
 Brno Trade Fair, 44, 412, 423
 Broaching machine, continuous, Lapointe (Lapointe Machine Tool Co.), 646-648
 Broadcasts, trial, of 1922, recalling, by B. N. MacLarty, 729
 Broadcasting, Pilkington Committee report on, 1
 — Sound and television, general principles, by K. R. Sturley (review), 791
 Brockhouse, J., on J. Brockhouse and Co. Ltd., 749
 Brockhouse, J., & Co. Ltd., pre-apprentice training, 485; position and prospects, 749; subsidiaries of, 749
 Broken Hill (trade publication), 624
 Broken Hill Proprietary Co. Ltd., oxygen steelmaking furnace for (Davy-Ashmore Group), 68-69
 Bronx Engineering Co. Ltd., edge bending press for Czechoslovakia, 672
 Bronzes, continuous cast (trade publication), 792
 Brook, E. J. L., on Lesbrook Ltd., 113
 Brook-Partridge, B., on translations for industry, 230-231
 Brookes, B. C., review of Use of English for Technical Students, 154; review of Technical Report Writing: Manual and Source Book, 154; biographical note, 156; on an exciting new University emerges, 210
 Brookhirst Igranite Ltd., electric control gear for Spencer Steel Works, 532
 Brooks, J. B., Industries Ltd., acquired by Harris & Sheldon (Holdings) Ltd., 685
 Broom & Wade Ltd., temperature conversion table (trade publication), 456; Par-A-Matic air tools, 611
 Broom, Dr. W. E. J., on energy requirements, 716
 Brotherhood, Peter, Ltd., position and prospects, 685
 Brotton, D. M., on Application of Digital Computers to Structural Engineering Problems (book), 624
 Broughton, J., & Son (Engineers) Ltd., pedal control, 411
 Brown Boveri Ltd., use of Nomag non-magnetic cast iron, 114
 Brown, David, Industries, Ltd., 25 ton gear blank, 237
 Brown, David, Tractors Ltd., use of Loctite sealant resin, 388
 Brown, David, Tractor Sales Ltd., use of ceramic coated exhaust pipes, 115
 Brown, Donald (Brownall), Ltd., hydraulic valves, 744
 Brown, E. H., on size effects in models of structures, 593-595
 Brown, F. H. S., on High Marnham power station, 501
 Brown GMS/Dan marine steering control system (S. G. Brown Ltd.), 798
 Brown, J., on Radio Surface Waves (review), 218; on British Standard for pressure vessels, 496
 Brown, J. A. C., on productive activity, 829
 Brown, John, & Co. (Clydebank) Ltd., J. Rannie appointed deputy managing director, 613; G. Strachan appointed deputy managing director, 613
 Brown, John, & Co. Ltd., position and prospects, 349; subsidiaries of, 349
 Brown, John, & Sons Ltd., use of tower cranes in shipyards, 43
 Brown Lennox & Co. Ltd., modernization programme, 109; working agreement with Planet Corp. Inc., 109; historical note, 109; steel castings (trade publication), 184; chain and lifting gear (trade publication), 288
 Brown, Sir Samuel, biographical note, 109
 Brown, S. G., Ltd., Brown GMS/Dan marine steering control system, 798; Arma/Brown gyro compass, 798
 Brown, W., on Piecework Abandoned: Effect of Wage Incentive Systems on Managerial Authority (review), 655; on Exploration in Management (book), 754
 Brown, William, & Co. (Ipswich) Ltd., Caromic Di-Grid timber roofing system, 472
 Bruins, B. D. H., on Tools and Machine Tools (review), 691
 Brunauer, Dr. S., on tobermorite gel, 137
 Brunel College of Technology, course on oil hydraulics, 352
 Brunswick University, award of Doctorate of Engineering to J. D. Pearson, 851
 Brush Electrical Engineering Co. Ltd., Falcon diesel electric locomotive, 799
 — Rotary wire (trade publication), 817
 Bruton, E., on Dictionary of Clocks and Watches (book), 124
 BTR Industries Ltd., fan belts (trade publication), 592; integration of Microcell Ltd. with Palmer Aero Product Ltd., 613; plastic hose, 689
 BTR inflatable framework tubes, 284
 Bubbles, air, to dampen underwater shock waves, (Atlas Copco Ltd.). See LETTER, 70
 Buccaneer aircraft, order placed by South Africa (Blackburn Aircraft Ltd.), 501
 Buchan, S., on water resources, 629
 Buchanan Silver Medal awarded to K. Mathieson, 485
 Bucharest, British Industrial Equipment Exhibition, 529
 — British Trade Fair, orders placed with Parkinson Cowan International Ltd., 772
 Buck & Hickman Ltd., portable electric drill, 379
 Buck, N. L., on Mechanical Measurements (book), 184
 Buckland, W. R., on Cambridge Don examines his bookshelf, 634
 Buckle, G. H., & Partners, new London offices for British Petroleum Co., 404
 Buensod-Stacey Corp., licence to Andrew Air Conditioning Ltd., 100
 Builder, survey on building industry, 661
 Building Acts, 225
 — Angle (Apton Ltd.), 492
 — Apprenticeships, shorter ones confirmed, 211
 — Centre, travelling scholarships, 619
 — Contracts and practice, Emden and Watson's by W. H. Gill (review), 324
 — Customers' requirements in, 376
 — Domestic, bringing up to date, 376
 — Factory made (Taylor-Woodrow Anglian Ltd.), 74
 — Geodesic, plastic, 339
 — with glass reinforced plastics, by C. Hayes, 339-340
 — House, costs of, 808
 — Goes into the factory, 74
 — Industry, aluminium in, 809
 — — Conservative methods in, 597
 — — Innovation in, 329
 — — Modernization of methods, 329
 — — Streamlining of, 89
 — — Survey, 661
 — Innovation in, 376
 — Materials, 376
 — Precast concrete, 444
 — Project calculations, computers for, 473
 — Research, Congress on, 134
 — — International Council for, conference of, 329
 — — Station, lightweight concretes, 203; *Index of Exposure to Driving Rain*, 340; 100 ton load cell for piling loading tests, 693-695
 — Scheme, Barbican, 138
 — Site production line, Sectra system (John Laing & Son Ltd., and L. Quentin), 267
 — Statistics, 808
 — Systems, 461
 — — Jackblock (Richard Costain (Construction) Ltd.), 711
 — — Jackblock, to be used on Britannia House, Brussels, 775
 — See also *Concrete Buildings*, Arcon (Taylor, Woodrow & Co. Ltd.), 407
 — Multi-storey, model for wind tunnel tests, 10
 — Multi-storey, wind pressures on, by B. G. de Bray, 10-11
 — Solar radiation problems in (DSIR Report), 1
 — Standard (trade publication), 24
 — Steel framed, composite construction for (British Constructional Steelworks Association booklet), 107
 Bulgarian Trade Mission, contracts to British industry, 44
 Bulketers, Avery-Hardoll, 562
 Bulldog aircraft (Bristol Aeroplane Co.), 245
 — Pushmatic circuit breakers (H. J. Baldwin), 79
 Bullows, Alfred, & Sons Ltd., Binks-Bullows Compact spray painting plant, 112; Titan airless spray painting unit, 841
 Bunn & Johnson Ltd., gasket clamps, 735
 Bundy, Dr. F. P., development of diamonds from graphite without catalysis process, 490
 Buoy, manned, for under-water research, 289
 Bureau of Standards. See *United States National*
 Burgess Co., bandsaw, 396
 Burgess Products Co. Ltd., micro-switches (trade publication), 184; Vibro-Tool engraving tool, 811; BVI electric can opener, 828
 Burke, H., on National Productivity Year, 733
 Burkinshaw, W. A., film on work sampling, 686
 Burman, S. F., on Serck Ltd., 685
 Burnall open fire with back boiler (Baxi Ltd.), 796
 Burndept Ltd., aircraft transmitter/receiver, 294; power meters (trade publication), 856
 Burner control, automatic (trade publication), 856
 — Gas, control (trade publication), 124
 — Oil, control for (Elcontrol Ltd.), 542
 — — Miniature, using ultrasonics (Esso), 128
 — — Puriper (Gothic Engineering Co. Ltd.), 379
 — — (Riley (IC) Products Ltd.), 379
 — Propane (Keith Blackman Ltd.), 108
 Burnet, Sir John, Tait and Partners, Manchester HQ of Co-operative Insurance Society Ltd., 573
 Burns, T. F., & Partners, dry dock for Vickers-Armstrongs, 442-443
 Burntisland Shipbuilding Co., alterations to Fife Docks, 377
 Burrows, C. R., research on transmission systems, 628
 Burton, C. V., on sideslip in motor cars, 832
 Burton Mount Corp., microfilm reader and printer, 290
 Bus chassis, Fleetline, for Birmingham Corp. (Transport Vehicles (Daimler) Ltd.), 136
 Bus Electronic Scanning Indicator, Plain Words on, 400. See LETTER, 102
 Bus, Routemaster (London Transport Executive), 385-387
 — Service, Green Line, Routemaster coaches for, 35
 Bush Radio, merger with Murphy Radio, 845
 Business Efficiency Exhibition, 461, 476
 Butcher, on definition of units, 612
 Butchers' supplies and meat machinery exhibition, 166
 Butland, A. N., road bridge design at Floristan for British Railways, 203
 Butterfield, A. J., on W. P. Butterfield Ltd., 177
 Butterfield, W. P. (Engineers) Ltd., road tanker with plastic tank for Smith and Robinson (Leeds) Ltd, 452
 Butterfield, W. P., Ltd., position and prospects, 177; profits, 177; range of products, 177; associated companies, 177; agreement with Ryan Industries Inc., 177
 Butters Bros. & Co. Ltd., cranes for St. John Shipbuilding and Drydock Co. Ltd., 768
 Butyl/hypalon cable (AEI Ltd.), 189
 Buzzer, electric (GEC), 700
 — — Minibuzzer (V. & E. Friedland Ltd.), 700
 BVI electric can opener (Burgess Products Co. Ltd.), 828
 By-Pass, Newport, contracts for, 136
 Byrd, A. A., & Co. Ltd., use of fibreboard clad polyethylene containers, 188
- ## C
- CABINETS and consoles (trade publication), 184
 — (Plessey Co. Ltd.), 15
 Cable, butyl/hypalon (AEI Ltd.), 189
 — Covering machine, automatic (General Engineering Co. (Radcliffe) Ltd.), 53
 — Ducting. See *Ducting*
 — Glands (trade publication), 252
 — Heat resistant, uses of, 452
 — Link between New Zealand and Fiji (Standard Telephones & Cables Ltd.), 772
 — Niplas, heat resistant (Greengate & Irwell Rubber Co. Ltd.), 452
 — Steel, for River Severn suspension bridge (Dorman Long (Steel) Ltd.), 789
 — Submarine, transistor repeaters for, 325
 — System, COMPAC, 772
 — — Mains, plastic insulated, symposium on, 41
 — See also *Power transmission*
 Cable & Wireless Ltd., COMPAC cable system, 772
 Caesium diode, 255
 — Plasmas, Stanford University, 256
 Calabro, S. R., on Reliability Principles and Practice (review), 155
 Calcium silicate insulating material, Caposil (Cape Insulating and Asbestos Products Ltd.), 51
 — — Insulation, Newtherm (Newalls Insulation Co. Ltd.), 652
 Calculating machines, Charles Babbage and his, by P. Morrison and E. Morrison (book), 288
 Calculations and engineering science for craftsmen in engineering industries, by W. E. Fisher (book), 514
 Calder Hall type atomic reactor, 696
 Calder, R. K., on Solar Industries Ltd., 613
 Caldwell, J., on power station in a cooling tower, 706-707
 Calgary Power Ltd., walking draglines for (Ransomes & Rapier Ltd.), 67
 California University, FLIP floating instrument platform for underwater research, 289
 Calor Gas (Distributing) Co. Ltd., liquid propane for Spencer Steel Works, 536
 Calver, C. M. G., Ltd., dividing head (trade publication), 124
 Cambridge don examines his bookshelf, 314-315; See LETTERS, 402, 496, 530, 602, 634, 707
 Cambridge Instruments Co. Ltd., instruments (trade publication), 220; Microscan X-ray analyser, 732; model 49 pyrometer for use on fast moving surfaces, 768
 — Timberproofing Laboratories Actane damp-proof renderings and damp courses, 789
 — University, Social Accounting Matrix, 65; artificial sky for daylighting studies, 76; constant strain testing machine, 172; financial aid for research from Rockefeller Foundation, 193; Edsac 2 computer, 274; Russian language course, 280; artificial sky now calibrated, 809
 Camera, Advocate (Ilford Ltd.), 119
 — Colour photomicrography with 35 mm. by C. H. S. Tupholm (review), 590
 — Fibre optics image dissection, 659-660
 — Periphery (Research Engineers Ltd.), 110
 — Polaroid, for industry (Polaroid Corp.), 164
 — Sportsman Vario 35 mm (Ilford Ltd.), 119-121
 — Sportsmaster (Ilford Ltd.), 119
 — Television, EMI, marketing rights for Clarke and Smith Ltd., 44
 Cammell Laird Ltd., standardized shipping, 529
 Campbell & Isherwood Ltd., lighting at Spencer Steel Works, 536
 Campbell, R. C., on Edsac 2 computer, 275
 Camping trailer "341" (M. F. Robertshaw Ltd.), 160
 Complex convecter heaters (Simplex Dairy Equipment Co. Ltd.), 292
 Camrex paints, 479
 Can opener, electric, BVI (Burgess Products Co. Ltd.), 828
 — — Electric (Sunbeam Electric Ltd.), 828
 Canada, science in, by Prof. D. Fleming, 553
 Canadian Overseas Telecommunication Corp., COMPAC cable system, 772
 Canadian Westinghouse Co., Lifeguard mercury discharge lamp, 800
 Canning, W., & Co. Ltd., plating developments (trade publication), 422; position and prospects, 581; subsidiaries of, 581
 Canopair air curtain canopy (F. Bracey & Sons of Bennington Ltd.), 800
 Canopy, air curtain, Canopair (F. Bracey & Sons of Bennington Ltd.), 800
 — Ansar (Narvida Appliances Ltd.), 564
 Cant, B. R., to continue as managing director of Hamworthy Engineering Ltd., 477
 Canterbury, Archbishop of, on Faith: the Response, 485
 Cantor Lecture, 829
 Capacitors, tantalum, sealing of, 649
 — Teflon film (Salford Electrical Instruments Ltd.), 206
 Cape Engineering Co. Ltd., Cape-Waine anaesthetic machine, 702-703
 Cape Insulation and Asbestos Products, Ltd., Caposil calcium silicate insulating material, 51
 Cape-Waine anaesthetic machine (Cape Engineering Co. Ltd.), 702-703
 Caposil calcium silicate insulating material (Cape Insulation and Asbestos Products Ltd.), 51
 Capri, Consul, motor car, Ford, road test of, 263; engine of, 433
 Capricorn. See *Plain Words* articles
 Car, motor. See *Motor car*
 — Rail. See *Railcar*
 — Shuttle (Qualter, Hall & Co. Ltd.), 144
 Carbo-nitriding with town gas (trade publication), 728
 Carbon content tester (George Kent Ltd.), 110
 — Dioxide, solid, Drikold (ICI Ltd.), 653
 — Oxidation in weld pool during metal-arc welding of plain carbon steels, by A. Aplod (book), 624
 Carborundum Co. Ltd., "Carbotrol 7" barrel finishing equipment, 205; manufacture and use of instructional films, 585; cinema film *Man in Charge*, 585; cinema film *Wider View*, 585
 Carbotrol-7 barrel finishing equipment (Carborundum Co. Ltd.), 205
 Carburizing with town gas (trade publication), 728
 Cards, edge punched, Paramount, 545
 Cardio-Vascular surgery, European Society of, Congress of, 191
 Careers, choice of (HMSO booklet), 89
Careers Guide—Opportunities in the Professions, Industry and Commerce, 723
 Careers, industrial, finding out about, 687
 Carey, B. R., appointed business manager of Marconi's Mechanical Products Division, 845
 Cargo and passenger ship, atomic propelled, *Savannah*, 4
 — Ship. See *Ship*
 Carlile, T., on Supervisory Training Services, 618
 Carlyle Air Conditioning & Refrigeration Co. Ltd., refrigeration compressor, 380
 Carmichael, A. M., Ltd., concrete bridge over River Ayr, 503
 Caromic Di-Grid timber roofing system (William Brown & Co. (Ipswich) Ltd.), 472
 Carquid Ltd., Carquid folding garage, 64
 Carr, J. C., on History of the British Steel Industry (review), 251
 Carr Report—*Training for Skill*, 244
 Carr Report on industrial training, 2, 850
 Carrier Engineering Co. Ltd., Marinair air conditioning for *Northern Star* liner, 34; position and prospects, 781
 Carroll, G. C., on Industrial Process Measuring Instruments (book), 124
 Carroll-Porzynski, C. Z., on Advances Materials (book), 88
 Carron, W. J., on shift working, 741
 Carruthers, J. H., & Co. Ltd., Monobox overhead travelling crane for William Hamilton & Co. Ltd., 261
 Carson Bros. Ltd., Managerial desk, 628
 Carter Thermal Engineering Ltd., gas cooler, 240; Airajust ductless air conditioning, 662
 Carvair car ferry aircraft (Aviation Traders (Engineering) Ltd.), 81
 Carver & Co. (Engineers) Ltd., heavy duty clamp, 777
 Casella, C. E., & Co. Ltd., scientific instruments (trade publication), 124
 Cashmore, J. F. M., & Partners, new London offices for British Petroleum Co., 404
 Cassidy, E. C., fast opening photographic shutter, 737
 Cassie, Professor W. F., on International Road Federation Conference, 746
 Cast bronzes (trade publication), 792
 — Gunmetals (trade publication), 792
 — Iron. See *Iron*
 Castan, development of epoxy resins, 236
 Castillo, on hydroelectric power resources, 638
 Casting, continuous, at Scunthorpe, 140-141
 — Machine, continuous, Concast/Distington (Distington Engineering Co. Ltd.), 710
 — Specifications, use of, 557
 Castings, austenitic iron, exhibition of, 620-621
 — Heavy iron, Quenchweld welding method for (Ejutectic), 478-479
 — Investment, new alloys for (P. I. Castings (Aitricham) Ltd.), 653
 Castings Ltd., record turnover, 177; position and prospects, 177
 Castings for Printomers (Ferranti Ltd.), 114
 — Stainless steel (AB Bofors), 689
 — Steel (trade publication), 184
 Castors, ball, heavy duty (Alwayse Castor Co. Ltd.), 642
 Castrol Group, research establishment, 581
 Castrol Industrial Ltd., taking impressions of pitted gear teeth, 644
 CAT. See *College of Advanced Technology Catalogue of Courses on Nuclear Energy* (European Nuclear Energy Agency publication), 384
 Cathedral, Coventry (John Laing Construction Ltd.), 17
 Cathode ray polarography (trade publication), 514
 Cathodic protection, Gardion, on ship *Gladstone Star*, 621
 — — Titanium anodes for, 678

- Cation exchange material, Zero-Karb, 807
 Cattermole, H. S., & Co. (Hydraulics) Ltd., position and prospects, 581
 Cauldwell, J., on steam set capacity, 639
 Caulking car body joints, Neoprene, 357
 Cavitation damage, 459
 — Influence of physical properties of liquid on severity of, by R. W. Wilson, 459-460
 Cayley, Sir George, aeronautics, by C. H. Gibbs-Smith (book), 422; (review), 654
 Ceiling panels, translucent Series 60 (Isora Illuminating Ceilings Ltd.), 173
 Cell, fuel. See *Fuel cell*
 — Load, 100 ton, for piling tests, by T. Whitaker and R. W. Cooke, 693-695
 Cellon-Docker polyurethane paint, protection for Vickers hovercraft VA 3, 557
 Cement chemistry and physics for civil engineers, by W. Czernin (book), 656
 Cement and Concrete Association, research on pressure of concrete on formwork, 11; *Design Notes and Specifications for Concrete from Rough Formwork*, 105; conference on housing from the factory, 502; Smithfield Poultry Market, 640; ABC of Prestressed Concrete, by M. R. Hollington, 775
 — Plants for Pakistan and Saudi Arabia, 75
 — Stabilized soil road bases, 699
 — See also *Concrete*
 Cenco Instruments Corp., electron spin resonance spectrometer, 159
 Census of production, 329
 Centenary of plastics, 434
 Central African Airways, order placed for One-Eleven aircraft, 469
 Central Council of Church Bell Ringers, rules for bell ringing, 797
 Central Electricity Generating Board, transformers orders to English Electric Co. Ltd., and Fuller Electric Ltd., 12; transformers ordered from AEI Ltd. and Ferranti Ltd., 44; proposals for Ironbridge "B" power station, 104; investigations for power station at Pwllcrochan, 173; application to Ministry of Power for power station at Aberthaw, 173; atomic power stations of, 225; stand by gas turbine generating plant ordered from Bristol Siddeley Engines Ltd., 232; order placed for four Avon generating units, 262; some points of interest in the design and operation of the system, by Sir Christopher Hinton, 279; electricity from nuclear power by Christmas, 300; increased capacity of Wylfa atomic power station, 364; report and accounts, 365; orders to John Thompson Water Tube Boilers Ltd., Ltd., and Clarke Chapman and Co. Ltd., 372; Fawley power station, 372; increasing demand for coal by, 501; gas-turbine generating sets from English Electric Co. Ltd., 637; cable ordered from Pirelli General Cable Works Ltd., 673; winter electricity demand curve, 766
 — Heating. See *Heating*
 Central Manufacturing & Trading Co. (Dudley) Ltd., Motocone road obstruction marker cones, 708
 — Office of Information, *Nuclear Energy in Britain*, 225
 — Youth Employment Executive, *Careers Guide—Opportunities in the Professions, Industry and Commerce*, 723
 Centrax Ltd., power and heating from gas-turbine unit, 704
 Centre Technique des Industries de la Fonderie, E. A. Roper & Co. Ltd., as licensees, 52
 Centrelock self-locking nuts (Whitehouse Industries Ltd.), 208
 Centrifugal pump. See *Pump*
 Centrifuge units (Aero Controls Ltd.), 296
 Centrum Electronics Ltd., intercom unit, 840
 Centurion tank, 630
 Ceramic, alumina. See *Alumina*
 — Coated exhaust pipes (Rustless Iron Co.), 115
 — Container for water heater, 146
 — Material, Electrox (Royal Worcester Industrial Ceramics Ltd.), 60
 — Regalox (Royal Worcester Industrial Ceramics Ltd.), 58-60
 Ceramic/metal material, comments on, 18-19
 Ceramic/metal material, Metamic (Morganite Research & Development Ltd.), 18-19
 Ceramic wire drawing cones (Royal Worcester Industrial Ceramics Ltd.), 471
 Ceramics, engineering, mechanical properties of, by W. W. Krieger and H. Palmour (book), 184
 — for turbine blading, 852
 Cercote resin coating (Stuart B. Dickens Ltd.), 189
 Cermets: a hope that did not materialize, by E. Glenny, 852
 — for turbine blading, 852
 Certificate of craftsmanship, foundry apprentice, City and Guilds, 383
 Chadwick, W. L., on simulation equipment, 639
 Chain and lifting gear (Trade publication), 288
 Chambers of Commerce, Association of British. See *Association*
 Chambers, John, & Son Ltd., visit by D. R. S. Turner, 469
 Champion Super spray gun (H. Singer Ltd.), 306
 Chance Bros. Ltd., use of dismantling fluids, 356
 Chancery Insulations Ltd., insulation for diesel rail coaches, 432
 Changes, rapid, photographing (Bell), 659
 — Resistance to, 812
 Channel, circulating water, for ship research, 290
 Channel Tool Distributors Ltd., VMS circular saw, 579
 Channel Tunnel, 605
 Chantiers Augustin-Normand, association with Babcock & Wilcox Ltd., 397
 Chapman & Hall Ltd., *Computable Model of Economic Growth*, 65
 Charbonnage de France, coal vending machine, 256
 Charchut, W., on Chip Removing Machine Tools (review), 691
 Chard, F. de la C., on Power System Engineering (review), 480
 Charger, battery, miniature (Multitone Electric Co. Ltd.), 732
 Chariot Project atomic excavation experiment (USAEC), 396
 Charlton, T. M., on Analysis of Statically Indeterminate Frameworks (review), 22
 Chart, design, by L. L. Jones (review), 391
 — Wall (trade publication), 456
 Chatburn & Chantry Ltd., roller hearth furnace for Heeley Rolling Mills Ltd., 807; stretch straightener, 841
 Checkmate Devices Ltd., portable safe, 112
 Chemical and allied industries, minerals for, by S. J. Johnstone and S. G. Johnstone (book), 156
 — Analysis. See *Analysis*
 Chemical Construction Corp., prefabricated oil refinery for Port Brega, 695
 Chemical Construction (GB) Ltd., use of strip-wound pressure vessels, 556
 Chemical dip. See *Dip*
 — Industries (trade publication), 184
 — Austenitic iron in, by G. L. Swales, 620
 — Inert atmospheres in, by P. A. F. White and S. E. Smith (review), 122
 — Plant (trade publication), 456
 — Czechoslovakia, ordered from Humphreys and Glasgow Ltd., 572
 — Preparation, PD8 (Albright & Wilson Ltd.), 132
 — Training at Spencer Steel Works, 539
 Chemistry, cement, for civil engineers, by W. Czernin (book), 656
 — Physical, and metallurgical processes, by A. K. Biswas and G. R. Bashforth (book), 184
 — and physics, shock waves in, by J. N. Bradley (book), 220; (review), 655-656
 Chesham Amalgamations & Investments Ltd., overseas investments, 772
 Chesterfield Tube Co. Ltd., formation of TI Stainless Tubes Ltd., 477; gas cylinders (trade publication), 656
 Chevrolet Corvette motor car, 499
 Chicago International Trade Fair, 469
 — University, twentieth anniversary of first atomic reactor going critical, 701
 Chieftain tank, 630
 Chime, electric (V. & E. Friedland Ltd.), 700
 — Unit, Innovation (Evered & Co. Ltd.), 700
 — Westminster (V. & E. Friedland Ltd.), 700
 Chimney, aluminium-clad, 216
 — Aluminium-clad (F. E. Beaumont Ltd.), 216
 — Erected with climbing crane (Hitachi Zosen), 75
 Chironis, N. P., on Spring Design and Application (review), 622
 Chocolate wafers (G. & T. Bridgewater Ltd.), 28
 Chorafas, D. N., on Programming Systems for Electronic Computers (book), 288
 Christ Church, Staines (R. F. Herron Ltd. and E. J. Cook & Co. (Engineers) Ltd.), 747
 Christie, D. M., research on transmission systems, 627
 Christmas, Plain Words on, 706
 Christopherson, Prof. D. G., on Engineering Education, 25
 Chromate coating for aluminium, Iridite (Forestal Industries (UK) Ltd.), 389
 Chromium, massive, developments in (Fulmer Research Institute), 83
 Chronocomparator, quartz, Isatron, 793
 Chrysler International, demonstration of turbine motor car, 499
 Chrysler Motors Ltd., use of Quenchweld method of iron casting welding, 478
 Chrysler V8 engine for Jensen motor car, 468
 Chucks (trade publication), 456
 — Milling, Dedlock (Clarkson (Engineers) Ltd.), 542
 — Perman (Europa Engineering Co. Ltd.), 341
 Churchill, Charles, & Co. Ltd., contract from Bulgarian Trade Mission, 44
 Churchill, Charles, Group, subsidiaries of, 806
 Churchill Gear Machines Ltd., formation of, 806; products of, 806; historical note, 806; exhibition of products, 806
 CIBA (ARL) Ltd., Aerodux 500 resorcinol resin adhesive, 203; epoxy resins, 236; epoxy resins for Nimrod proton-synchrotron, 248; epoxy resin for repairing leaks in tanks, 557
 Cinema film. See *Film (cinema)*
 Circlemaster circle template (Euco Tools Ltd.), 610
 Circuit analysis, junction transistor, by S. S. Hakim (review), 726
 — Analysis, pneumatic (trade publication), 124
 — Assembly board, Veroboard (Vero Electronics Ltd.), 844
 — Fluid power—a commonsense approach, cinema film, 374
 — Magnetic, complicated and highly saturated, nomographic computation of, by O. Benedikt (book), 156
 — Semi-conductor, and valves (trade publication), 252
 Circuitry for semiconductor strain gauges, 523
 Circulators, gas bearing (trade publication), 56
 Cisterns, galvanized, extending life of, 298
 Citra Co., Comilog Railway, Congo, 407
 Citroen Safari ambulance, 433
 City and Guilds, reorganization continues, 150; foundry apprentice certificate of craftsmanship, 383; Buchanan Silver Medal awarded to K. Mathieson, 485; rebuilding and rehusing scheme opened by H.R.H. Duke of Edinburgh, 516-517; natural evolution of, 516; academic council of, 517; postgraduate courses, 517; certificate for work study practitioners, 755
 City of London Corporation, Barbican building scheme contracts, 138
 Civil aviation. See *Aviation*; see also *Aeronautics; Aircraft*
 — Engineers, cement chemistry and physics for, by W. Czernin (book), 656
 — Structural adhesives for, by A. O. Frearson, 837-839
 City engineering industry, use of austenitic iron in, by J. Morrison, 620
 — Plant Handbook, by R. Hammond, 624
 — Practice, modern, by R. Hammond (review), 218
 — Research, DSIR grant for, 607
 — Research Council, research projects current and future, 11
 — Research, Government's role in, by Sir Harold Roxbee-Cox, 77
 Civilization, science and technology, by Prof. R. V. Jones, 554
 Clad steel, stainless, 453
 Claddings, structural, fixing (British Stone Federation booklet), 173
 Clamps, Destaco (Insley Industrial Ltd.), 475
 — Gasket (Bunn & Johnson Ltd.), 735
 — Heavy duty (Carver & Co. (Engineers) Ltd.), 777
Clan Macgillivray cargo ship, 331, 703
 Claridge, Lewis & Jordan Ltd., Wanson Thermobloc air heaters for new factory, 237
 Clark, Sir Allen, death of, 781
 Clark, C., on British Trade in the Common Market: Plain Facts about the Common Market (book), 288
 Clark Clutch Co. Ltd., electro-magnetic clutches and brakes (trade publication), 252; electromagnetic clutch, 580
 Clark, D., development of Distinguon-Goodman Ropebelt conveyor structure, 486; on cooling water, 606
 Clark, W. D., review of Metallurgical Principles for Engineers, 691; biographical note, 692
 Clarke Chapman & Co. Ltd., order from CEBG, 372
 Clarke, John, & Son, malt and barley silo for R. & W. Paul Ltd., 713
 Clarke & Smith Ltd., marketing rights for EMI television cameras, 44
 Clarkson (Engineers) Ltd., Dedlock milling chuck, 542
 Classic switch, Crabtree, 328
 Classification systems, 545
 Clausen, H., on design versus styling, 134; on Cambridge Don examines his bookshelf, 530, 634
 Claxton, A. E., review of Industrial Painting: The Engineered Approach, 421; biographical note, 422
 Clay Cross Iron Co., hot blast cupolas installed, 337
 Clayton Equipment Co. Ltd., diesel-electric locomotives for British Railways, 527
 Clayton mobile boilers (English Electric Co. Ltd.), 708
 Clean Air Act, 564, 796, 829
 — Conference, 626
 — Fuel efficiency and domestic heating exhibition, 71
 Cleaner, vacuum, Moulinex (Andrews Housewares Manufacturers Ltd.), 32
 — Petivac (Andrews Housewares Manufacturers Ltd.), 32
 — (Singer Sewing Machine Co. Ltd.), 32
 Cleaning liquid, GWD346 (Walpamur Co. Ltd.), 249
 — System, Bendix, 506
 Clearcall communications system for Spencer Steel Works (AEI Ltd.), 536
 Clemow, J., on Short-Range Guided Weapons (review), 54; on Missile Guidance (book), 656
 Cleveland Bridge & Engineering Co. Ltd., bridge girders for fatigue tests, 105; member of consortium of Associated Bridge Builders Ltd., 789
 — Scientific and Technical Institution, Harold Wright Memorial Lecture, 797
 Clevedon Rivets & Tools Ltd., position and prospects, 581
 Clock, electric, Bijou movement (Smiths English Clocks Ltd.), 666
 — Synchronous (Smiths English Clocks Ltd.), 666-668
 — Electronic, Soltronic (Solvil & Titus), 600
 — Quartz crystal, Isatome, 793
 — Setric (Smiths English Clocks Ltd.), 666
 — and watches, dictionary of, by E. Bruton (book), 124
 Clockhouse Engineering Ltd., soil testing tools, 377; pocket penetrometers, 377
 Clothing, protective, and devices, by N. T. Freeman (review), 421
 — Weather (trade publication), 592
 Clutch, centrifugal (J. H. Fenner & Co. Ltd.), 111
 — Compendium on, by K. Stübner and W. Ruggen (book), 288
 — Disc (Wichita Ltd.), 610
 — Electromagnetic (trade publication), 252
 — (Clark Clutch Co. Ltd.), 580
 CO₂. See *Carbon dioxide*
 Coach, railway. See *Railcar*
 — Routemaster, for Green Line service, 35
 Coal Board, National. See *National Coal Board*
 — Demand by CEBG, 501
 — Fluid, injected into blast furnaces, 788
 — Mine. See *Colliery*
 — Products Division of National Coal Board, formation of, 397
 — Sales convention, 102
 — Loss due to methane imports (NCB), 257
 — Utilization, 225
 — Council, *Cosier in Winter*, 764; "heating on a budget" scheme, 796
 — Vending machine (Charbonnage de France), 256
 Coales, J. F., review of Dynamics of Automatic Control Systems, 759; biographical note, 760
 Coast Protection Act 1949, 304
 Coated Strip Ltd., formation of, 813
 Coating, Armourseal (Griffiths Bros. & Co. London Ltd.), 217
 — Chromate, for aluminium, Iridite (Forestal Industries (UK) Ltd.), 389
 — Ferrodor (Griffiths Bros. & Co. London Ltd.), 217
 — Neoprene, Limpette, 757
 — Nylon, on control pulleys, 82
 — Plastic, for car assembly trolley, 82
 Coating, plastic, for concrete bridge (E. Earnshaw & Co. Ltd.), 75
 — in paper industry, 453
 Cobol data processing language, 827
 Cochrane, A. L., on Cochrane & Sons Ltd., 845
 Cochrane & Sons Ltd., position and prospects, 845; orders received, 845; historical note, 845
 Cockcroft, Sir John, presidential address to British Association Meeting, 293; on Investment in Science, 293; on education for management, 619; inauguration of Atlas computer (Ferranti Ltd.), 827
 Cockerell power station, contracts placed, 713
 Cockerell, C., Hovercraft principle, 65
 Code, colour, for tools (ISO), 109
 Coding systems, 547
 Cohen, C. M., on George Cohen 600 Group Ltd., 413
 Cohen, George, 600 Group Ltd., position and prospects, 413; J. A. Wellings appointed managing director, 413; Richmond tape controlled drilling machine, 608
 Cohen, George, Sons & Co. Ltd., Hiab log and lumber loader, 15; Alligator type shearing machine, 80; Pingon tower cranes, 171
 Coil, field, and armatures, by K. Wilkinson (review), 87
 — Winding machine, induction (Frieseke & Hoepfner and Embassy Engineering Ltd.), 238
 Colburn glass making process, 308
 Cold heading machine, Roy (Gaston E. Marbaix Ltd.), 643
 Collectron Ltd., discharge valve, 811
 Colleges of Advanced Technology—Fact, Fiction and Future, by Dr. J. S. Tait, 244
 — of Advanced Technology, *persona* of, 446
 — of Aeronautical and Automobile Engineering, practical training, 649; prize giving, 649
 — of Marketing, courses, 469
 — Technical, general studies in, 212
 — to have more say on new ONC, 316
Colleges and Universities, 365
 College and university entrance—the basic facts (N.U.T. publication), 515
 Collier, J. F., & Co. Ltd., position and prospects, 145
 Colliery, Maltby Main, strike at, 25
 — See also *Coal*
 Collimat Development Co. Ltd., metering head, 715; manufacturing and selling rights bought from Kontak Manufacturing Co. Ltd., 715
 Collins, Dr. A. R., on concrete formwork, 105
 Collins, Brian D. (Engineers) Ltd., valves and meters (trade publication), 324
 Collins, H. E., on fossil fuels, 604
 Collisions. See *Accidents*
 Collocator plate handling equipment, 237
 Colmer, F. C. W., on Calder Hall type atomic reactor, 696
 Color-Port water level indicator, Dewrance-Yarway (Dewrance & Co. Ltd.), 811
 Colquhoun, L., on Hovercraft service, 65
 Coltrate Ltd., repairs to tanks with epoxy resin, 557
 Columns, street lighting, 680
 Colville, A. C. A., development of strip shearing machine, 57
 Colvilles Group, centralized oxygen plant for (BOC Ltd.), 338
 Colvilles Ltd., Shell-Mex & BP Ltd. appointed lubrication consultants, 301
 Combustion Engineering Association, conference of, 701, 716
 Combustion Engineering Inc., design of boilers, 2
 Comet 4C aircraft flight simulator (General Precision Systems Ltd.), 295
 Comilog Railway, Congo, 407
 Commer Cars Ltd., use of Loctite sealant resin, 388
 Commerce, Chambers of, Association of British. See *Association*
 — Conferences for, 469
 Commercial treaty, Anglo-Japanese, 733
 Committee on Traffic Signs for Motorways, final report of, 705
 Common Market, British Institute of Management conference on, 738
 — British Trade in the: plain facts about the Common Market, by C. Clark (book), 288
 — Challenge of—ten questions (Management Consultants Association booklet), 565
 — and competence in foreign language, 25
 — and engineers, conference on, 765
 — French industry and (European Communities publication), 836
 — Membership, 572
 — Production, management and the, symposium on, 612
 — and professional engineers, conference on, 33
 — and professional engineers, by Sir Walter Puckey, 785
 — Profiting from, 230
 — Prognoses about, 565
 Commonwealth Institute, new building for, 574-575
 — Mining and Metallurgical Congress, 802
 — Scientific and Industrial Research Organization, gift from Ford Foundation for radio heliograph, 61
 — See also *Australia*, etc.
 Communication equipment, Packset (Ultra Electronics Ltd.), 476
 — High frequency, convention on, 197
 — Station, satellite, low cost (Bell), 428
 Communications (Air) Ltd., to move to Harlow, 381
 Communications, Clearcall system for Spencer Steel Works (AEI Ltd.), 536
 — Satellite, conference on, 765, 826
 — Postgraduate course on, 585
 — Still experimental, 826
 COMPAC cable system, 772
 Compact spray painting plant, Binks-Bullows (Alfred Bullows & Sons Ltd.), 112

- Compagnie Générale de Telegraphie Sans Fil, historical note, 781; formation of CSF (United Kingdom) Ltd., 781; ruby laser, 781; P. J. Buloz appointed managing director of CSF (UK) Ltd., 781
- Comparative Administration Trust, first public meeting of London Group for the Study of Administration of Research and Development, 701
- Compass, gyro, Arma/Brown (S. G. Brown Ltd.), 798
- Competition, apprentice, at Gijon University, 211
- Components behind the modern aircraft, 294-295
- Compressor (BEN Patents Ltd.), 508
- FMA (Mining & Compressor Engineering Co. Ltd.), 776
- Gas bearing (Bristol Siddeley Ltd.), 345
- Refrigeration (Carlyle Air Conditioning & Refrigeration Co. Ltd.), 380
- Computable Model of Economic Growth, 65
- Computaquants Ltd., computer prepared bills of quantity, 272
- Computation, analogue, by R. W. Williams (review), 512
- Control and automation, handbook of, by E. M. Grabbe, S. Ramo and D. E. Wooldridge (review), 286
- Nomographic, of complicated and highly saturated magnetic circuits, by O. Benedikt (book), 156
- Computer, AEI-1010, 198
- Algebraic formulae, prepared by Massachusetts Institute of Technology, 274
- Analogue (Solartron Electronic Group Ltd.), 307
- Apollo, at Prestwick airport (Ferranti Ltd.), 273
- Applied economics and, 65
- Argus (Ferranti Ltd.), 273
- Argus 100 (Ferranti Ltd.), 827
- Atlas, inauguration of (Ferranti Ltd.), 827
- for Bill of Quantity, 272
- Brain as, by F. H. George (review), 791
- for British Railways timetable, 273
- for building project calculations, 473
- Control of rolling mill, 337
- Controlled automatic flame cutter (British Oxygen Co. Ltd.), 274
- Digital, application of to structural engineering problems, by D. M. Brotton (book), 624
- Designing with, by G. K. Ridley, 198-200
- Increasing uses for, by Dr. S. Gill, 272-275
- by A. P. Speiser (review), 123
- Edsac 2, Cambridge University, 274
- Exhibition, 198
- Facit EDB, for optimum positioning of pylons, 698
- Fundamental limitations of, 272
- Geometrical problems, solution by, 273
- IBM 1620, for de Havilland Aircraft Co. Ltd., 100
- Ideas behind, 273
- for Jodrell Bank radio telescope (Ferranti Ltd.), 491
- Memory, magnetic film (GEC Ltd.), 327
- Mercury, Ferranti, to plan overhaul of oil refinery, 159
- Programming systems for, by D. N. Chorafas (book), 288
- Special purpose (National Engineering Laboratory), 844
- (Strojimport), 143
- Systems (International Systems Control Ltd.), 191
- Univac 422, to teach data processing (Sperry Rand Corp.), 415
- Computing centre for Harvard University, 95
- Course, 370
- Machine, in modern university, by Dr. Booth, 200
- Resolvers (trade publication), 88
- Concast/Distinguon continuous casting machine (Distinguon Engineering Co. Ltd.), 710
- Concentri-Chek instrument for checking hole location (British Indicators Ltd.), 672
- Concord supersonic airliner, 661, 734
- Concrete additive, Fluol (C.T. (London) Ltd.), 621
- Adhesives, 839
- Breaker accessories (trade publication), 324
- Bridge over River Ayr, 503
- Design, by R. E. Rowe (book), 817
- Plastic coating for (E. Earnshaw & Co. Ltd.), 75
- Failure of, 593
- High quality, design and placing of, by D. A. Stewart (book), 624
- Lightweight, 203
- Concrete Ltd., wall frame system (trade publication), 220
- Metal joint made with epoxy resin, 837
- Mixers (trade publication), 88
- Mixing machine, Gyramixer (Blaw Knox Ltd.), 611
- Non-destructive testing of, by R. Jones (review), 550
- Precast, building with, 444
- Pressure on formwork, research on, 11
- Prestressed, ABC of, by M. R. Hollington, 755
- Properties and manufacture, by T. N. W. Akroyd (review), 391
- Reinforced, basic design, by C. E. Reynolds (book), 288
- Lightweight, for Christ Church roof at Staines, 747
- Members subjected to bending and direct force, by J. D. Bennett (book), 288
- from rough formwork, design notes and specifications for (Cement and Concrete Association report), 105
- Siporex (Richard Costain Ltd.), 774
- Structures, reinforced and prestressed, ultimate load analysis of, by L. L. Jones (book), 88; (review), 391
- Tests on models of, by M. Amaratunga, 62-63
- Technology, by D. F. Orchard (book), 24; (review), 550
- Concrete testing penetrometer (Clockhouse Engineering Ltd.), 377
- Tobermorite gel the heart of, 137
- Travelling wall shutter for (Rapid Metal Developments Ltd.), 503
- Condensate removal, and steam trapping (Engineering Equipment Users' Association) (book), 728
- Condenser, flash steam (Royles Ltd.), 35
- Neoprene coating for, 757
- Cone, marker, road obstruction, Motocone (Central Manufacturing & Trading Co. (Dudley) Ltd.), 708
- Conference, apprenticeship training, 824. See *Correction*, 850
- British Association for Commercial and Industrial Education, 244, 446, 447
- British Institute of Management, opening address by Sir Robert Shone, 150; speakers for, 384; technologist in productivity, by Dr. P. H. Sykes, 687
- British Occupational Hygiene Society, 397
- Clean Air, 626
- Combustion Engineering Association, 701, 716
- Commerce and industry, 469
- Common Market, 738
- Electricity for Productivity, 733, 741
- Electronic processes in dielectric liquids, 464
- Engineering education, 7
- Engineers and the Common Market, 765
- Environmental control of plant growth, 395
- High speed photography, 659
- Housing from the factory, 502
- Industrial Development, of Electrical Development Association, 672
- Fire Protection Association, 370
- Safety and Exhibition, 785
- International Council for Building Research, 329
- Federation of Air Line Pilots' Associations, 761
- Labour, address by J. Hare, 89
- Machine Tool Design and Research, 504
- Road Federation, 746
- Union of Marine Insurance, 429, 432
- Large electric systems, 71
- Lead, 6
- Measurement, 135
- Microwave valves, 434
- Pattern of Research in British Industry, 77, 103
- Professional engineers and the Common Market, 33
- Representatives of Engineering Societies of Western Europe and the USA (EUSEC), foundation of, 1; reports, 1; glossary of terms, 1; support from Ford Foundation, 1; report on education and training of professional engineers, 25
- Research in British Industry, 65
- Salaries paid to executives, 335
- Sales, of Steel Group, 336
- Satellite communications, 765, 826
- Shipbuilding, shipping statistics, 136
- Training, by British Welding Research Association, 485
- University professors, 279
- Welding tubes to tube plates, 197
- World Power, 41, 464, 604, 638-639; 696-697, 716
- Conflow steam traps (W. Hopwood & Co. Ltd.), 378
- Congo, Comilog Railway, 407
- Congress on Building Research, 134
- Combustion Engines, 635, 835
- Commonwealth Mining and Metallurgical, 802
- European Society of Cardio-Vascular Surgery, 191
- Film, at Warsaw, 135
- High Speed Photography, 166
- International Commission on Large Dams, H.R.H. Duke of Edinburgh as patron, 803
- Council for Building Research, 376, 444
- History of Science, 553
- Plastics, 41
- Connectors, pin and socket (trade publication), 552
- Connolly, T. F., on Airplane Aerodynamics (book), 456
- Consett Iron Co. Ltd., award of university scholarships, 25; annual statement, 113; position and prospects, 113; installation of LD and Kaldo units, 237; welded steel pipe (trade publication), 324
- Consoles and cabinets (trade publication), 184
- Consolidated Electrodynamics Corp. (UK) Ltd., pressure transducers, 208; Electromanometer pressure transducer, 611
- Consolidated Pneumatic Tool Co. Ltd., Air Nip, pneumatic pliers, 78; Hicycle polishing tools, 357; impact wrench, 579
- Consort II training atomic reactor for London University (GEC (Engineering) Ltd.), 786
- Construction activity, prospect index of, 808
- Equipment (trade publication), 792
- Furniture, 492
- Industrial: the complete factory, by A. Hugon and R. Traverse (review), 155
- Large panel, 444
- Construction Machinery Ltd., Wakefield impact breaker, 674
- Methods, new, 376
- Overseas, increasing orders for, 407
- Sites, investigation of problems of, 11
- System Impresa Costruzione Opere Specializzate-Icos, 543
- Constructional Products (Chadderton) Ltd., Led-plate lead based anti-seize compound, 389
- System for technical furniture, Widney Dorlec (Hallam, Sleigh & Cheston Ltd.), 614-616
- Constructor dump truck (Scammell Lorries Ltd.), 578
- Tractor, 6 by 6, Scammell, 669
- Constructors John Brown Ltd., Fawley to London pipeline, 202; position and prospects, 349; overseas orders, 407
- Costruzione Revisione Milano, engine for *Tramontana* high speed power boat, 227
- Consul Capri motor car engine, Ford, 433
- Motor car, Ford, road test of, 263
- Consul Cortina motor car, Ford, details of, by G. Wilkins, 369
- Consultancy keeps training up-to-date, 181
- Consumers' Association, *Which?* 813
- Container, Aircon (Airtech Ltd.), 21
- Polyethylene, fibreboard clad (Reed Plastic Packaging Ltd.), 188-189
- Rexoplast (H. Erben Ltd.), 506
- Contents indicator (Flight Refuelling Ltd.), 295
- Continuous media, non-linear theory of, by A. C. Eringen (book), 856
- Control, automated, in mineral treatment at Parc Mine, 742-743
- Computation and automation, handbook of, by E. M. Grabbe, S. Ramo and D. E. Wooldridge (review), 286
- Engineering, progress in, by R. H. Macmillan, T. J. Higgins and P. Naslin (book), 856
- Control Instruments Ltd., centrifugal separator, 240
- Linkages, aircraft (Teleflex Products Ltd.), 295
- Panels for sinter plant (Contropanels Ltd.), 176
- Pedal (J. Broughton & Son (Engineers) Ltd.), 411
- Processes, adaptive, a guided tour, by R. Bellman (review), 219
- Remote (Expert Industrial Controls Ltd.), 271
- Systems analysis, non-linear, by R. H. Macmillan (review), 481
- Automatic, dynamics of, by E. P. Popov (review), 759
- for boilers, 3
- Hydraulic, design of, by E. E. Lewis and H. Stern (review), 286
- Marine steering, Brown GMS/Dan (S. G. Brown Ltd.), 798
- Non-linear, synthesis of optimum, by H. L. Van Trees (book), 514
- Process, Arch, for Steel Co. of Wales (Elliott-Automation Ltd.), 779
- Theory: feedback engineering, by G. Lago and L. M. Benningfield (book), 288
- Controlled Heat & Air Ltd., propane fired oven for tin printing, 108; welded fabrications in aluminium, 589; dust collection (trade publication), 760
- Controller, electric motor. See *Motor, electric*
- Liquid level, Resistron (Thomas Industrial Automation Ltd.), 714
- Controls, automatic, by A. E. De Barr (book), 456
- for ships, 331
- Contropanels Ltd., sinter plant control panel, 176
- Convention, coal sales, 102
- on high frequency communication, 197
- Scientific Manufacturers Association, 496
- Conversion table, temperature (trade publication), 456
- Converter, electricity to infrared radiation (MIT), 292
- Conveyancer Rotobug, EMI, 273
- Conveyor, Air-Float (Sheepbridge Equipment Ltd.), 662. See *LETTERS*, 738, 770
- Belt, Udal Co. Ltd., 307
- Ultra-deep, Maxtroff (C. H. Johnson (Machinery) Ltd.), 100
- Driving head, Double Drive (Richard Sutcliffe Ltd.), 170
- Flexible, Stubbe-Metalastik Serpentix (Mitchell Engineering Ltd.), 331
- Portable, Europa (G. Hunter (London) Ltd.), 48
- Sectional, Miracon (Stephens Belting Co. Ltd.), 463
- Structure, Distinguon-Goodman Ropebelt (Distinguon Engineering Co.), 486-488
- System for Tema Docks (Spencer (Melksham) Ltd.), 217
- Vertical (Lamson Engineering Co. Ltd.), 506
- Conway, H. G., on Engineering Tolerances (book), 360
- Coode & Partners, Escravos Bar Moles, 138; Warri dockyard in Nigeria, 305
- Cook, E. J., & Co. (Engineers) Ltd., Christ Church, Staines, 747
- Cook, Sir William, on prototype fast civil atomic reactor, 561; on atomic reactors, 696
- Cooke, J. B., Portage Mountain Dam, 641
- Cooke, J. F., on Castings Ltd., 177
- Cooke, R. W., on 100 ton load cell for piling load tests, 693-695
- Cooker, AEI-Hotpoint-6040, 860
- Panguard thermostatic control for, 860
- Parkinson-Cowan Prince, 596
- Prince, Parkinson-Cowan, 596
- Cooler, gas (Carter Thermal Engineering Ltd.), 240
- Coolie Cub lift truck (Polymathic Engineering Co. Ltd.), 14
- Coolie pallet truck (Polymathic Engineering Co. Ltd.), 342
- Cooling system, air cycle (Sir George Godfrey & Partners Ltd.), 294
- Tower (Midland Heating & Ventilation Co. Ltd.), 508
- Power station in, 706
- Unit, remote (G. V. Planer Ltd.), 840
- Cooper, A., on personnel selection, 193
- Cooper & Turner Ltd., Topaz welding electrode, 189; electrode and equipment business transferred to British Oxygen Co. Ltd., 845
- Cooper Electroheat Ltd., pipe heating muffles, 378; electric finger heating elements, 641
- Cooper Mechanical Joints Ltd., King self-cleaning air filter, 330
- Co-operative Insurance Society Ltd., Manchester headquarters opened, 573
- Copetake, L. G., on loose wheels on railway axles, 802
- Copper alloys. See also *Bronze; Gunmetal*
- Plating, UBAC process (Electro-Chemical Engineering Co. Ltd.), 321
- Coppus sentry valve (George Meller Ltd.), 432
- Copy-turning hemispherical forms (Hepworth Iron Co. (Engineering) Ltd.), 175
- Copying machine, automatic, Tar-L (Tarex (England) Ltd.), 271
- Copying machine, Azoflex (Ilford Ltd.), 476
- Hydro-Copier (Vero Precision Engineering Ltd.), 440
- Coquet River filtration plant (Moto Plastics Ltd.), 138
- Cord, Tygaflor (Tygadure Ltd.), 389
- Cordero, H. G., on Iron and Steel Works of the World (book), 592
- Cordomatic Reels Ltd., balance reels, 144
- Cores, iron, AC devices with, by P. F. Van Eldick and P. Cornelius (book), 760
- Corfield, Reginald, Ltd., propane fired oven for tin printing installed, 108
- Cork, N. H., on group economies schemes, 404
- Cormack, J. A., on Worked Examples in Applied Mechanics (book), 220
- Cornelius, P., on AC Devices with Iron Cores (book), 760
- Cornell University, International Congress of the History of Science, 553
- Cornwallis, Lord, on Reed Paper Group, 685
- Corroplast sheeting (Holoplast Ltd.), 842
- Corrosion by electrochemical polarization, study of (National Bureau of Standards), 491
- Engineers, British Association of. See *British*
- Galvanic, of austenitic cast iron, 815
- Graphitic, of austenitic cast iron, 815
- and Metal Finishing Exhibition, 71, 703
- Resistant applications of titanium, 677
- Sea water, resistance of austenitic cast iron, 814
- Soil, austenitic cast iron resistance to, 815
- Steel piling, 453
- Cort, Robert, Ltd., use of austenitic iron castings, 620
- Cortina motor car, Ford Consul, details of, by G. Wilkins, 369
- Corvette motor car, Chevrolet, 499
- Cory Bros. & Co. Ltd., Purfleet oil storage installation opened, 605
- Cory Sand & Ballast Co. Ltd., share capital of South Coast Ready-Mixed Concrete Co. Ltd., passed to Ready Mixed Concrete (United Kingdom) Ltd., 17
- Cory, William, & Son Ltd., use of Ulstron ropes, 757
- Cosines, table of, by H. E. Salzer and N. Levine (book), 422
- Coslett, Air Vice Marshal T. N., on youth training for leadership, 825
- Coslett, Dr. V. E., development of Microscan X-Ray analyser, 732
- Cossor, A. C., Group, subsidiary firms to move to Harlow, 381
- Cossor, A. C., Ltd., new radar research laboratories for, 93; historical note, 93; products of, 93; developments in radar, 93
- Cossor Communications Co. Ltd., to move to Harlow, 381; radio/telephone units for police, 469
- Cossor Instruments Ltd., to move to Harlow, 381
- Cossor Radar & Electronics Ltd., other Cossor firms to join at Harlow, 381
- Costain, Richard (Civil Engineering) Ltd., section of London/South Wales Motorway, 775
- Costain, Richard (Construction) Ltd., 17-storey flats for Coventry Corporation, 711; Jackblock building system, 711
- Costain, Richard Ltd., Escravos Bar Moles, 138; office opened in Brussels, 407; cinema film *This is Siporex*, 775; use of Jackblock building system for Britannia House, Brussels, 775
- Cotton Board, training courses, 812
- Coull, A., on Cambridge Don examines his bookshelf, 402
- Counters, semiconductor, 684
- Countries, developing, road construction in, 746
- Couplings, all metal, washers for, 50
- Hose-end, Linemaster (Zwicky Ltd.), 163
- Pipe, flareless, 50
- See also *Clutch*
- Courses on accident prevention, 785
- of Anne Shaw Organization, 181
- Computing, 370
- Engineering, University, 721-722
- Evening, by Electrical Association for Women, 384
- on foreign languages, 33
- on general management, 851
- *Course Handbook* (Institution of Works Managers publication), 415
- Course on heat treatment of metals, 6
- on indexing, 218
- on interpretation of weld radiographs, 787
- Introduction to Industry, 687
- on joining processes, 787
- in machine tool design, 212
- on magnetic particle inspection, 787
- in management practice, 649
- on management training 617-618
- Management training for staff of S. Smith & Sons (England) Ltd., 787
- on marketing, 469
- on materials handling, 264
- on noise measurement, 280
- on nuclear energy, catalogue of, 384
- on oil hydraulics, 352
- on penetrant inspection techniques, 787
- on planning for management succession, 244
- on plant layout and materials handling, 315
- Postgraduate, 279, 517
- Importance of, 40
- on satellite communications, 585
- on powder technology, 315
- Russian language, 280
- Safety training, 279
- in sales management, 649
- Sandwich, for overseas students, 257
- Senior sales, on steel, 637
- on solid mechanics and machine tools, 315
- on Solus-Scall Equipment (Rank Organization), 787
- on statistical quality control and acceptance sampling, 244
- on "straight thinking," 448
- for supervisors at Dowty Seals Ltd., 755
- Training, 812
- for training officers, 483-484
- on ultrasonic testing, 787

- Course, University, 350
 — Engineering, 721-722
 — "Thick sandwich," 57
 — on vitreous enamels, 588
 — on welding of agricultural machinery, 787
 — on welding technology, 278
 — on work study, 586-587
 — See also *Education; Training*
 Courtney-Pratt, J. S., on camera for photographing rapid changes, 659
 Cousins, F., on quick turn round of lorries campaign, 493
 Coventry Cathedral (John Laing Construction Ltd.), 17
 Coventry Climax Ltd., Coventry Climax engines, 801; historical note, 801
 Coventry Corporation, flats built by Jackblock system, 711
 Coventry Gauge & Tool Co. Ltd., contract from Bulgarian Trade Mission, 44; circular division tester, 441; use of austenitic iron castings, 621; Matrix slip gauges, 776
 Coventry Steel Caravans Ltd., mobile exhibition vehicle for British Aluminium Co Ltd., 404
 Covers, exciter, in plastic (J. J. Harvey & Pressurecast Ltd.), 147
 Cowan, M. A. C., on languages as an engineering tool, 41
 Cowl, radiator, of neo prene rubber (Leyland Motors Ltd.), 557
 Cowling, Prof. T. G., review of Introduction to Magneto-Fluid Mechanics, 654; biographical note, 656
 Coxon, W. E., on Automatic Process Control: An Introduction (review), 219
 Crabtree Classic switch, 328
 Crabtree, R. W., & Son Ltd., Ambassador remote control printing machine, 577
 Cracking at notches in transverse shear, by J. C. Walter, 326-327
 Craig Alford Ltd., floodlighting equipment (trade publication), 24
 Crane, climbing, for chimney erection (Hitachi Zosen), 75
 — Derrick, floats for (Taylor Woodrow (Sierra Leone) Ltd.), 75
 — and Hoist Supplies, Munck chain hoists, 170
 — Mobile self-erecting tower (Star Cranes Ltd.), 105
 — Overhead, on circular track for Netherlands Nuclear Reactor Centre, 800
 — Travelling (John Smiths of Keighley), 232
 — Travelling, Monobox (J. H. Carruthers & Co. Ltd.), 261
 Crane Packing Ltd., ptfе ribbon bearing sleeves, 389; ptfе mouldings, 789
 Cranes for St. John Shipbuilding & Drydock Co. Ltd. (Butters Bros. & Co. Ltd.), 768
 — Sprawler, truck mounted, NCK-RapieR 555 (NCK-RapieR Ltd.), 641
 — Stacker (Munck Engineering), 413
 — Tower, for shipyard use, 43
 — Lorry mounted (Stewarts Construction Equipment Ltd.), 38
 — Origins and future of, by A. H. Davies, 42-43. See LETTER 334
 — Peingeon Ideal, 138
 — Pingon, 43, 171
 — Record, 138
 — Twin-boom, at Toronto docks, 366
 — See also *Gantry; Hoist; Transporter*
 Cranes (Dereham) Ltd., works transporter, 240; site trolley, 777
 Cranfield College of Aeronautics, group project training on the grand scale, 148-149
 Cranks, five bearing, in four-cylinder cars, 570
 Crawford Collets Ltd., chucks (trade publication), 456
 Creep resisting steels, 275
 Crescent, HMCS, fitted with variable depth sonar, 396
 Cresta motor car, Vauxhall, rebodied, 467
 Crewe/Euston railway line, electrification of (British Insulated Callender's Construction Co. Ltd.), 804
 Crimping Tool, Rotocrimp (BICC), 207
 Criteria for professional recognition, by Dr. A. King, 8-9
 Crofts (Engineers) Ltd., power transmission (trade publication), 552
 Croghan, D., artificial sky, 76
 Croghan, D., design of artificial sky at Cambridge University, 809
 Cromie, R. G., on mark for marque, 570
 Crompton Parkinson Ltd., lighting equipment (trade publication), 252; Spencer Steel Works, 535; control instruments for printing press, 577; Cyc-Arc E3 stud welding equipment, 717; Lifeguard mercury discharge lamp, 800
 Crop spraying equipment. See *Spraying*
 Crossley Bros., Andy-Lad combination ladder, 224
 Crowley's in the early iron industry, men of iron, by M. W. Flinn (book), 288
 Crown Pump Manufacturing Co. Ltd., submersible pump, 506
 Crowther Report, 765
 Crucibles, Metamic, 18
 Crushing machine, Gravelpactor (GEC (Engineering) Ltd.), 674
 Cryophysics, experimental, by F. E. Hoare, L. C. Jackson and N. Kurti (review), 390
 Crypton Equipment Ltd., Motorscope motor car engine test equipment, 39; Scopemaster motor car engine test equipment, 39
 Crystal Palace as shop window for Britain, 193
 Crystalline solids, wave mechanics of, by R. A. Smith (review), 182
 CSF (United Kingdom) Ltd., formation of, 781; P. J. Buloz appointed managing director, 781
 C.T. (London) Ltd., Fluol concrete and mortar additive, 621
 Cubitt Magazine, 89
 Cubitts-Fitzpatrick-Shand, Hyde Park/Marble Arch road improvement scheme, 543-544
 Culligan power station, Deriaz turbines for (English Electric), 191
 Cullwick, Prof. E. G., review of Radio Surface Waves, 218; biographical note, 220
 Cumberland immersion heater (Santon Ltd.), 292
 Cummins Engine Co. Ltd., use of austenitic iron castings, 620
 Cunningham, Dr. C. M., on employing the older man, 280
 Cupboards, fume (Thermotank Ltd.), 115
 Cupolas, hot blast, installed at Clay Cross Iron Co., 337
 Curle, N., on Laminar boundary Layer Equations (book), 422
 Curran, Dr. S. C., on Scottish Reactor Centre, 448
 Cushioncraft Ltd., CC-2 Cushioncraft ordered by War Office, 372
 Cutter, flame, automatic, computer controlled (British Oxygen Co. Ltd.), 274
 Cutting equipment, flame, BOC-Ferranti, 577
 — Fluids (trade publication), 88
 — with light beams, 31
 — of metals, by E. Amini, 504
 — Theory, 805
 — Tools. See *Tools*
 Cybernetics Developments Ltd., formation of, 723
 Cyc-Arc E3 stud welding equipment (Crompton Parkinson Ltd.), 717
 Cyclone furnace (Babcock & Wilcox Ltd.), 717
 Cylinders, gas (trade publication), 656
 Cyprus—A Short Survey, 740
 Cyprus, statistics on, 740
 Czechoslovak engineering, 423-425
 Czechoslovakia, chemical plant ordered from Humphreys & Glasgow Ltd., 572
 — Edge bending press from Bronx Engineering Co. Ltd., 672
 — Orders placed with Rootes Group, 708
 Czernin, W., on Cement Chemistry and Physics for Civil Engineers (book), 656
- ## D
- DABOO, J. E., on Solid-Fuel Rocket Propulsion (book), 624
 Dacora Co., camera manufacture for Ilford Ltd., 119-121
 DAF Variomatic motor car (van Doorne's Automobielfabriek NV), 229
 Dagnall, R. F., foundation of RFD Co., 151; biographical note, 151
 Daily Express Off-Shore Race for power boats, 226-227, 329
 Daimler motor car, 468
 Dairyland Power Cooperative of La Crosse, boiling water atomic reactor power project with USAEC, 31
 Daisy Damp Wash Laundry, use of aluminium-clad chimney, 216
 Dam, arch, research on, 11
 — Derbandi Khan, completion of, 106
 — Engineering, earth and rockfill, by G. F. Sowers and H. L. Sally (book), 592
 — Geology, by R. C. S. Walters (review), 513
 — Kariba, cost of, 661
 — Large, International Commission on, HRH Duke of Edinburgh as patron of Congress on, 803
 — Miraflores, contract to Taylor Woodrow (Overseas) Ltd., 503
 — Portage Mountain, tenders invited, 641
 Damp courses, Actane (Cambridge Timberproofing Laboratories), 789
 Damp-proof renderings, Actane (Cambridge Timberproofing Laboratories), 789
 Damper, rotary (Kinnetrol Ltd.), 745
 Damping, dry-friction, using in a new way, by D. Williams, 794-796
 Danavox (Great Britain) Ltd., hearing aids, 732. See *Correction*, 860
 Danfoss A/S, Orbit gear hydraulic motor, 463
 Daniels, T. H. & J., Ltd., fan mouldings, 52
 Daphne atomic reactor, aluminium plates for, 51
 Darex bottle sealing ovens (W. R. Grace Ltd.), 53
 Darfen Arrestor Safety Barrier for motorways (British Ropes Ltd.), 433. See LETTER, 570
 Darracq, A., historical and biographical note, 633
 Darstellungsmethoden, Zeichnerische, by H. Berns (book), 792
 Darwin, H., on sidelisip in motor cars, 832
 Darwins Group Ltd., amalgamation with Arthur Balfour & Co. Ltd., 209
 Dasco hydraulic fluid (D. A. Stuart Oil Co. (Great Britain) Ltd.), 147
 Data link, Harco (Decca Navigator Co. Ltd.), 294
 — Processing in electricity industry, 819
 — Future trends in, 820
 — in gas industry, 819
 — Languages, 827
 — in power industries, by J. H. Nicoll, 818-820
 — Reliability and integrity, 820
 — System (IBM (UK) Ltd.), 580
 — Univac 422 computer to teach (Sperry Rand Corp.), 415
 — Retrieval from service reports by G. M. Boyd, 545-548
 Davey, Paxman & Co. Ltd., Super Ultrasonic boilers, 142; rotary pressure filter, 663
 Davidson & Co. Ltd., air preheater (trade publication), 24; Sirocco fan, 380; subsidiaries of, 469; overseas agents of, 469; airconditioning units (trade publication), 792
 Davies, A. H., on origins and future of the tower crane, 42-43. See LETTER, 334
 Davies, F. T., review of Aircraft Stability and Control, 287; biographical note, 288
 Davies, J. E. H., on pipeline network for the UK, 774
 Davies, L. T., on Regalox ceramic material, 60
 Davies, P. B., research on transmission systems, 627
 Davis, C. H., development of Widney Dorlec constructional system for technical furniture, 614-616; biographical note, 614
 Davis, D. S., on Nomography and Empirical Equations (book), 856
 Davis, John, & Son (Derby) Ltd., Genephone sound powered telephone, 463
 Davis, W. K., on atomic power costs, 697
 Davy-Ashmore Group, oxygen steel-making furnace for Broken Hill Proprietary Co. Ltd., 68-69
 Davy-Ashmore Ltd., position and prospects, 349; subsidiaries of, 349
 Davy & United Engineering Co. Ltd., strip mills for Spencer Steel Works, 534; plate mill plant ordered by Masinimport, 708; and Wellman Smith Owen Engineering Corp. Ltd., joint contract with Rudnici i Zelezara through Invest-Import, 740
 Dawe Instruments Ltd., audio sweep oscillator (trade publication), 856
 Day, James (Machinery) Ltd., plastic extrusion machines (trade publication), 456
 Day release, Ministry of Education inquiry into, 687
 Daylighting studies at Cambridge, artificial sky for, 76
 Dayson, C., research on transmission systems, 627
 Dazor table lamps (General Trade & Equipment Ltd.), 428
 De-Acidite anion exchange resin, 807
 Deac rechargeable accumulator, 732
 Dean, W. E., Jr., on efficiency in burning fuel, 639
 Deane, P., research projects at Cambridge University, 193
 De Barr, A. E., on Automatic Controls (book), 456
 de Bloeme, M. G. W., on trade with Japan, 733
 de Bray, B. G., on wind pressures on multi-storey buildings, 10-11
 Deburring machine (Acme-Efco Ltd. and Acme Manufacturing Co.), 841
 Decca Navigator Co. Ltd., Harco data link, 294; Decca radar for North Sea seismic survey, 573
 Decca Radar Ltd., "True Motion" radar for ships, 201; new laboratories for, 397; new plant planned for Isle of Wight, 413; contribution to British Space Development Co. Ltd., 413; marine radar, 578
 Declon Foam Plastics Ltd., Scott polyurethane foam, 853
 Decoilers, twin cone (Press Equipment Ltd.), 144
 Decontactors (British Central Electricity Co. Ltd.), 79
 Dedlock milling chuck (Clarkson (Engineers) Ltd.), 542
 Deere crawler loader tractor (JD Tractors Ltd.), 580
 Degreasing and pickling solutions (Walterization Co. Ltd.), 217
 — Plant (trade publication), 56
 DeGroat, G. H., on Metalworking Automation (book), 24; (review), 513
 de Groot, P., nuclear power development, 697
 de Havilland Aircraft Co. Ltd., use of nylon coatings on control pulleys, 82; IBM 1620 computer installed, 100; Executive Aircraft, 163; aircraft and equipment for Kuwait Airways, 201; Trident aircraft on order by BEA, 258
 de Havilland Engine Co. Ltd., gas bearing circulators (trade publication), 56
 de Havilland, Sir Geoffrey, on aviation, 97
 Delaney Galley Ltd., effluent disposal system installed (Wallace & Tiernan Ltd.), 19
 Delft Hydraulics Laboratory, Escravos Bar Moles, 138
 Deliveries, Plain Words on, 802
 Delrin acetal resin for gearwheels (Du Pont Co.), 653
 Delta girder construction of Yakima bridge, 267
 Demineralization ion exchange plant, Deminrolit, 807
 Deminrolit demineralization ion exchange plant, 807
 Denison, Samuel, & Son Ltd., testing machine, 342
 Dennis Bros. Ltd., fire engines fitted with disc brakes, 740
 Denny-Brown stabilizers for Northern Star liner, 35
 Denny Hovercraft Ltd., sidewall Hovercraft, 525; second sidewall Hovercraft, 566
 Department of Scientific and Industrial Research, report on building research, 1; Lighting and Town Planning, 1; Solar Radiation Problems in Buildings, 1; hydrological research unit set up, 33; research and development contract on machine tools to Staveley Industries Ltd., 53; Hydraulics Research, 1961, 75; grants for machine tool research, 178; method of roadside exhaust smoke measurement, 225; finance for survey of building methods, 329; Universities and Colleges, 365; by Sir Harry Melville (book), 482; Industrial Operations Unit, 493. See LETTER, 635; Science in your Methods, 493; grant for civil engineering research, 607; investigation of dry process of sulphur dioxide adsorption, 626; automated control of mineral treatment at Parc Mine, 742-743; reports on motor car seat belts, 769; See also under specific research establishments
 Deposits, engine, photographic observation of (Shell), 160
 Derbandi Khan Dam, completion of, 106
 Deriaz, P., turbine design, 191-192
 Deriaz turbines for Culligan power station (English Electric), 191
 Derion Productions Ltd., rotary airlock, 268
 Deritend Engineering Co. Ltd., group apprenticeship scheme, 243
 Deritend Precision Castings Ltd., vacuum melting service, 644
 Derrick. See *Crane*
 Deruguine, T., on Russian-English Dictionary of Metallurgy and Allied Sciences (book), 592
 Design, anthropometric, 660
 — Charts, by L. L. Jones (review), 391
 — Comparison with styling, 102, 134
 — in machine tools, 504
 — Plain Words on, 40. See LETTER, 102
 — Scientific, of exhaust and intake systems, by P. H. Smith (book), 482
 Designing with a digital computer, by G. K. Ridley, 198-200
 — for old people, some aspects of (HMSO publication), 660
 Desk, managerial (Carson Bros. Ltd.), 628
 Desoutter Bros. Ltd., air feed drill, 441; USA sales rights to Sundstrand Corp., 572
 Destaco clamps (Inslay Industrial Ltd.), 475
 Detector, interface (trade publication), 392
 Determinants, evaluation of, by H. Barras, 834
 de Trafford, R., to retire from chairmanship of Elliott-Automation Ltd., 717
 Developing countries. See *Countries Developing Management*, 617
 de Viger, W. A., on Acrow (Engineers) Ltd., 477
 Devon immersion heater (Santon Ltd.), 292
 Dewar flask, development of new type, 61
 Dewar, J., development of Dewar flask, 61; historical and biographical note, 61
 Dewrance & Co. Ltd., Jones-Tate valve actuator, 379; exhibition, 464; Dewrance-Yarway Color-Port water level indicator 811; parallel slide valve, 821-823; historical note, 821
 Dewrance-Yarway Color-Port water level indicator (Dewrance & Co. Ltd.), 811
 Dexion slotted angle, 436
 Di-Grid, Caromic, timber roofing system (William Brown & Co. (Ipswich) Ltd.), 472
 Diaform grinding wheel profiling units (Toolmasters Ltd.), 411
 Dial indicator holders, 411
 Diamond drill rig (Boart & Hard Metal Products S.A. Ltd.), 713
 — from graphite without catalysis (GEC (US)), 490
 — Industrial, processing of, 347
 — Industry's applications for. See *Correction*, 109
 Dickens, Stuart B., Ltd., Cercote resin coating, 189
 Dico Ovenette (R. S. Stokvis & Sons Ltd.), 128
 Dictaphone, portable, Travel-Master (Magnesium Elektron Ltd.), 621
 Dictating machine, pocket, Parler Korder (Miniaturized Office Machines Ltd.), 772
 Dictation system, Teledictation (Aga Dictating Machine Co. Ltd.), 476
 Dictionary of Clocks and Watches, by E. Bruton (book), 124
 — of electronics, by S. Handel (book), 422
 — Russian-English, of metallurgy and allied sciences, by T. Deruguine (book), 592
 — Six-language, on automation, electronics and scientific instruments, by A. F. Dorian (book), 456
 — Technical, 33
 Diddington Reservoir (W. & C. French Ltd.), 572
 Die head (Baker Perkins Granbull Ltd.), 306
 Diecastings, magnesium (trade publication), 856
 Dielectric liquids, electronic processes in, conference on, 464
 Diesel engine. See *Engine, diesel*
 Digital follower for monitoring machining process (Paramatic Development Ltd.), 67
 Dilatometer, optical, Expansometer (Barr & Stroud Ltd.), 508
 Dimberg, R. A., on Practical Work Standards (book), 482
 Dimensional analysis, 593
 — Engineering metrology, by L. Miller (book), 360
 — Method, an introduction to, by E. W. Jupp (book), 324
 DIMPLe atomic reactor in operation at Winfrith Atomic Energy Establishment, 32
 Dinghy, one-man (RFD Co.), 151
 Diode, caesium, 255
 — Gas-filled, cinema film on, 649
 — Generators, Massachusetts Institute of Technology, 256
 — In-pile (General Motors), 255
 — Laser, 763
 — Semiconductor devices and transistors, British, data annual, 1962-63, by G. W. A. Dummer and J. M. Robertson (book), 456
 — Tunnel, 683
 Dip, chemical, for smoothing aluminium, Noralbyrte (Walterization Co. Ltd.), 589
 Diploma of Technology, mounting interest in, 212; statistics on, 753
 Diplomat boiler, Potterton, 596
 Directory of Opportunities, 753
 Diron steel for vitreous enamelling (John Summers & Sons Ltd.), 688-689
 Discharge rate, timing unit for measuring, by R. Silvester and J. Mills, 657-658
 Dis-incentives within British Industry, by A. J. M. Sykes, 167-168
 Dismantling fluids. See *Fluids*
 Distillation of sea water at Kuwait, by J. D. Addison and R. S. Silver, 130-132
 Distillers Co. Ltd., new yeast hoppers installed (Whessoe Ltd.), 189
 Distilling plant, Weirwater, for Northern Star liner (G. & J. Weir Ltd.), 35
 Distington Engineering Co. Ltd., Distington-Goodman Ropebelt Conveyor Structure, 486-488; historical note, 486; Concast/Distington continuous casting machine, 710
 Distington-Goodman Ropebelt conveyor structure (Distington Engineering Co.), 486-488
 Ditchburn Minispa soup vending machine, 256
 Dividing head, (trade publication) 124
 Diving, deep, research on, 793
 Division, circular, tester for (Coventry Gauge & Tool Co. Ltd.), 441
 Djot motor car. Bonnet, 498
 Do-It-Yourself and handicrafts exhibition, 396
 Dock, dry, Palmers Hebburn shipyard, Vickers Armstrongs, 442-443
 — Palmers Hebburn, use of rotating fenders, 462
 — Fife, alterations to, 377
 — Floating, for Poland (Furness Shipbuilding Co. Ltd.), 469
 — Hovercraft terminal, 607
 Dockyard, Warri, opened in Nigeria, 305
 Dolezal, R., on Grosskessel-Feuerungen: Theorie, Bau und Regelung (review), 54

- Dolphin marine petrol engines (Wortham Blake & Co. Ltd.), 777
- Dome, Roof, paraboloid, for Smithfield Poultry Market, 640
- Dominion Structural Steel Ltd., twin boom crane for Toronto docks, 366
- Dommasch, D. O., on Airplane Aerodynamics (book), 456
- Donkeyman boiler, compact water tube (Babcock & Wilcox Ltd.), 228
- Donoughe, Dr. B., on wage policies in public sector, 661
- Donovan, A. F., on High Speed Problems of Aircraft and Experimental Methods (book), 156
- Donovan Electrical Co. Ltd., electronic timer, 16; power relays, 777
- Door, automatic, Stanley Magic-Door (Tonks-Rowley Automatic Doors Ltd.), 342
- Garage, Garador (Westland Engineers Ltd.), 21
- Openers, automatic, Sentinel (Elcontrol Ltd.), 841
- Shutter, use of Stelvetite for, (Bolton Gate Co. Ltd.), 453
- Dorian, A. F., on Six-Language Dictionary on Automation, Electronics and Scientific Instruments (book), 456
- Dorman Long (Bridge & Engineering) Ltd., blast furnaces, 672; member of consortium of Associated Bridge Builders Ltd., 789
- Dorman Long & Co., Spencer Steel Works, 535
- Dorman Long (Steel) Ltd., third blast furnace in operation, 49; record output of blast furnace, 672; cables for River Severn suspension bridge, 789
- Double-D fendering strip (Sherborne Rubber Co. Ltd.), 621
- Double Drive conveyor driving head (Richard Sutcliffe Ltd.), 170
- Douglas, J. F., on Solution of Problems in Fluid Mechanics (book), 422; (review), 854
- Douglass, H., on profits, 733
- Douglass, M. J., on Railway Conversion League, 503
- Doulton Industrial Porcelains Ltd., Roydalox alumina ceramic, 146
- Dounreay atomic reactor, problems encountered, 696
- Reactor type of the future, 561
- Dover Engineering Works Ltd., position and prospects, 81
- Dowell Hissett, position and prospects, 81
- Dowlais Foundry & Engineering Co., Ltd., formation of, 49
- Dowty Group Ltd., steerable nose undercarriage for aircraft, 294; aircraft nose undercarriage with built-in steering, 400
- Dowty Marine Ltd., marine jet units, 526-527; Turbocraft boat, 527
- Dowty Seals Ltd., course for supervisors, 755
- Doxford, William, foundation of William Doxford & Sons (Engineers), Ltd., 213
- Doxford, William, & Sons (Engineers) Ltd., Doxford P type marine diesel engine, 213-215; historical note, 213; association with Sunderland Shipbuilding Dry Docks & Engineering Co., 215
- Drafting machine, automatic (ITEK Corp.), 274
- Draglines, walking, for Calgary Power Ltd. (Ransomes & Rapier Ltd.), 67
- Drakelow C power station, supercritical boiler for (International Combustion Ltd.), 2-4
- Dransfield, F., review of Working Party on Pressure Vessels, 550; biographical note, 552
- DRAT vertical traverse unit (Berridge Aircraft Ltd.), 341
- Draw-Pak wire packaging equipment (Reliance Gear Co. Ltd.), 306
- Drawing, engineering, for G1 and G2 courses, by H. Ord (book), 692
- Foundry, calculations and physics, by J. E. Garside (book), 514
- Machine (Ekstrom, Carlson & Co.), 193, 200
- Technical, approach to early art from the psychology of, by Dr. R. E. Heymann, 553
- Drazin, D. H., effects of vibration on vision, 158
- Dreadnought submarine, atomic propelled, 828
- Dredger, hydraulic, design of (Hay's Wharf Ltd.), 431
- Hydro-Pneumatic (Hymatic Dredges Ltd.), 431
- Dredging equipment (Hymatic Dredges Ltd.), 549
- Dress, Plain Words on, 334, 738
- Driam machinery for helical welding of pipe, 409
- Drier. See *Dryer*
- Drift transistor, 682
- Drikold solid carbon dioxide (ICI Ltd.), 653
- Drill, air feed (Desoutter Bros. Ltd.), 441
- Portable (Black & Decker Ltd.), 541
- Electric (Black & Decker Ltd.), 112, 379
- Electric (Buck & Hickman Ltd.), 379
- Rig, diamond (Boart & Hard Metal Products S.A. Ltd.), 713
- Rock, Silver Feather (Holman Bros.), 695
- Silver 82 (Holman Bros.), 695
- Rods (trade publication), 324
- Drill Service (Horley) Ltd., Electro-Mechano power drilling machines, 776
- Vole (Holman Bros. Ltd.), 675
- Drilling jig (A. A. Jones & Shipman Ltd.), 111
- Machine (W. J. Meddings Ltd.), 142
- Power, Electro-Mechano (Drill Services (Horley) Ltd.), 776
- Tape controlled, Richmond (George Cohen 600 Group Ltd.), 608
- Drives, V (trade publication), 220
- Driving high-performance cars, learning, 40
- Droughts and floods, perennial, checking in Afghanistan, 266
- Drum, boiler, for Komati power station (G. A. Harvey & Co. (London) Ltd.), 268
- Coiling (H. & T. Mellor (Engineers) Ltd.), 432
- Dry cleaning, laundry and allied trades, international exhibition, 738
- Dry-dock. See *Dock*
- Dryer, air lift, Aldersley-Shaw (Aldersley Engineers Ltd.), 208
- Rotary louvre (Dunford & Elliot Process Engineering Ltd. and Foundry & Metallurgical Equipment Co. Ltd.), 171
- Drying equipment, spray, Luwa, made to measure (Steels Process Plants Ltd.), 709
- Medium, trichlorethylene as, 320
- Paint by gas fired infra-red radiation, by F. J. Brewer, 780
- Drynamels Ltd., zinc-rich paint, 51; wax primer for pitted steel, 321
- Dualok cutting tools (Edibrac Ltd.), 239
- Dubesco Laboratories Ltd., Grayhill miniature tap switches, 240
- Ducal appliances, Ducal fire alarm, 700
- Du Cane, Cmdr. P., on high speed craft built to win a race, 226-227; design of *Tramontana* power boat, 329
- Ducas, R., on Winget Gloucester Ltd., 549
- Duckett, W., on Windings on Traction Machines: Insulation and Construction (book), 817
- Duckworth, W. E., on Guide to Operational Research (review), 250
- Duct-Plast pvc cable ducting (Shawford Control Gear Co. Ltd.), 321
- Ducting, air, flexible (Baxter Woodhouse & Taylor Ltd.), 703
- Cable, of pvc, Duct-Plast (Shawford Control Gear Co. Ltd.), 321
- Skirting and dado (Key Engineering Co. Ltd.), 744
- Dudley, D. W., on Gear Handbook: The Design, Manufacture and Application of Gears (review), 86
- Dummer, G. W. A., review of Miniaturization 122; biographical note, 124; on Micro-miniaturization (book), 156; on British Transistors, Diodes and Semiconductor Devices Data Annual 1962-3 (book), 456
- DuMont, Allen B., Laboratories, photomultiplier tube, 393
- Duncumb, Dr. P., development of Microscan X-Ray analyser, 732
- Dunford & Elliott Process Engineering Ltd., rotary louvre dryers, 171
- Dungeness atomic power station, accident at, 233, no delay at, 233
- Dunlop disc brakes, cars fitted with, 740
- Dunlop Rubber Co. Ltd., research on production problems, 17; Pneuride air suspension for commercial vehicles, 333; air suspension for vehicles (trade publication), 482; Maxeret braking system, 601; anti-lock braking device, 601; tyres in mechanical handling (trade publication), 692
- Dunlop Tyre & Rubber Co. Ltd., ice tyre, 133
- Dunn, P. D., on present state of energy converters, 254-256
- Dunsmore, E., runner-up for Buchanan Silver Medal, 485
- Dunworth, Dr. J. V., on Administration of Large Research Establishments, 701; biographical note, 701
- Duplicating machine, System-Matic (Gestetner Duplicators (BSO) Ltd.), 476
- Du Pont Co. (U.K.) Ltd., neoprene, 147; neoprene synthetic rubber, 557; Delrin acetyl resin plastic for gearwheels, 653; neoprene coating for power station condenser, 757
- Durapipe & Fittings Ltd., flanges for plastic pipe, 389
- Durham Fire Brigade, tests of Perkins portable pumping set, 145
- University, symposium on magnetohydrodynamics, 393; semiconductor developments, 682-684
- Durrant, A. A. M., concept of Routemaster bus, 385
- Dust, airborne, control of, by W. D. Bamford (review), 287
- and ash handling plant for Rodenhuz power station (John Thompson Group of Companies), 269
- Collection (trade publication), 760
- Dyad double-rotor hammermill for High Brooms Brick & Tile Co. Ltd. (GEC), 845
- Dyna-Soar orbital glider (Boeing Corp.), 659
- Dynamic test rig for car seat belts (British Standards Institution), 501
- on machine tools, 730
- Dynamics of automatic control systems, by E. P. Popov (review), 759
- gas, introduction to, by R. M. Rotty (book), 592
- Power, by A. D. Lewis (book), 592
- by R. L. Halfman (book), 624
- Dynamometers, hydraulic, for Russia (Heenan & Froude Ltd.), 828
- See also *Brake*

E

- EAGLE Book of How it Works (Longacre Press Ltd.) (review), 855
- Eaglet photo-electric control (Elcontrol Ltd.), 341
- Earnshaw, E., & Co. Ltd., plastic coating for concrete bridge, 75
- Earth and rockfill dam engineering, by G. F. Sowers and H. L. Sally (book), 592
- Earthmover tyres as rotating dock fenders, 462
- Earthmoving equipment, Fiat, 529
- Earthworks, research on, 11
- East Lancashire Chemical Co. Ltd., Elco pinhole detector, 171
- Easterling, K. E., on investing failures in feed heaters, 426-427
- Eccles, Lord, on population, industry and planning, 733
- Eccles-Williams, H., appointed chairman of E. J. Heath & Co. Ltd., 73
- Echo sounder, Seamarc (Marconi), 568
- Eckersley, P. P., design of Croydon Aerodrome radio transmitter circa 1922, 729
- Eclipse pot magnets (James Neill & Co (Sheffield) Ltd.), 580
- Economic growth, computable model of (Chapman & Hall Ltd. publication), 65
- Policy, Government, and industry, by J. M. Livingstone, 265
- Economics, applied, and computers, 65
- Mine, by S. J. Truscott (book), 624
- Eddy current tester (Solus-Schall Ltd.), 171
- Edge & Sons Ltd., position and prospects, 613
- Edibrac Ltd., adoption of ISO tool colour code, 109; Dualok cutting tools, 239
- Edinburgh, H.R.H. Duke of, presidential address to Institute of Marine Engineers, 496; opening of rebuilding and rehousing scheme of City and Guilds College, 516-517; opening of Manchester headquarters of Co-Operative Insurance Society Ltd., 573; television appearance to launch National Productivity Year, 661; patron of Congress of International Commission on Large Dams, 803
- Edsac 2 computer, Cambridge University, 274
- Edson, A. P., on fuel cells, 126
- Education, adult, in a free society (New Orbits Group publication), 280
- Engineering, by Prof. D. G. Christopherson, 25
- Conference on, 7
- Looking back on, 350-352
- for Europe, by Sir Willis Jackson, 785
- Higher, Robbins Committee on, 116-118, 446
- Women and, by Dr. M. Reeves, 244, 447
- Imminent moment of truth, 116-118
- Life-long, of the engineer, 8-9
- for management, by Sir John Cockcroft, 619
- Ministry of, *General Studies in Technical Colleges*, 212; booklet on liberal studies, 485; of, inquiry into day release, 687
- Patterns of expenditure on, table of, 280
- Plain Words on, 196
- of professional engineers, 25
- Public spending on, 280
- Scientific, quality in, by Sir Patrick Linstead, 723
- Technical, better, opportunities in (White Paper), 212, 316
- The smaller firm and, by P. R. R. Venables and W. J. Williams (review), 55
- See also *Courses; Training*
- Educational status, 753
- Television stations, prospects for, 280
- Edwards, Prof., on Electricity Council, 461
- Edwards, F. J., Ltd., rotary machine, 15
- Edwards, Sir George, on One-Eleven aircraft on order, 136; on Concord supersonic airliner, 734
- Edwards High Vacuum Ltd. use of Metamic metal/ceramic material, 19
- Efco industrial filter (Electro-Chemical Engineering Co. Ltd.), 643
- Effluent, trade, checking for 1961 Health Act, 76
- Disposal, and water supplies in Western Germany (FBI publication), 340
- Treatment with greater economy, 807
- Egg boiler, Oprim (Improved Appliances & General Engineering Co. Ltd.), 128
- Eilon, Dr. S., on Industrial Engineering Tables (book), 124; on Elements of Production Planning and Control (book), 220; review of Methods Engineering: Design and Measurement of Work Methods, 455; biographical note, 456; review of Production Technology: Some Recent Developments, 551; biographical note, 552; on Elements of Production Planning and Control (review), 690
- Eimco (Great Britain) Ltd., rail mounted rocker shovel, 143; crawler mounted loaders, 473
- Eire, apprenticeship in, by J. Agnew, 824
- Ekco Electronics Ltd., development of high speed automatic tinplate classifying machine, 778-779
- Ekco Ensign Electric Ltd., position and prospects, 241
- Eklund, Dr. S., survey of nuclear propelled ships, 397
- Ekstrom, Carlson & Co., drawing machine, 193, 200
- Elan motor car, Lotus, 467
- Elasticity, applied, by J. Prescott (book), 482
- Engineering, fundamentals of, by S. F. Borg (book), 56
- Elbourne Memorial Lectures, 619
- Elco pinhole detector (East Lancashire Chemical Co. Ltd.), 171
- Elcontrol Ltd., portable water samplers, 76; photo-electric light source, 111; Eaglet photo-electric control, 341; oil burner control, 542; Sentinel automatic door openers, 841
- Eldorado Ice Cream Ltd., use of dismantling fluids, 356
- Electric central heating, 460
- and electronic engineering, automatic production in, symposium on, 335
- Furnace. See *Furnace*
- Generator. See *Alternator; Generator and Turbo*
- Locomotive. See *Locomotive, electric*
- Machine analysis using matrices, by W. J. Gibbs (book), 656
- See also *Alternator; Generator; Motor; Turbo*
- Mains. See *Cable*
- Motor. See *Motor, electric*
- Electric and Musical Industries Ltd., exhibit at British Industrial Equipment Exhibition, 529
- Power demands, home, 96
- Pumped storage, 638
- See also *Electricity; Power*
- Railways. See *Railways and British Railways*
- Systems, large, conference on, 71
- Electrical accessories (trade publication), 624
- Association for Women, evening courses, 384
- Development Association, *At Home with Electricity*, 328; running costs of electric central heating, 460; Industrial Development Conference, 672
- Encapsulation, by M. C. Volk, J. W. Lefforge and R. Stetson (book), 792
- Engineers Exhibition, 802
- Engineering, books on, 314
- Fundamentals, by R. B. Angus (book), 482
- Electrical Equipment, automobile, by A. P. Young and L. Griffiths (book), 482
- Generation, better materials for, by M. G. Gemmill, 275-276
- Industry, metallurgy and applications of non-magnetic irons in, by O. Ogden and T. I. Jones, 621
- Installation work, by R. A. Mee (book), 88
- Practice, marine, by G. O. Watson (book), 692
- Precipitation (trade publication), 656
- Electrical Remote Control Co. Ltd., reversing timer, 47
- Electricité de France, atomic reactors of, 696
- Electricity, at home with (Electrical Development Association booklet), 328
- Atomic storage processes of, 767
- Conversion to infrared radiation converter (MIT), 292
- Council, *Report of the Proceedings of the 2nd Conference of University Professors*, 279; reports and accounts, 365; wage offer, 779
- Demand curve, winter, 766
- Electrochemical storage of, fuel cells, 766
- Increasing consumption in Europe, 225
- Industry, data processing in, 819
- Mackenzie report on generation and distribution in Scotland, 829
- from nuclear power, 300
- for productivity, conference on, 733, 741
- Pumped storage schemes, 766
- Sales statistics, 365
- Storage by thermal capacity, 767
- Thermal methods of, 767
- Electrics, aircraft, developments in (English Electric Co. Ltd.), 64
- Electro-Chemical Engineering Co. Ltd., UBAC copper plating process, 321; Efco industrial filter, 643; new electro-plating plant for Siebe Gorman, 789; sewage and effluent treatment plant for Siebe Gorman & Co. Ltd., 807; Tri-Ni three layer nickel plating, 853; metal finishing (trade publication), 856
- Electro-encephalograph, transistorized (AEI Ltd.), 563
- Electro-encephalographic Society, transistorized electro-encephalograph, 563
- Electro-Mechano power drilling machines (Drill Services (Horley) Ltd.), 776
- Electrochemical polarization, study of corrosion by (National Bureau of Standards), 491
- Storage of electricity, fuel cells for, 766
- Electroflo Meter Co. Ltd., boiler controls for Reed Paper Group's new extension, 842
- Electroluminescence, by H. K. Henisch (book), 392; (review), 816
- Electrolytic machining technique (International GEC), 393
- Electrolytic Refining & Smelting Co. of Australia Pty. Ltd., use of Metamic metal/ceramic material, 19
- Electromagnetic control of liquid iron, by O. Tedder, 174
- Flow-measurement, theory of, by J. A. Shercliff (book), 760
- Theory, by E. Hallen (book), 856
- Electromanometer pressure transducer (Consolidated Electro-dynamics Corp. (UK) Ltd.), 611
- Electromark (GB) Ltd., automatic marking machine, 48
- Electrometer DC amplifier (Vacuum Generators Ltd.), 715
- Electron beam furnace (GEC Ltd.), 659
- Unit (Torvac Ltd.), 793
- Electronic and electric engineering, automatic production in, symposium on, 335
- Equipment, reliability, symposium on, 402
- Sealing, 50
- Experiments (trade publication), 624
- Industries Supply Board, formation of, 413; S. S. Eriks appointed chairman, 413; R. Kelf-Cohen appointed secretary, 413
- Instruments (trade publication), 856
- Instrumentation, principles of, by W. A. Lynch and J. G. Truxal (review), 551
- Processes in dielectric liquids, conference on, 464
- Rectification, by F. G. Spreadbury (book), 288
- Valve and Semiconductor Manufacturers Association, formation of Electronic Industries Supply Board, 413
- Wiring at low temperatures (ASTM), 159
- Electronics, automation and scientific instruments, six-language dictionary on, by A. F. Dorian (book), 456
- Dictionary of, by S. Handel (book), 422
- Microminiaturization in, 682
- Physics of failure in, symposium on, 192
- Semiconductor, handbook of, by L. P. Hunter (book), 56
- Electroplating, copper, UBAC process (Electro-Chemical Engineering Co. Ltd.), 321
- Engineering Handbook, by A. K. Graham (book), 456
- Plant for Siebe Gorman, 789
- Electrostat Ltd., Nesag-Spraytron electrostatic paint spraying equipment, 206
- Electrox ceramic material (Royal Worcester Industrial Ceramics Ltd.), 60
- Elements, alloying, in steel, by E. C. Bain and H. W. Paxton (book), 220
- Elephant portable shelters (John Smith & Co. (London) Ltd.), 238
- Eletra III research vessel for Marconi International Marine Co. Ltd. (Fairmile Construction Co. Ltd.), 568
- Elevator, service (Barron & Shepherd Ltd.), 14
- Elizabeth, HM Queen, the opening of Commonwealth Institute's new building, 574
- Elizabeth Parker Safety Cup, awarded to Stuart Street Basic Training Centre, 211
- Elkington, V., on Dover Engineering Works Ltd., 81
- Elliott-Automation Ltd., computer system for Spencer Steel Works, 532; position and prospects, 717; new appointments to the board, 717; Sir Leon Bagrit to succeed R. de Trafford as chairman, 717; automation control of mineral treatment at Parc Mine, 742-743; Arch process control system for Steel Co. of Wales, 779

- Elliott, B., & Co. Ltd., position and prospects, 445
- Elliott, B. (Machinery), Ltd. shaping machine, 270
- Elliott Bros., postal machines, 73
- Elliott, S. L., appointed managing director of E. J. Heath & Co. Ltd., 73
- Elliott Steam Tug Co., orders placed with Cochrane & Sons Ltd., 845
- Elliott, T. L., & Co. Ltd., formation of E. J. Heath & Co. Ltd., 73
- Ellison, George, Ltd., Vapomatic automatic motor starter, 111
- Elm Engineering Ltd., aluminium tube as typewriter platens, 249
- Embassy Engineering Ltd., induction coil winding machine, 238
- Embassy Machine & Tool Co. Ltd., Kampf copy milling machine, 307
- Embrittlement, hydrogen, investigation of, 521
- Emden and Watson's Building Contracts and Practice, by W. H. Gill (review), 324
- Emerson, W. H., on survey on heat exchangers, 659
- Emflux electromagnetic flowmeter (Mawdsley's Ltd.), 239
- EMI Conveyancer Rotobug, 273
- EMI-Cossor Electronics Ltd., variable depth sonar equipment, 396
- EMI Electronics Ltd., television camera marketing rights for Clarke & Smith Ltd., 44; closed circuit television for archaeological observation, 253; voice frequency telemetry system, 325; closed circuit television for aircraft rear vision, 361; photomultipliers, 732; new television aerial for ITA at Croydon, 773
- EMI. See also *Electric and Musical Industries Ltd.*
- Emmerson, Sir Harold, on building industry, 597
- Empirical equations and nomography, by D. S. Davis (book), 856
- Empiricism versus research, 103
- Employment, civilian public, statistics on, 661
- Service, youth, work of, 212
- See also *Unemployment*
- Enamel, vitreous, course on, 588
- Improving the quality of, 588
- Enamelling, vitreous, Diron steel for one coat (John Summers & Sons Ltd.), 688-689
- Encapsulation, electrical, by M. C. Volk, J. W. Leforge and R. Stetson (book), 792
- Energy converter, 457
- Present state of, by H. Billett and P. D. Dunn, 254-256
- Thermionic, 255
- Methods in applied mechanics, by H. L. Langhaar (book), 760
- Storage, methods of, by J. W. Gardner, 766-767
- Enfield Rolling Mills Ltd., copper roof for Commonwealth Institute buildings, 575; continuous cast bronzes and gunmetals (trade publication), 792
- Engine, aero. See *Aircraft engine*
- Combustion, congress on, 835
- Seventh international congress on, 635
- Coventry Climax (Coventry Climax Ltd.), 801
- Deposits, photographic observation of (Shell), 160
- Diesel, "D" range of (Rolls-Royce Ltd.), 567, 579
- Doxford P type (William Doxford & Sons (Engineers) Ltd.), 213-215
- for export (F. Perkins Ltd.), 336
- Falcon (Rolls-Royce Ltd.), 642
- High-powered Sulzer (Swan, Hunter & Wigham Richardson Ltd.), 112
- Industrial, AEC A590 and A690 (AEC Ltd.), 782-784
- for locomotives, Sulzer (Vickers-Armstrongs (Engineers) Ltd.), 740
- Marine, by C. C. Pounder, 525
- Multi-purpose (Petters Ltd.), 110
- New types (A/B Götaverken), 662
- Perkins marine, 745
- for rail traction (trade publication), 514
- for tanks, 631
- (Villiers Engine Co.), 79
- for high speed power boat (Construzione Revisione Milano), 227
- Industrial (Villiers Engineering Co. Ltd.), 776
- Marine (Rolls-Royce Ltd.), 840
- Motor-car. See *Engines, petrol; Motor-car engines*
- Oil. See *Engine, diesel*
- Petrol, for tanks, 631
- Industrial (Ford Motor Co. Ltd.), 475
- Marine, Dolphin (Wortham Blake & Co. Ltd.), 777
- See also *Aircraft engine; Motor-car engine*
- Rocket, by S. L. Bragg (review), 358
- Rotary, NSU/Wankel, fitted to boats, 567
- See also *Turbine, gas*
- Engineers and Common Market, conference on, 765
- Guild, on joint council of engineering bodies, 515; conference on engineers and the Common Market, 765
- Joint Council, downward trend in enrolment in engineering students, 851
- Life-long education of, 8-9
- as manager, by C. T. Melling, 555
- Metallurgical principles for, by J. G. Tweeddale (book), 288; (review), 691
- Physical metallurgy for, by A. G. Guy (book), 324
- Professional, and Common Market, conference on, 33
- and Common Market, by Sir Walter Puckey, 785
- Definition of, 8
- Education and training of, 25
- in Royal Navy, 434
- What does a University do for an? 279
- ENGINEERING, inspection of Ferrari motor car, 13
- Engineering alloys, by N. E. Woldman (book), 817
- Apprentices. See *Apprentice*
- Capacity Exchange, aims and objects of, 673
- Engineering courses. See *Courses*
- Dimensional metrology, by L. Miller (book), 360
- Education. See *Education*
- Employers' West of England Association, work study department, 586-587; course on practice of work study, 586-587
- Equipment Users' Association, Steam Trapping and Condensate Removal (book), 728
- and geology, by R. F. Legget (book), 56; (review), 622
- Industries Association, setting up National Automation Centre, 565; *Proposals for a National Automation Centre*, 565
- Industries, engineering science and calculations for craftsmen in, by W. E. Fisher (book), 514
- Use of austenitic iron in, by J. Morrison, 620
- Institutions, 461
- Joint Council, establishment of, 493; purpose of, 493; bodies represented, 493; Sir Kenneth Hague as chairman, 493; K. H. Platt as secretary, 493; formation of, 525
- Laboratories. See *Laboratories; National Engineering; National Physical Engineering Ltd.*, launching of *Kompass Register*, 804
- and management: total quality control, by A. V. Feigenbaum (review), 219
- Mechanics, books on, 314
- Handbook of, by W. Flügge (book), 456
- Military (HMSO publication) (book), 514
- Production, materials for, by P. S. Houghton (book), 324
- Research Association, boring bars, 521
- Science and calculations for craftsmen in engineering industries, by W. E. Fisher (book), 514
- Sciences, Institute of Advanced Studies in. See *Institute*
- Laboratory manual for, by E. C. Halliday and B. P. Morris (book), 656
- in perspective, by K. Ball, 721-722
- Standards. See *British Standards Institution; Standards*
- Tables, industrial, by S. Eilon (book), 124
- Tolerances, by H. G. Conway (book), 360
- Training for nuclear power, by Dr. J. M. Kay, 448
- University, evolution of, by K. Ball, 650-651
- Value, and analysis (Value Analysis Inc.), 175
- Without wheels, by N. Swindin (book), 252
- Workshop experiments, by H. W. Reece (book), 817
- England, G., on water for cooling, 605
- English, for technical students, by R. A. Kelly (review), 154
- English Abrasives Corp. Ltd., abrasive belt "skiving" machine with air bearings, 710
- English Electric Aviation Ltd., future of Blue Water guided missile, 161
- English Electric Co. Ltd., transformers for CEGB, 12; electric motors, 48; equipment (trade publication), 56; development in aircraft electric, 64; homopolar generator, 64; Deriaz turbines for Culligran power station, 191; waste disposer, 192; four Avon generating units for West Burton power station, 262; circulating water channel for ship research, 290; Riband hydro-electric scheme, 404; use of aluminium extrusions as heat sinks, 419; diesel electric locomotives for British Railways, 436; Nelson High Power Laboratories, 589; flameproof electric motors, 610; gas-turbine generating sets for CEGB, 637; welding division merger with Arc Manufacturing Co. Ltd., 645; formation of English Electric-Arc Welding Co. Ltd., 645; Clayton mobile boiler, 708; Kaplan turbines for Toledo Bend Project, 740
- English-Russian Dictionary of Metallurgy and Allied Sciences, by T. Deruguine (book), 592
- English Steel Castings Corp. Ltd., historical note, 84; technical organisation, 84; process controls, 85; products of, 84-85
- English Steel Corp., electric arc furnaces for (Armstrong-Vickers (Engineers) Ltd. and Birlec-Efco (Melting) Ltd.), 302-303
- Engraving tool, Vibro-Tool (Burgess Products Co. Ltd.), 811
- Entropy, by J. D. Fast (book), 760
- Epikote resins (Shell Chemical Co.), 284
- Epoxy resin. See *Resin*
- Equations, empirical, and nomography, by D. S. Davis (book), 856
- Laminar boundary layer, by N. Curle (book), 422
- Equipment (trade publication), 56
- Erben, H., Ltd., Rexoplast tanks and containers, 506
- Ergonomics in the home, 660
- Ericsson Telephones Ltd., position and prospects, 17; acquired by Plessey Co. Ltd., 781
- Eriks, S. S. appointed chairman of Electronics Industries Supply Board, 413
- Eringen, A. C., on Nonlinear Theory of Continuous Media (book), 856
- Erlam, C. G., appointed chairman of Microcell Ltd. and Palmer Aero Product Ltd., 613
- Erroll, Rt. Hon. Frederick, on F. Perkins Ltd., 336; on export booklets, 572; on importance of Japanese market, 673
- Escravos Bar Moles, cinema film on, 138
- Escritt, L. B., on Pumping Station Equipment and Design (book), 592
- Esso Hampshire tanker, 201
- Esso Oil Co. Ltd., to form joint company with Mobil, Regent, Shell-Mex and BP for pipeline construction, 774
- Esso Petroleum Co. Ltd., hose handling equipment installed (Woodfield Rochester Ltd.), 107; marine fuelling pontoons, 136; pipelines under Southampton Water, 202; use of Ferodo brake blocks on rail tank wagons, 432; prefabricated oil refinery for Port Brega, 695
- Esso Research & Engineering Co., miniature oil burner using ultrasonics, 128
- Esso Sirte Inc., prefabricated oil refinery for Port Brega, 695
- Esso West Indies Ltd., oil refinery contract placed with Arthur E. McKee Co., 469
- Établissements Willeme of Paris, agreement with British Motor Corp. Ltd., 44
- Etchells, David (Furnaces) Ltd., rotary billet heater, 810
- Etchells, David (Machinery) Ltd., Multiforge forging machine, 542
- Etching machine, powderless, Faxi (General Trade Equipment Ltd.), 579
- Ethylene storage sphere for ICI Ltd. (Whessoe Ltd.), 217
- ETS Ltd., Lark II welding transformer, 378
- Euco Tools Ltd., Circlemaster circle template, 610
- Euratom. See *European Atomic Energy Commission*
- Europa Engineering Co. Ltd., Perman chucks and mandrels, 341
- Europa portable conveyor (G. Hunter (London) Ltd.), 48
- Europe, education for, by Sir Willis Jackson, 785
- Increasing electricity consumption in, 225
- Marketing in (Institute of Practitioners in Advertising booklet), 12
- European Atomic Energy Commission, expenditure for 5-year plan, 31; test atomi reactor for Ispra, 659
- European Coal and Steel Community, record and progress of, 161; *Tenth General Report on the Activities of the Community*, 161; *General Report*, 211; trends in numbers of apprentices, 211
- Communities Information Service, *French Industry and the Common Market*, 836
- Launcher Development Organization, Blue Streak rocket as satellite booster, 405
- Lead Development Committee, conference on lead, 6
- Machine Tool Exhibition, 733
- Nuclear Energy Agency, *Catalogue of Courses on Nuclear Energy*, 384; survey of nuclear propelled ships, 397; *Fourth Report on the Activities of the Agency*, 397
- Society of Cardio-Vascular Surgery, Congress of, 191
- Eurotrac (Imports) Ltd., Porsche-Diesel tractors, 436
- Eusec. See *Conferences of Representatives of Engineering Societies of Western Europe and the USA*
- Euston-Crewe railway line, electrification of (British Insulated Callender's Construction Co. Ltd.), 804
- Eutectic Welding Alloys Co. Ltd., Eutectodes for alloy and cast steel, 357; Quenchweld method of welding heavy iron castings, 478-479
- Eutectode, welding electrodes for alloy and cast steel (Eutectic Welding Alloys Co. Ltd.), 357
- Evaporation system, vacuum (F. J. Stokes Corp.), 521
- Evaporators, flash (trade publication), 692
- Events, Plain Words on, 664
- Evered & Co. Ltd., Innovation chime unit, 700
- Everest, A. B., on history of austenitic irons and the evolution of the British Standard, 620
- Evertaut Ltd., to be operated by Evertaut Seating Ltd., 685
- Evertaut Seating Ltd., to undertake operation of Evertaut Ltd., 685
- Ewarts Ltd., use of Trisec process, 320
- Ewbank, Tupper and Associates, twin boom crane for Toronto docks, 366
- Ewens, F. H., on H. S. Cattermole & Co. Ltd., 581; on W. Canning & Co. Ltd., 581
- Excavation, atomic, experiment, Project Chariot (USAE), 396
- Excavator, Hydra-Digga Loadall (J. C. Bamford Excavators Ltd.), 449
- JCB 3 (J. C. Bamford (Excavators) Ltd.), 449-451
- Skoda (Strojimport and Strojexport), 412
- Exciter covers in plastic (J. J. Harvey & Pressurecast Ltd.), 147
- Executive aircraft (de Havilland), 163
- Intercom local telephone system (Standard Telephones & Cables Ltd.), 476
- Salaries paid to, conference on, 335
- Exhaust pipe. See *Pipe*
- Systems, scientific design of, by P. H. Smith (book), 482
- Exhibition of austenitic iron castings, 620-621
- British, at Stockholm, 104
- British Fortnight, at Geneva, 104
- British, in Romania, 12
- British Industrial Equipment, Bucharest, 529
- British Trade Fair, Bucharest, orders placed with Parkinson Cowan International Ltd., 772
- Brno Trade Fair, 44, 412, 423
- Business Efficiency, 461, 476
- Centre, National, Plan for (FBI Booklet), 201
- Chicago International Trade Fair, 469
- Clean Air, Fuel Efficiency and Domestic Heating, 71
- Computer, 198
- Corrosion and metal finishing, 71
- Dewrance & Co. Ltd., 464
- Electrical Engineers, 802
- European Machine Tool, 733
- Factory equipment, 342
- Farnborough Air Show, 257, 258
- Friedrichshafen International Boat Show, 567
- Gateway to Britain Week, Norway, 404
- Gauge and Tool and Power Press, 410, 440
- of hand and small power tools, 770
- Handicrafts and Do-It-Yourself, 396
- Heating, Ventilating and Air Conditioning, 380
- Ventilating and Fuel Efficiency, 379
- of Industrial Process Heating, 41
- Industrial Safety, and conference, 785
- International Motor Show, 401
- Exhibition, Laundry, Dry Cleaning and Allied Trades, 738
- Leipzig Trade Fair, countries represented, 836
- Meat Machinery and Butchers' Supplies, 166
- Metal Finishing and Corrosion, 703
- Mobile, vehicles for, 12
- Motor Show, 525, 528, 529
- Osaka Machine Tool Fair, 673, 733
- Printing Machinery and Allied Trades, 166
- Public Works, 529, 674
- by Rockwell Machine Tool Co. Ltd., 464
- Screw forming, 299
- Stockholm Technical Fair, 436
- Utrecht International Spring Fair, 804
- Vehicle, mobile, British Aluminium Co., Ltd., 404
- Welding Engineering (1962), 278
- Expanded Metal Co. Ltd., slotted design expanded metal, 217; walkways (trade publication), 288
- Expanded metal, slotted design (Expanded Metal Co. Ltd.), 217
- Expansometer optical dilatometer (Barr & Stroud Ltd.), 508
- Expedition, International Indian Ocean, preliminary report, 328
- Expenditure, Government, 265
- Experiments, electronic (trade publication), 624
- Engineering workshop, by H. W. Reece (book), 817
- Expert Industrial Controls Ltd., remote control, 271
- Explorer XII satellite, results from, 95
- Exports, 265
- Export Action Now, 572
- Export of agricultural machinery, statistics, 232
- of aircraft, 469
- Consortia, 404
- Council for Europe, conferences for commerce and industry, 469
- of diesel engines (F. Perkins Ltd.), 336
- of forged steel rolls (Firth Brown Ltd.), 471
- How to, by M. Shanks, 572
- to Japan, 673
- of machine tools, rising statistics, 501
- of motor cars, 529
- Situation, FBI report, 501
- Ex-resonance experiments, 859
- Extremes, statistics of, by Professor E. J. Gumbel, 160
- Extrusion, aluminium, for heat sinks (Alcan Industries Ltd.), 418-419
- Cold-steel, research on, 31
- Hydrostatic, of metals (National Engineering Laboratory), 191
- Machines for plastics (trade publication), 456
- Metal, mechanics for, by W. Johnson and H. Kudo (review), 758
- Presses, hydraulic, by E. Muller (review), 390

F

- FABER, OSCAR, & PARTNERS, Smithfield Poultry Market, 640
- Fabrication line, shot blasting begins, 139
- Welded, in aluminium (Controlled Heat & Air Ltd.), 589
- Facit EDB computer for optimum positioning of pylons, 698
- Factories Acts, 701
- Accidents. See *Accidents*
- Changing culture of, by Dr. E. Jacques (book), 754
- Complete: industrial constructions, by A. Hugon and R. Traverse (review), 155
- Equipment exhibition, 342
- House building goes into, 74
- Housing from, conference on, 502
- Management, by K. G. Lockyer (book), 252; (review), 727
- Fafnir Bearing Co. Ltd., continuous hardening and tempering equipment installed (AEI-Birlec Ltd.), 779
- Failures, Plain Words on, 602
- Fair, trade. See *Exhibition*
- Fairbanks, G. C., appointed to board of Elliott-Automation Ltd., 717
- Fairey Engineering Ltd., Weatherhead hydraulic pump, 580
- Fairfield Shipbuilding & Engineering Co. Ltd., replacement of Harringay West Hornsey rail viaduct, 641
- Fairhurst, Harry S., & Son, new chemistry block for Manchester University, 104
- Fairlon universal joints (W. M. Pollard Ltd.), 341
- Fairmile Construction Co. Ltd., *Elettra III* research vessel for Marconi International Marine Co. Ltd., 568
- Fairs & Exhibitions Ltd., British Exhibition in Romania, 12; British exhibitors at Brno Trade Fair, 44; British Industrial Equipment Exhibition at Bucharest, 529
- Falcon diesel electric locomotive (Brush Electrical & Hawker Siddeley), 799
- Falcon diesel engine (Rolls-Royce Ltd.), 642
- Falk, R. S., review of Postscript to Science and Government (review), 154; biographical note, 156
- Fan, axial flow, Aerofoil, silencer for (Woods of Colchester Ltd.), 380
- Mouldings (T. H. & J. Daniels Ltd.), 52
- Sirocco (Davidson & Co. Ltd.), 380
- Testing, flow measurement in (National Engineering Laboratory), 626
- Unit with linear electric motor drive (Matthews & Yates Ltd.), 463
- Vent-A-Matic (R. W. Simon Ltd.). See *LETTER*, 40
- Xpelair (Woods of Colchester), 52
- Fao offshore tanker terminal, Iraq (Raymond-Costain-De Long), 503
- Farming. See *Agriculture; Irrigation; Tractors*
- Farnborough Air Show, 257, 258
- Fast, J. D., on Entropy (book), 760
- Fatigue, 595
- Data for titanium alloys. See *Correction*, 64
- Designing against, by R. B. Heywood (book), 422
- Metal, surface reactions during, 190

- Fatigue resistance of welded steel plate girders, investigation of, 11
 — Tests on bridge girders (BWRA), 105
 Fawcett, J. R., on Hydraulics in Mechanical Handling (book), 124
 Fawcett Preston & Co. Ltd., moulding presses, 507
 Fawley power station, 372, 404
 Faxi powderless etching machine (General Trade Equipment Ltd.), 579
 Faylor, R. C., on reliability of Perkins generating sets in Arctic conditions, 658
 Fearon, J. H., on Progress in Non-Destructive Testing (review), 322
 Feasey, W. J., on tower cranes in shipbuilding, 334
 Feature systems, 545
 Federal German Navy, *Strahl* and *Pfeil* patrol boats for (Vosper Ltd.), 637
 Federation of British Industries, *Foreign Languages in Industry*, 33; shop window for Britain, 193; *Plan for a National Exhibition Centre*, 201; study group on National exhibition centre, 201; *Trade Effluent Disposal and Water Supplies in Western Germany*, 340; inquiry into industrial trends, 501; export situation, 501; *Cyprus—A Short Survey*, 740
 Fédération Européenne d'Associations Nationales d'Ingenieurs, formation of, 33
 Feed heaters. See *Heaters*
 — Hopper (Amigo Engineering Products Ltd.), 507
 — System, closed, for ships, Weirpak (G. & J. Weir Ltd.), 704
 — Unit, multi-bin (Frederick Parker Ltd.), 271
 Feedback engineering: control system theory, by G. Lago and L. M. Benningfield (book), 288
 Feeders, rotary disc (Aylesbury Automation Ltd.), 580
 Feedwater treatment for boilers, 4
 Feigenbaum, A. V., on Total Quality Control: Engineering and Management (review), 219
 Feldmann, H. D., on Cold Forging of Steel (review), 322
 Fenders, rotating, for docks (Firestone Burleigh Marine Pneumatic Fendering Co. Ltd.), 462
 Fendering strip, Double-D (Sherborne Rubber Co. Ltd.), 621
 Fenner, J. H., & Co. Ltd., centrifugal clutch, 111
 Fennessy, G/Capt., on new ideas for industry, 397; on new laboratories for Decca Radar Ltd., 397; on Decca Radar Ltd., 413
 Fenton Bryn & Co. Ltd., glass-fibre roof ventilators, 663
 Ferguson, Harry, Research Ltd., use of Loctite sealant resin, 388
 Fermi, E., first atomic reactor, 701
 Ferodo brake blocks for rail tank wagons, 432
 Ferodo Ltd., Friction Materials for Engineers (book), 514
 Ferranti Ltd., using steam from test equipment, 35; transformers for CEGB, 44; Indicat ratio indicator, 80; Nomag non-magnetic cast iron, 114; castings for Printometers, 114; Mercury computer to plan overhaul of oil refinery, 159; Apollo computer at Prestwick airport, 273; Argus computer, 273; use of Trisec process, 320; computer for Jodrell Bank radio telescope, 491; high vacuum pumps, 563; magnetrons, 715; power line fault locator, 793; Argus 100 computer, 827; Atlas computer inaugurated by Sir John Cockcroft, 827
 Ferrari motor cars, 13
 Ferraro, V. C. A., on Introduction to Magneto-Fluid Mechanics (review), 654
 "Ferret," pipe cleaning, with magnetic transmitter (Water Research Association), 305
 Ferri, A., on Progress in Aeronautical Sciences (book), 482
 Ferrite isolator (Marconi's), 47
 Ferro Enamels Ltd., course on vitreous enamels, 588
 Ferrodor coating (Griffiths Bros. & Co. London Ltd.), 217
 — Steel protection system (Griffiths Bros. & Co. London Ltd.), 217
 Ferroglass ferro-magnetic glass (New Metals & Chemicals Ltd.), 626
 Ferrous scrap industry, price stability in, 733
 Fescol Ltd., Kanigen plating process, 479
 Ffestiniog penstock bent to fit, 641
 Fiat earthmoving equipment, 529
 Fiat motor car, 529
 Fiat 600D motor car, road tests on, 769
 Fibreboard-clad polyethylene containers (Reed Plastic Packaging Ltd.), 188-189
 Field Aircraft Services, instrument servicing, 20
 — Coils and armatures, by K. Wilkinson (review), 87
 Fielden Electronics Ltd., Bikini temperature indicator, 80; pressure transmitter, 239; temperature transmitter, 800
 Fiennes, M. A., on Davy-Ashmore Ltd., 349
 Fife docks, alterations to, 377
 Fiji, cable link with New Zealand (Standard Telephones & Cables Ltd.), 772
 Film (cinema) Congress at Warsaw, 135
 — on Escravos Bar Moles, 138
 — Fluid Power Circuits—A Commonsense Approach, 374
 — Gas filled diode, 649
 — Ignatron, 649
 — *Man in Charge*, 585
 — Optical Gratings and Machine Tools, 374
 — Other Fellow, 769
 — on propane (BOC Ltd.), 73
 — for teacher and training officer (Machine Tool Trades Association), 211
 — Teaching work sampling through, 686
 — *This is Siporex* (Richard Costain Ltd.), 775
 — on thyratron, 649
 — *Wider View*, 585
 Film Cooling Towers Ltd., cooling towers for Spencer Steel Works, 535
 — Magnetic, computer memory (GEC Ltd.), 327
 — Oil, studies of, Leeds University, 223
 — X-ray non-screen (Ilford Ltd.), 853
 Filter, air, self-cleaning, 330
 — Self-cleaning, King (Cooper Mechanical Joints Ltd.), 330
 — Viscous, Auto Midac (Midland Heating & Ventilation Co. Ltd.), 380
 — Industrial, Efco (Electro-Chemical Engineering Co. Ltd.), 643
 — Rotary (trade publication), 692
 — Pressure (Davey, Paxman & Co. Ltd.), 663
 — String discharge (trade publication), 422
 — Water well, stainless steel (Republic Steel Corp.), 51
 Filtration plant for Coquet River (Moto Plastics Ltd.), 138
 Findlay, Alexander, & Co., Spencer Steel Steel Works, 535; Cockenzie power station, 713
 Findlay, Irvine Ltd., Autoheat fan heater, 292
 Finishing equipment, barrel, "Carbotrol 7" (Carborundum Co. Ltd.), 205
 — Machine, metal (Amber Light Engineering Co.), 610
 — Metal (trade publication), 856
 Fink, L. R., on Central Electricity Generating Board, 696
 Finlayson, on market research, 612
Finwhale submarine, 217
 Fire alarm, Ducal (Ducal Appliances), 700
 — Damage statistics, 329
 — Engines with disc brakes (Dennis Bros. Ltd.), 740
 — Offices' report, 329
 — Open, with back boiler, Burnall (Baxi Ltd.), 796
 — Protection Association, Industrial. See *Industrial*
 — Research using model structures, 394
 Firefighting unit (M. F. Robertshaw Ltd.), 78
 Fireproof Tanks Ltd., Hyclad gasket material, 50
 Firestone Burleigh Marine Pneumatic Fendering Co. Ltd., rotating fenders for docks, 462
 Firms, British, making them European minded, 612
 — Smaller, and technical education, by P. R. R. Venables and W. J. Williams (review), 55
 Firma Curd Nube copy milling machine (Soag Machine Tool Ltd.), 714
 Firth Brown Ltd., use of Heraeus consumable electrode vacuum remelting furnace, 408; exports of forged steel rolls, 471; vacuum remelted steels, 789
 Firth Brown Tools Ltd., position and prospects, 209; Canadian subsidiary, 209; position and prospects, 349
 Firth, G., foundation of Graham Firth Steel Products Ltd., 813; biographical note, 813; appointed deputy chairman of Brightside Engineering Holdings Ltd., 813
 Firth, Graham, Steel Products Ltd., joining Brightside Group, 813; position and prospects, 813; historical note, 813; output of, 813; acquisition of Metal Mouldings Ltd., 813; formation of Coated Strip Ltd., 813
 Fischbacher, R. E., review of Reliability Principles and Practices, 155; biographical note, 156; review of Principles of Electronic Instrumentation, 551; biographical note, 552
 Fishburn Printing Ink Co. Ltd., use of fibreboard clad polyethylene containers, 188
 Fisher Governor Co. Ltd., automatic oil blender for Petrofina facility at Wearside, 809
 Fisher, N., on new developments in management training, 244, 447; appointed manager of Vickers-Armstrongs (Engineers) Ltd. cement machinery division, 781
 Fisher, W. E., on Engineering Science and Calculations for Craftsmen in Engineering Industries (book), 514
 Fisk, P. R., review of Mathematical Programming, 454; biographical note, 456
 Fisons Fertilisers Ltd., continuous belt weigher, 239
 Fittings, scaffolding to timber frames (Boulton Scaffolding Ltd.), 377
 Fitts, D. D., on Non-equilibrium Thermodynamics: Phenomenological Theory of Irreversible Processes in Fluid Systems (book), 24
 Fitzroy, Robinson & Partners, new office block for Prudential Assurance Co. Ltd., 804
 Fix Assistants shelving (Fix Equipment Ltd.), 270
 Fix Equipment Ltd., Fix Assistants shelving, 270
 Flame hardening equipment (Paul Ferd. Peddinghaus), 470
 Flange for plastic pipe (Durapipe & Fittings Ltd.), 389
 — Shields. See *Shields*
 Flask, Dewar, development of new type, 61
 Flatlets, grouped, for old people (HMSO publication), 660
 Flats, Jackblock system for, 711
 — Prefabricated, in Warsaw, 444
 Fleetline bus-chassis for Birmingham Corp. (Transport Vehicles (Daimler) Ltd.), 136
 Fleischmann (London) Ltd., electron beam furnace, 109
 Fleming, Prof. D., on science in the United States, Canada and Australia, 553
 Fletcher Mills Ltd., cutting fluids (trade publication), 88
 Fletcher, Thomas, & Co., replacement of Harringay West/Hornsey rail viaduct, 641
 Flexible bars, by R. Frisch-Fay (review), 590
 Flexible Drives (Gilmans) Ltd., Flexmaster winding unit, 143; Flexmaster air grinding machine, 271; position and prospects, 477
 Flexmaster hand grinding machine (Flexible Drives (Gilmans) Ltd.), 271
 Flexmaster winding unit (Flexible Drives (Gilmans) Ltd.), 143
 Flight, high speed, problems of, 625
 — Mechanics, by A. Meile (book), 728
 — Orbital, design guide to, by J. Jensen, G. Townsend, J. Kork and D. Kraft (review), 286
 Flight Refuelling Ltd., contents indicator, 295; POL collapsible fuel tank, 367
 Flight simulator, Comet 4C aircraft (General Precision Systems Ltd.), 295
 — Vickers VC10 airliner for BOAC (Redifon Ltd.), 827
 Flinn, M. W., on Men of Iron: The Crowley's in the Early Iron Industry (book), 288
 FLIP floating instrument platform for underwater research, 289
 Float for derrick crane (Taylor Woodrow (Sierra Leone) Ltd.), 75
 — Uniflote (Thos. Storey (Engineers) Ltd.), 75
 Floating dock. See *Dock*
 Floodlighting equipment (trade publication), 24
 Floods and droughts, perennial, checking in Afghanistan, 266
 Floor care, 32
 — Warming elements (Heating Investments Ltd.), 144
 Flooring, timber (Hollis Bros. Ltd.), 374
 Floriston road bridge for British Railways, 203
 Flow, laminar, studying by birefringence, by K. O. Kemp, 157
 — Measurement, electromagnetic, theory of, by J. A. Shercliff (book), 760
 — in fan testing (National Engineering Laboratory), 626
 — and meters, by A. Linford (review), 184
 — Transonic, theory of, by K. G. Guderley (review), 623
 — Vortex, compressible source, free surface water table analogue of (Boeing Co.), 489
 Flowmeter, acoustic, solid state (Westinghouse), 328
 — Electromagnetic, Emflux (Mawdsley's Ltd.), 239
 Flowpak prepackaging machine (Forgrove Machinery Co. Ltd.), 26-28
 Flügge, W., on Handbook on Engineering Mechanics (book), 456
 Fluid, anti-corrosion (Plus Gas Co. Ltd.), 356
 Fluid Coal injected into blast furnaces, 788
 Fluid, cutting (trade publication), 88
 — Dismantling (Plus Gas Co. Ltd.), 356
 — Hydraulic, and engineering applications, by R. H. Warring (review), 323
 — — Dasco (D. A. Stuart Oil Co. (Great Britain) Ltd.), 147
 — — Physical properties of, by C. D. Galvin, 459-460
 — — Research and practice, 459
 — — Mechanics for hydraulic engineers, by H. Rouse (book), 482
 — — Solution of problems in, by J. F. Douglas (book), 422; (review), 854
 — — by A. C. Walshaw and D. A. Jobson (book), 817
 — Motions, methods of reducing, 859
 — Power circuits, a commonsense approach, cinema film, 374
 — Systems, phenomenological theory of irreversible processes in, non-equilibrium thermodynamics, by D. D. Fitts (book), 24
 Fluidal valve (Bendix Corp.), 132
 Fluidized bath (Techne (Cambridge) Ltd.), 508
 Fluidmix fluid mixing machine (Laycock Engineering Ltd.), 745
 Flume, stream gauging, 125
 Fluol concrete and mortar additive (C.T. (London) Ltd.), 621
 Fluoro-Glide pte lubricant (Systems Engineering Services Ltd.), 147
 Fluxing unit, Gasfluxer (Weldcraft Ltd.), 610
 Flygt Bibo submersible pump (International Pumps Ltd.), 840
 Flying suit, high altitude (Baxter Woodhouse & Taylor Ltd.), 295
 FMA air compressors (Mining & Compressor Engineering Co. Ltd.), 776
 Foam, polyurethane, for cavity filling (Baxenden Chemical Co. Ltd.), 479
 — Scott (Declon Foam Plastics Ltd.), 853
 — Spandof foam (Baxenden Chemical Co. Ltd.), 357
 Fog horn (Wallace & Tiernan Ltd.), 714
 Folding and bending machine for plate (Scottish Machine Tool Corp.), 14
 Folkes, J., on John Folkes Group Ltd., 509; on Stour Valley Motor Co. Ltd., 509; on Stour Valley Trucks Ltd., 509
 Folkes, John, Group Ltd., position and prospects, 509; subsidiaries of, 509
 Follower, digital, for monitoring machining process (Paramatic Development Ltd.), 67
 Food machinery, use of austenitic cast iron, 815
 — Processing valves, Godolphin, 600
 Forbes, A., formation of Forgrove Machinery Co. Ltd., 26; biographical note, 26
 Ford Foundation, support for Conference of Representatives of Engineering Societies of Western Europe and the USA, 1; financial support for report on education and training of professional engineers, 25; gift to Australia's Commonwealth Scientific and Industrial Research Organization for radio heliograph, 61
 Ford Motor Co. Ltd., record export year, 232
 new tractor plant at Basildon, 232; road test of Consul Capri motor car, 263; motor car engines, 263; Taunus 12M motor car, details of, by G. Wilkins, 368; Consul Cortina motor car, by G. Wilkins, 369; exports of. See *Correction*, 372; Consul Capri motor car engine, 433; industrial petrol engines, 475; use of Aqua-Clear water treatment plant, 479; millionth Fordson tractor as gift to 'Jamaica Project,' 708
 Fordyce, D. S., & Co. Ltd., taken over by Southeros Ltd., 81; position and prospects, 81
 Foreman training at Spencer Steel Works, 539
 Forestal Industries (UK) Ltd., licence from Allied Research Co. of America, 389; Iridite chromate coating for aluminium, 389
 Forestier-Walker, C. O., on putting new life into oil storage tanks, 496
 Forging, cold, of steel, by H. D. Feldmann (review), 322
 — Machine, high energy rate (US Industries Inc.), 36-37
 — Multiforge (David Etchells (Machinery) Ltd.), 542
 — Press, new technique (Armour Research Foundation), 626
 Forgrove Machinery Co., Flowpak prepackaging machine, 26-28; historical note, 26
 Forming machine, wire and strip (Meyer, Roth & Pastor and Soag Machine Tools Ltd.), 238
 — of metals, by Dr. F. Mellor, 504
 Formwork, economic (Sterling-Safway Ltd.), 267
 — Research on concrete pressure on, 11
 — Rough, design notes and specifications for concrete from (Cement and Concrete Association report), 105
 Forth Alloys Ltd., use of austenitic iron castings, 620
 Forth River, overhead electric line crossing, 605. See *Connection*, 713
 Fortran data processing language, 827
 — programming system (IBM), 100
 Foster, D. B., on National Automation Centre, 565
 Foster Wheeler Ltd., vacuum refrigeration (trade publication), 24
 Foster Yates & Thom Ltd., Voss Precision Inverted Roller Levellers, 710
 Foundations, deep bored cylinder, research on, 11
 — Introduction to, and sheet piling, by D. H. Lee (review), 182
 — for machines and turbines, vibration analysis and design of, by A. Major (book), 760
 Foundry apprentice certificate of craftsmanship, City & Guilds, 383
 — Calculations, drawing and physics, by J. E. Garside (book), 514
 — Equipment and L. & Y. Holdings Ltd., position and prospects, 845
 — and Metallurgical Equipment Co. Ltd., rotary louver dryers, 171
 — Work, steel, ringing in better, 84-85
 — See also *Castings*; *Moulding*
 Fountains for Hyde Park (Stainless Steel Vessels (London) Ltd.), 357
 Fourcalt glass making process, 308
 Fourdriner paper making machine, 343; Inverform modification to, 344
 Fourier integral and its applications, by A. Papoulis (book), 552
 Fracture brittle. See *Brittle fracture*
 Frame analysis, by A. S. Hall and R. W. Woodhead (review), 22
 — Wall, system (trade publication), 220
 Frameworks, statically indeterminate, analysis of, by T. M. Charlton (review), 22
 France. See *French*
 Francia, Professor, development of anti-lock braking system, 601
 Francis, Professor J. R. D., review of Solution of Problems in Fluid Mechanics, 854; biographical note, 856; on danger of standing waves in oil tankers, 858-859
 Francis, R. H. L., on rough riding on railways, 706. See *LETTER*, 802
 Francis, W., on Boiler House and Power Station Chemistry (book), 422
 Franco, General, honorary presidency of fourth meeting of International Road Federation, 746
 Frank, W. F., on Introduction to Industrial Administration (book), 252; (review), 727
 Fraser, W. L., on the man who fits in, 496
 Frearson, A. O., on structural adhesives for civil engineers, 837-839
 Freeman, Fox & Partners, Severn Bridge, 695, 789. See *Correction*, 747
 Freeman, G. G., on Silicones: Introduction to their Chemistry and Applications (book), 552
 Freeman, P., on Lubrication and Friction (book), 624
 Freight handler; Auto Diesel (Braby Group), 745
 — Lashing fitting for aircraft (Short Bros. & Harland Ltd., and H. K. Porter & Co. (Great Britain) Ltd.), 296
French Industry and The Common Market, 836
 French Société Nationale, development of engines for Concord supersonic airliner, 734
 French, W. & C., Ltd., Diddington Reservoir, 572; realigning Waterloo Bridge approaches, 641
 Friction bolt. See *Bolt*
 — Dry, damping, using in a new way, by D. Williams, 794-796
 — and lubrication, by P. Freeman (book), 624
 — Materials for engineers (book), 514
 Frictional systems, research on, 627
 Friedensburg, Professor Dr., on fossil fuels, 604
 Friedland, V. & E., Ltd., bells and chimes, 700; Westminster chimes, 700; Underdome bell, 700; Minibuzzer buzzer, 700
 Friedrichshafen International Boat Show, 567
 Friend, W. A., review of Protective Clothing and Devices, 421; biographical note, 422
 Frieske & Hoepfner, induction coil winding machine, 238
 Frisch-Fay, R., on Flexible Bars (review), 590
 Fröhlich, Professor H., review of Wave Mechanics of Crystalline Solids, 182; biographical note, 184
 Frost, A. C., on Glass in Architecture and Decoration (review), 123
 Froth flotation, 743
 Frye, J., on B. Elliott & Co., Ltd., 445
 Fuel cells, 126, 255
 — for electrochemical storage of electricity, 766
 — Efficiency, clean air and domestic heating exhibition, 71
 — Heating and ventilating exhibition, 379
 — Jet propulsion, by N. A. Ragozin (review), 358
 — Liquid, getting the best out of, 716
 — Oil, increase in use of, 701
 — Smokeless, Phurnacite, 397
 — Solid, for cheaper steelmaking, 762
 — Design data for (trade publication), 514
 — See also under *specific types of fuel*
 Fuelling pontoons, marine (Esso), 136
 Fulham Borough Council, under floor heating for flats, 106
 Fuller Electric Ltd., transformers for CEGB, 12
 Fuller, F. M., Hyde Park/Marble Arch road improvement scheme, 543

- Fulmer Research Institute, developments in massive chromium, 83
- Fulton, A. A., on power resources, 638
- Fume cupboards (Thermotank Ltd.), 115
- Disposal from furnaces, 511
- Furlong Film Productions Ltd., cinema film on propane for BOC Ltd., 73
- Furnace, annealing, roller hearth, installed at Whitehead Iron & Steel Co. (AEI-Birlec Ltd.), 269
- Arc, project for scrap steel, 510
- Batch type, for Imperial Metal Industries (Kynoch) Ltd. (GWB Furnaces Ltd.), 471
- Birlec Tama, 18
- Blast, fluid coal injected into, 788
- Record output by Dorman Long, 672
- Cyclone (Babcock & Wilcox Ltd.), 717
- Design and construction, 3
- Electric arc, for English Steel Corp. (Vickers-Armstrongs (Engineers) Ltd. and Birlec-Efco (Melting) Ltd.), 302-303
- Electron beam (Fleischmann (London) Ltd.), 109
- Beam (GEC Ltd.), 659
- Beam (W. C. Heraeus GmbH), 109
- Fume disposal from, 511
- Heat treatment, for Bristol Siddeley Engines Ltd. (BWG Furnaces Ltd.), 175
- Heraeus consumable electrode vacuum remelting, 408
- High vacuum (Vacuum Industrial Applications Ltd.), 16
- Laboratory (BWRA), 325
- Open hearth, design, by A. S. Lychagin (review), 790
- Oxygen steelmaking, for Broken Hill Proprietary Co. Ltd. (Davy-Ashmore Group), 68-69
- Roller hearth (Chatburn & Chantry Ltd.), 807
- Semi muffle (trade publication), 856
- Vacuum induction melting, for Jessop-Saville Ltd. (GEC/Vacuum Industrial Applications Ltd.), 373
- See also *Cupola*
- Furness Shipbuilding Co. Ltd., floating dock for Poland, 469
- Furniture construction, 492
- Polisher. See *Polisher*
- Technical, Widney Dorlec constructional system for (Hallam Sleigh, & Cheston Ltd.), 614-616
- for working at home, 628
- Furnival, J. H., to retire from chairmanship of Wolverhampton Metal Co. Ltd., 145
- Furrer, W., on Noise and Acoustics (review), 790
- Fuselage, aircraft, conditions at mach 4, 625
- G**
- GAGE, Viscount, on industry, population and planning, 733
- Gallium arsenide, 763
- Galloway, Dr., on results of research, 612
- Galvanic corrosion. See *Corrosion*
- Galvanized cisterns, extending life of, 298
- Galvanomagnetic devices, 684
- Galvin, C. D., on Some Physical Properties of Hydraulic Fluids, 459-460
- Games, World Student, 753
- Gamlen, D. R., development of Widney Dorlec constructional system for technical furniture, 614-616
- Gammon (Nigeria) Ltd., Warri dockyard in Nigeria, 305
- Gantries, mobile types (Anderston Clyde Engineers Ltd.), 507
- Track relaying, Boyer Scharz, 573
- See also *Crane*
- Garador garage door (Westland Engineers Ltd.), 21
- Garage door, Garador, 21
- Folding, Carquad, 64
- Gardiner, Dr. K. M., on Moulton bicycle, 706. See *LETTER*, 770
- Gardiner Prestcold Holdings Ltd., formation of, 49
- Gardiner Prestcold Ltd., new name for Gardiner Refrigeration (Bristol) Ltd., 49; Somerset Refrigeration Co. Ltd. to be taken over, 49
- Gardiner Prestcold (Western) Ltd., new name for Arthur Brand Refrigeration Ltd., 49
- Gardiner Refrigeration (Bristol) Ltd., to change name to Gardiner Prestcold Ltd., 49; Somerset Refrigeration Co. Ltd., to be taken over, 49
- Gardiner, Sons & Co. Ltd., formation of Gardiner Prestcold Holdings Ltd., 49
- Gardner, B., winner of Apprentice of the Year Award, 57; biographical note, 57
- Gardner Engines (Sales) Ltd., new name for Norris, Henty and Gardners Ltd., 241
- Gardner, J. W., on methods of energy storage, 766-767
- Gardner, L., & Sons Ltd., products of, 241
- Gardners of Gloucester, Spraymix and Airmix mixing units, 735
- Garlick, Professor G. F. J., review of Electroluminescence, 816; biographical note, 817
- Garrard Engineering & Manufacturing Co. Ltd., position and prospects, 17
- Garrard-Levering preheating process for porous surfaces, 844
- Garside, Dr. J. E., on Foundry Calculations, Drawing and Physics (book), 514; on Borough Polytechnic diplomas and associateships, 753
- Gartside, M. J., appointed to board of Elliott-Automation, 717
- Garvan, Professor, A. N. B., on slide-rule and sector, 553
- Gas, argomix, for shielded welding (British Oxygen Co. Ltd.), 19
- Bearing. See *Bearings*
- Cooler (Carter Thermal Engineering Ltd.), 240
- Council, import of methane, 257; Coleshill Lurgi gas plant, 257; gas grid, 377; *Home Heating and Hot Water*, 596; *Cosie in Winter*, 764
- Gas, dynamics, introduction to, by R. M. Rotty (book), 592
- Fired infra-red radiation, drying paint by, by F. J. Brewer, 780
- Infra-red radiation units (Parkinson Cowan), 780
- Generator, Avon jet engine as, 262
- Grid, 377
- Heating. See *Heating*
- Industry, data processing in, 819
- Liquid, storage vessels for (British Oxygen Engineering Co. Ltd.), 338
- Vessels for (Vickers-Armstrongs), 377
- from petroleum process (ICI Ltd.), 269
- Power dynamics, by A. D. Lewis (book), 592
- Town, carburizing and carbo-nitriding with (trade publication), 728
- Hardening equipment using, 470
- Turbine. See *Turbine*
- See also under *specific gases*
- Gasfluxer fluxing unit (Weldcraft Ltd.), 610
- Gaskets (trade publication), 392
- Clamps (Bunn & Johnson Ltd.), 735
- Material, Hyclad (Fireproof Tanks Ltd.), 50
- Rubber/metal, users' comments on, 50
- Gasmalerfabriken Edras A/S, use of tinned steel, 724
- Gasoline. See *Petrol*
- Gatwick Airport, use of glued and nailed beams, 838
- Gaudin, J. P., on Spencer Works, 602
- Gauge control, electro-pneumatic (Optical Measuring Tools Ltd.), 336
- Cylinder bore (Thomas Mercer Ltd.), 441
- Electro-pneumatic, Ariel (Sigma Instrument Co. Ltd.), 441
- Height, Accuread (Amar Gauge & Tool Co. Ltd.), 440
- Non-contact (Armour Research Foundation), 564
- Plug, Kwik-set (Interservices Ltd.), 238
- Pressure, precision (trade publication), 514
- Screw caliper (Horstmann Gear Co. Ltd.), 410
- Slip, Matrix (Coventry Gauge & Tool Co. Ltd.), 776
- Strain, for design and control. See *LETTERS*, 40, 70
- Primer, by C. C. Perry and H. R. Lissner (book), 792
- Semiconductor, circuitry for, 523
- Semiconductor, experience with, 523
- Semiconductor, materials, by G. R. Higson, 522-523
- Silicon, 522
- Thread (Tolimit Ltd.), 206
- and Tool and Power Press Exhibition, 410, 440
- Water level, Reflex, 281
- Gauging, air, basic principles of, by I. G. Morgan, 576
- Fits the tighter tolerance, 576
- Theory of, 576
- System, optical (Associated Engineering Ltd.), 671
- Gauhati oil refinery, inauguration of, 169
- Gear blank, 25 ton (David Brown Industries Ltd.), 237
- Design, by W. A. Tuplin (book), 760
- Handbook: Design, Manufacture and Application of Gears, by D. W. Dudley (review), 86
- Hobbing machine, Staehely (BPS Machinery & Spares Ltd.), 341
- Involute, geometry, by W. A. Tuplin (book), 422
- Marine reverse reduction, Hindmarch/MWD (T. Hindmarch & Co. Ltd.), 846-848
- Orbit, for hydraulic motor (Danfoss A/S), 463
- Shaving machine (Charles Churchill & Co. Ltd.), 109
- Teeth, pitted, taking impressions of (Castrol Industrial Ltd.), 644
- Tester, single-flank (National Engineering Laboratory), 490
- Unit, continuously variable ratio (Perbury Engineering Ltd.), 223
- Gearboxes (Rotork Engineering Co. Ltd.), 643
- Gearing, epicyclic, kinematics of, by H. Klein (review), 454
- Wildhaber's work in field of, 634
- Gearwheels of Delrin acetal resin (Du Pont Co.), 653
- Geary, P. J., on Fluid Film Bearings: Their Design, Construction and Use (book), 392
- Gebhardt & Koenig, Derbendi Khan Dam, 106
- GEC (Engineering) Ltd., Gravelpactor crushing machine, 674; self-clearing spray nozzle, 735; Consort II training atomic reactor for London University, 786; Dyad double-rotor hammermill for High Brooms Brick & Tile Co., Ltd., 845
- GEC (Lighting & Equipment) Ltd., lighting at Spencer Steel Works, 536; bells and buzzers, 700
- GEC/Vacuum Industrial Applications Ltd., vacuum induction melting furnace for Jessop-Saville Ltd., 373
- Gell, P. A. M., on all-electric melting of glass, 672
- Gemmell, M. G., on better materials for electrical generation, 275-276
- Genephone sound powered telephone (John Davis & Son (Derby) Ltd.), 463
- General Atomics, design of in-pile diodes, 255
- General Dynamics Corp., new modulation technique for lasers, 327
- General Electric Co. Ltd., slip-power recovery units, 38; motors (trade publication), 56; position and prospects, 145; microwave propagation through plasmas, 159; quartz iodine lamp, 253; magnetic film computer memory, 327; microwave amplifier, 415; starters (trade publication), 456; equipment for automatically recording movements of railway wagons, 632; electron beam furnace, 659; turbine units for Reed Paper Group's new extension, 842; Hunterston atomic power station, 857
- General Electric Co. (US), tests of satellite sub-assemblies, 158; air-over-frame ventilation of electric motors, 191; caesium diodes, 255; portable MHD generator, 255; diamonds from graphite without catalysis, 490; semiconductor laser materials, 763
- General Engineering Co. (Radcliffe) Ltd., automatic cable covering machine, 53
- General Galvanizers Ltd., position and prospects, 177
- General Motors, in-pile diodes, 255,
- General Post Office, mechanization of, 73; signal dish at Goonhilly Downs research station, 45; hydraulics and 110 volts for, 406; Orange series of tools, 406; uses of Tel-E-Lect line construction units, 406; new "house style" for, 747
- General Precision Systems Ltd., Comet 4C aircraft flight simulator, 295
- General Telephone & Electronics Laboratories, research on plasma physics, 255-256
- General Trade & Equipment Ltd., Dazor table lamps, 428; Faxi powderless etching machine, 579
- Generating plant, gas turbine stand by (Bristol Siddeley Engines Ltd.), 232
- (Onan & Sons), 271
- Onan (G. M. Power Plant Co. Ltd.), 271
- Sets, gas-turbine, for CEGB (English Electric Co. Ltd.), 637
- Liquid propane fuelled (E. P. Allam Ltd.), 406
- Generation, electrical, better materials for, by M. G. Gemmill, 275-276
- Generator, atomic, simple (Martin Co.), 96
- Diesel, Perkins, for Arctic use, 658
- Diode, Massachusetts Institute of Technology, 256
- Homopolar (English Electric Co. Ltd.), 64
- Impulse, at AEI Ltd., 495
- MHD, Westinghouse Research Laboratories, 256
- Pulse, Puls-O-Rev (Jiskoot Autocontrol Ltd.), 811
- Signal (Narda Microwave Corp. and Avey Electric Ltd.), 142
- Systems, starter/gas (Micro Turbo), 313
- Thermo-electric (Martin Co.), 256
- Unit, turbine, development of (J. & S. Pumps Ltd.), 399
- See also *Alternator; Turbo*
- Geneva, British Fortnight Exhibition at, 104
- Geodesic building, plastic, 339
- Geology, dam, by R. C. S. Walters (review), 513
- and engineering, by R. F. Legget (book), 56; (review), 622
- Geometrical problems solved by computer, 273
- Geometry, involute gear, by W. A. Tuplin (book), 422
- George, F. H., on The Brain as a Computer (review), 791
- Geothermal power, 638
- Station. See *Power Station*
- German Navy. See *Federal German Navy*
- Germany, West, trade effluent disposal and water supplies in (FBI publication), 340
- Gestetner Duplicators (BSO) Ltd., System-Matic duplicator, 476
- Ghalib, on nuclear power, 697
- Gibb, Sir Alexander, & Partners, Tilbury "B" power station, 104; London/South Wales Motorway, 775
- Gibbs Shipyards Inc., ships with centralized engine room control ordered from Westinghouse Electric Corp., 703
- Gibbs-Smith, C. H., on Sir George Cayley's Aeronautics (book), 422; (review), 654
- Gibbs, W. J., on Electric Machine Analysis Using Matrices (book), 656
- Gibson, Sir Donald, appointed director of research and development of Ministry of Public Works and Buildings, 629
- Gies, J., on Adventure Underground. Story of the World's Great Tunnels (review), 855
- Giesler, C. F. R., Ltd., balancing machine, 642
- Gifford, E. W. H., & Partners, Hovercraft terminal dock for Hovercraft Developments Ltd., 607
- Gijon University, apprentice competition at, 211
- Gilbert, H. D., on Miniaturization (review), 122
- Gilbert, Sydney B., Ltd., use of Quenchweld method of welding heavy iron castings, 478
- Gilford, C. L. S., review of Noise and Acoustics, 790; biographical note, 792
- Gilkes, Gilbert, and Gordon Ltd., development of turbine generator unit, 399
- Gill, Dr. S., on increasing uses for digital computers, 272-275
- Gill, W. H., on Emden and Watson's Building Contracts and Practice (review), 324
- Gilleland, J. E., on efficiency in burning fuel, 639
- Gilling machine for tubes, Rasmussen (Soag Machine Tools Ltd.), 507
- Gilruth, R. R., on High Speed Problems of Aircraft and Experimental Methods (book), 156
- Girder bridge, fatigue tests on (BWRA), 105
- Delta, used for Yakima Bridge, 267
- Welded steel plate, investigation of fatigue resistance of, 11
- See also *Beam; Bridge; Floor*
- Girls, training in industry (Industrial Training Council publication), 787
- G.K.N. Steel Co. Ltd., foundry and engineering division taken over by Guest, Keen & Nettlefolds Ltd., 49
- Glacier Metal Co. Ltd., tilting-pad thrust bearings, 567; research into industrial relations, 754
- Glading, D. G., on mixed units in a teacup, 334
- Gladstone Star, Guardian cathodic protection of, 621
- Glands, cable (trade publication), 252
- Glass, all-electric melting of, by P. A. M. Gell, 672
- in architecture and decoration, by R. McGrath and A. C. Frost (review), 123
- Glass, D. V., on Society: Problems and Methods of Study (book), 656
- Glass, drawing flat sheets, 308
- Ferro-magnetic, Ferroglass (New Metals & Chemicals Ltd.), 626
- Glass-filled nylon compound, Maranyl A190 (ICI Ltd.), 621
- Glass, flat, manufacture of at Pilkingtons, by L. H. A. Pilkington, 308-310
- Float, 308
- Making process, Colburn, 308
- Process, Fourcault, 308
- Glass, manufacture, float process, 308
- Reinforced epoxy resins for repair of metal tanks (Liquid Metal Applicators Ltd.) 284-285
- Plastic, building with, by C. Hayes 339-340
- Safety, for aircraft (Triplex Safety Glass Co. Ltd.), 294
- Making it safer, 165
- (Triplex), 813
- Windscreens, laminated versus toughened, 601
- Glassware, industrial (trade publication), 156
- Glenny, E., on Cermet: a hope that did not materialize, 852
- Glens, new ways through, by A. R. B. Haldane (review), 251
- Glider, orbital, Dyna-Soar (Boeing Corp.), 659
- Glossary of Terms in Work Study, 416
- Gloucester Controls Ltd., Annin actuators, 431
- Gloucester Railway Carriage & Wagon Co. Ltd., merger with Winget Gloucester Ltd., 549
- G.M. Power Plant Co. Ltd., Onan generating plants, 271
- Gnome engines for helicopters (Bristol Siddeley), 201
- Goddard, F. E., on High Speed Problems of Aircraft and Experimental Methods (book), 156
- Goddard Space Flight Centre, 826
- Godfrey, Sir George, & Partners Ltd., air cycle cooling system, 294
- Godolphin food processing valves (Talbot Stead Tube Co. Ltd.), 600
- Godwin, R. C., review of Structural Design of Missiles and Spacecraft, 250; biographical note, 252
- Gold, alluvial mining for, by H. L. H. Harrison (book), 324
- Gold Fields of South Africa Ltd., use of Bo-Bo electric locomotives, 735
- Survey in Orange Free State, 713
- Goldsmith, K., review of Industrial Constructions: The Complete Factory, 155; biographical note, 156; review of Study and Determination of Hydraulic Systems, 323; biographical note, 324; review of Hydraulic Fluids and Engineering Applications, 323; review of Industrial Organization and Management, 759; biographical note, 760
- Good, C. H., on Supervisory Training Services, 618
- Good, R. S. J., on machine tool control, 504
- Gooding, P., on cement stabilized road bases, 746
- Goodman, L. L., review of Automatic Process Control; An Introduction, 219; review of Adaptive Control Processes: A Guided Tour, 219; biographical note, 220; review of Anatomy of Automation, 420; biographical note, 422; review of Organization, Automation and Society, 480; biographical note, 482; on Automation (review), 855
- Goodman, R., on Programmed Learning and Teaching Machines, 316
- Goodyear Aviation Products, wire brush landing skids for Dyna-Soar orbital glider, 659
- Goonhilly aerial steering system, 826
- Downs research station of GPO, signal dish at, 45
- Gosling, W., review of Brain as a Computer, 791; biographical note, 792
- Goss, A., on British Industry and Town Planning (review), 758
- Gosse, E. B., on extending the life of galvanized cisterns, 298
- Gotaverken, A/B, proposals for atomic propelled ship, 4; new types of diesel engine, 662; bearing wear alarm bell warning system, 799
- Gothic Engineering Co. Ltd., Puripher oil burners, 379
- Gould, C. H., on metal resistivity under strain, 40. See *LETTER*, 70
- Goulder, J., & Sons Ltd., lead tester, 410
- Government economic policy and industry, by J. M. Livingstone, 265
- Expenditure, 265
- Plain Words on, 70
- Role in civil research, by Sir Harold Roxbee-Cox, 77
- and science, postscript to, by C. P. Snow (review), 154
- Governors, hydraulic, compensating (Simms Motor Units Ltd.), 768
- Grabbe, E. M., on Handbook of Automation, Computation and Control (review), 286
- Grace, J. A., appointed commercial manager of Microcell Ltd., and Palmer Aero Product Ltd., 613
- Grace, W. R., Ltd., Darex bottle sealing ovens, 53
- Graco Hydro-Sprays spraying equipment (F. W. Berk & Co. Ltd.), 689
- Graco Power-Flo spraying equipment (F. W. Berk & Co. Ltd.), 689
- Graham, A. K., on Electroplating Engineering Handbook (book), 456
- Grain size, instrument for quick measurement (National Engineering Laboratory), 626
- Grant & West Ltd., Plastiloy packing compound, 789
- Graphite, diamonds from, without catalysis (GEC (US)), 490
- Versus water: nuclear battle, by J. H. M. Sukes, 696-697
- Graphitic corrosion. See *Corrosion*
- Graphs, theory and applications of, by C. Berge (book), 220
- Grasshopper helicopter (Rotorcraft Ltd.), 367
- Gratings, optical, and machine tools, cinema film, 374
- Gratwick, J., on management succession, 244
- Gravelpactor crushing machine (GEC (Engineering) Ltd.), 674
- Graving dock. See *Dock*
- Grayhill miniature tap switches (Dubesco Laboratories Ltd.), 240
- Grzebrook, M. & W., Ltd., marking-out machine, 15
- Grease, Black Moly (John W. Miller & Son Ltd.), 19
- Bulk handling, 301

- Great Ouse Water Authority, Diddington Reservoir, 572
- Green Line service, Routemaster coaches for, 35
- Green, M. H., on International and Metric Units of Measurement (book), 360
- Green, W. G., on Theory of Machines (book), 552
- Greencoat Industries Ltd., battery operated record player, 364
- Greene, D. E., on Production Technology: Some Recent Developments (book), 24; (review), 551
- Greengate and Irwell Rubber Co. Ltd., Niplas heat resistant cable, 452
- Greenhouse heating, 292
- Greenlee, development of epoxy resins, 236
- Greenock Dock Co., *Clan Macgillivray*, cargo ship, 331
- Greenwald, H. A., on Understanding Management (book), 552
- Greenwood's and Airvac Ventilating Co. Ltd., Mechadome extractor ventilator, 715
- Gregor, William, discovery of titanium, 676
- Gregory, P., review of Hydraulic Extrusion Presses, 390
- Greig, Professor J., review of Inspiration of Science, 358
- Griffith, E. N., on Rotary Hoes Ltd., 81; on Howard Rotovator Co. Ltd., 81
- Griffiths Bros. & Co., London Ltd., Ferrodor steel protection system, 217; Ferrodor and Armourseal coatings, 217
- Griffiths, L., on Automobile Electrical Equipment (book), 482
- Grigg, Charles S. W., Ltd., acquired by Triplex Holdings Ltd., 445; renamed Weldall-Grigg Ltd., 445
- Grigg, P. B., & Sons Ltd., steel slitting and cutting line installed, 109
- Grigull, U., on Textbook on Heat Transfer (review), 420
- Grinding concentrate, Hi-D (D. A. Stuart Oil Co. (Great Britain) Ltd.), 147
- Machine, centreless, Holmquist (Selson Machine Tool Co. Ltd.), 506
- Centreless (Malcus Holmquist & Co.), 506
- Crankshaft (Strojimport and Strojexport), 412
- Electrolytic (Sparcatron (Manufacturing) Ltd.), 208
- Form, Mona-Hobson (H. M. Hobson Ltd.), 111
- Hand, Flexmaster (Flexible Drives (Gilmans) Ltd.), 271
- Rotary surface, Mattison (Gaston E. Marbaix Ltd.), 611
- Surface (Strojimport and Strojexport), 412
- Medium, Zircon, Hi-den (W. Podmore & Sons), 83
- Ore, 743
- Technique of, by G. Stade (review), 691
- Wheel profiling units, Diaform (Toolmasters Ltd.), 411
- Grindler, J. E., on Radiochemistry of Uranium (book), 218
- Griplock self-locking nuts (Whitehouse Industries Ltd.), 208
- Grönegress, Dr. H. W., development of flame-hardening equipment, 470
- Grooving tool, hand (Tectool Manufacturing Co.), 396
- Gross, W. A., on Gas Film Lubrication (book), 422
- Grosskessel-Feuerungen: Theorie, Bau und Regelung, by R. Dolezal (review), 54
- Group functioning, autonomous: an exploration in behaviour theory and measurement, by P. G. Herbst (book), 624
- Grover, J., formation of Forgrove Machinery Co. Ltd., 26; biographical note, 26
- Groves, W. R., development of moulding presses, 558
- Grunberg hydrofoil boat, 831
- GSP-Matic jig-boring machine (Ateliers GSP), 204
- Guard, machine, in plastic (Short Bros. & Harland Ltd.), 51
- Guardian cathodic protection on ship *Gladstone Star*, 621
- Guderley, K. G., on Theory of Transonic Flow (review), 623
- Guest, Keen & Nettlefolds Ltd., to take over Guest Keen Iron & Steel Works, 49; formation of Dowlais Foundry & Engineering Co. Ltd., 49; load indicating friction bolt, 76
- Guest, Keen & Nettlefolds (South Wales) Ltd., reinforcing bars (trade publication), 124
- Guided weapons, short-range, by J. Clemow (review), 54
- Systems for tanks, 631
- Guillon, M., on Study and Determination of Hydraulic Systems (review), 323
- Guinness Book of Records, 797
- Guittard Z-blade mixers (Premier Colloid Mills Ltd.), 715
- Gulf Oil Corp., formation of Gulf Oil (Great Britain) Ltd., 436
- Gulf Oil (Great Britain) Ltd., first retail petrol outlet in UK, 436
- Gumbel, Professor E. J., on The Theory of Extremes and Some Hydrological Applications, 160; on Statistics of Extremes, 160
- Gun, flame spray (Metco Ltd.), 16
- Metal spraying, Swift (Mining & Chemical Products Ltd.), 475
- Size, optimum, for tanks, 630
- Spray, Champion Super (H. Singer Ltd.), 306
- Gundersen Bros. Engineering Corp., FLIP floating instrument platform for underwater research, 289
- Gunmetals, continuous cast (trade publication), 792
- Gunner, A. M., on engineers and foreign translations, 664
- Gush chemical pump (Appleton & Howard Ltd.), 703
- Gutzon, J., on computer systems, 191
- Guy, A. G., on Physical Metallurgy for Engineers (book), 324
- Guy, N. G., on vitreous enamel, 588, 688
- GWB Furnaces Ltd., heat treatment furnaces for Bristol Siddeley, 175; coreless induction melting plant for F. M. Parkin (Sheffield) Ltd., 374; batch type furnace for Imperial Metal Industries (Kynoch) Ltd., 471
- GWD 346 cleaning liquid (Walpamur Co. Ltd.), 249
- Gwynnes Pumps Ltd., integration of research with W. H. Allen Sons & Co. Ltd., 685
- Gyramixer concrete mixing machine (Blaw Knox Ltd.), 611

H

- HABAKUK, H. J., on American and British Technology in the 19th Century (review), 726
- Hack Saws Ltd., formation of, 509; position and prospects, 509; historical note, 509; jubilee, 509
- Hackensack River Bridge, 105
- Hacket, E., on storage of liquid fuels, 716
- Haden, G. N., & Sons, sixty apprentices taken on, 448; use of Centrax gas-turbine power and heating unit, 704
- Hadfield, D., on Permanent Magnets and Magnetism (book), 220
- Hadley, H. M., Yakima bridge, 267
- Hague, Sir Kenneth, chairman of Engineering Institutions Joint Council, 493
- Hahn, P., on chemical producing firms, 804
- Hahn, Dr. R. S., development of high ratio overhang boring bars, 521
- Hailsham, Lord, opening of National Lending Library for Science and Technology, 597; on duties of director of research and development at Ministry of Public Works and Buildings, 629
- Haines, H. N., design of Christ Church, Staines, 747
- Hakim, S. S., on Junction Transistor Circuit Analysis (book), 422; (review), 726
- Haldane, A. R. B., on New Ways Through the Glens (review), 251
- Haldane, T. G. N., on power resources, 638
- Halden atomic reactor, modifications to, 222
- Halfman, R. L., on Dynamics (book), 624
- Hall, A. S., on Frame Analysis (review), 22
- Hall, J. & E., Ltd., lift doors and panels of Stelvetite steel, 189
- Hall, Matthew, & Co. Ltd., hose handling equipment, 107
- Hall, P. G., on Industries of London since 1861 (review), 481
- Hall, Dr. R. N., on laser diode, 763
- Hallam, Sleight & Cheston Ltd., Widney Dorlec constructional system for technical furniture, 614-616
- Hallen, E., on Electromagnetic Theory (book), 856
- Halliday, E. C., on Laboratory Manual for Engineering Science (book), 656
- Halliday, I. M. D., on continuous casting, 141
- Hamilton, William, & Co. Ltd., Monobox overhead travelling crane installed (J. H. Carruthers & Co. Ltd.), 261
- Hammer with interchangeable faces (Thor), 396
- Unit (Holman Bros. Ltd.), 208
- Hammermill, double-rotor, Dyad, for High Brooms Brick & Tile Co. Ltd. (GEC), 845
- Hammond, P., review of Power System Engineering, 480; biographical note, 482
- Hammond, R., on Modern Civil Engineering Practice (review), 218; on Civil Engineering Plant Handbook (book), 624
- Hanworthy Engineering Ltd., shareholders accept offer from Powell Duffryn Group, 477
- Handel, S., on Dictionary of Electronics (book), 422
- Handicrafts and Do-It-Yourself Exhibition, 396
- Handley Page laminar flow aircraft wing, 462
- Handley Page Ltd., use of Hyclad gasket material, 50; annual report, 813; sales of Herald aircraft, 813; position and prospects, 813
- Handling equipment (trade publication), 482
- Mechanical (trade publication), 856
- Hydraulics in, by J. R. Fawcett (book), 124
- Tyres in (trade publication), 692
- Vehicles, Little Giant attachments for (Oldham & Sons Ltd.), 349
- Raw material, 511
- Hankin, B. D., to be director of City and Guilds, 150; biographical note, 150
- Hans-Worm Unimatic linear ball bearing (H. G. Stevens Co. Ltd.), 777
- Harco data link (Decca Navigator Co. Ltd.), 294
- Hard facing alloys (trade publication), 817
- Hardening equipment, continuous (AEL-Birlec Ltd.), 779
- Using town gas, 470
- Harding, J. R., on value of motoring money, 664
- Harding, R. S., on conveyors for powder materials, 770
- Hardness tester (trade publication), 252
- Hare, J., address to International Labour Conference, 89; on International Apprenticeship Competition, 415; White Paper, 850
- Harfitt, R., on Hovercraft service, 65
- Harland Engineering Co. Ltd., chemical pump of alumina ceramic, 146; Purfleet oil storage installation, 605
- Harland & Wolff Ltd., hose handling equipment, 107; marine fuelling pontoons for Esso, 136; *British Merlin* tanker for BP Ltd., 479
- Harman, Alfred, foundation of Ilford Ltd., 119
- biographical note, 119
- Harold Wright Memorial Lecture, 797
- Harp Lager Brewery, stainless steel clad steel brewing vessel, 453; Steinecker Hydro-automatic brewing system plant installed, 453
- Harris, A. J. & J. D., Commonwealth Institute buildings, 574-575
- Harris-Berger, L., on Mechanization of Motion (review), 455
- Harris, R., on Advertising in Action (review), 623
- Harris & Sheldon (Holdings) Ltd., acquisition of J. B. Brooks Industries Ltd., 685
- Harrison, H. L. H., on Alluvial Mining for Tin and Gold (book), 324
- Hartley, Sir Harold, on world power, 639
- Hartog, J. P. D., on Strength of Materials (book), 514
- Harvard University, computation laboratory to be replaced with computing centre, 95
- Harvey, G. A., & Co. (London) Ltd., boiler drums for Mitchell Engineering Ltd. South African contract on Komati power station, 268; frame of edge bending press for Bronx Engineering Co. Ltd., 672
- Harvey, J. J., and Pressurecast Ltd., plastic exciter covers, 147
- Harwell. See *Atomic Energy Research Establishment*
- Harza Engineering Co., Derbendi Khan Dam, 106
- Hatcher, N. F., on roads in New South Wales, 746
- Hattersley (Ormskirk) Ltd., regulators, 307. See *Correction*, 412
- Hawk motor car, improvements to (Humber), 333
- Hawker P1127 VTOL aircraft, 259
- Hawker Siddeley Aviation Group, orders from Farnborough Air Show, 372; order from South Africa for Buccaneer aircraft, 501
- Hawker Siddeley Industries Ltd., Falcon diesel-electric locomotive, 799
- Hay, G. S., Manchester HQ building of Co-operative Insurance Society Ltd., 573
- Hayes, C., on building with glass reinforced plastics, 339-340
- Hayes, F. C., on trade tests, 849
- Hay's Wharf Ltd. See *Proprietors of Hay's Wharf Ltd.*
- Hayward, R. L., on trade with Japan, 733
- Hayward Turbine Plastics Ltd., Polyshrink heat shrinkable pvc sleeving, 589
- Head, automatic recessing (trade publication), 24
- Boring and profiling, Seleromat (Solar Weld Languepin Ltd.), 270
- Cutting (Lede Group), 78
- Dividing (trade publication), 124
- Indexing, TC (United Technical Supplies Ltd.), 542
- Head, J. C. R., mission to Cyprus, 740
- Head Wrightson & Co. Ltd., heat exchangers for Dungeness atomic power station, 233; installation at Consett Iron Co. Ltd., 237
- Head Wrightson Iron & Steelworks Engineering Ltd., oil-fired sinter plant for Skinninggrove Iron Co., 176
- Head Wrightson McKee, blast furnace, 672
- Head Wrightson Processes Ltd., association with John Laing & Son Ltd., 17
- Head Wrightson Stockton Ltd., ore drying plant for Spencer Steel Works, 532
- Heading, J., on Introduction to Phase-Integral Methods (book), 392
- Heading machine, cold, Roy (Gaston E. Marbaix Ltd.), 643
- and position indication, inertial, mechanics of, by W. R. Markey and J. Hovorka (review), 359
- Health Act, 1961, 76
- Ministry of, hospital modernization plan, 129
- Hearing aid, 732
- Bernadette (Bernatone Ltd.), 732
- Danavox (Great Britain) Ltd., 732. See *Correction*, 860
- Secrete (Amplivox Ltd.), 732
- Heart, mechanical (Thorax Clinic and Swedish Aga Co.), 191
- Heat exchangers for Dungeness atomic power station, 233
- Survey on, 659
- Sinks, aluminium extrusions for (Alcan Industries Ltd.), 418-419
- Source, nuclear reactor, 457
- Transfer, textbook on, by U. Grigull (review), 420
- Treatment of metals, course on, 6
- Heater, air, Pak-a-Way (Package Heater Co. Ltd.), 112
- Wanson Thermobloc, 237
- Block storage, 460
- Storage, Rogack (Mantle & Butterworth Ltd.), 460
- Storage, Thermodare, 460
- Convectoc, Complex (Simplex Dairy Equipment Co. Ltd.), 292
- Fan, Autoheat (Findlay, Irvine Ltd.), 292
- Feed, investigating failures in, by K. E. Easterling, 426-427
- Immersion, Brecon (Santon Ltd.), 292
- Cumberland (Santon Ltd.), 292
- Devon (Santon Ltd.), 292
- Industrial, KempSAFE-Tangyes (Tangyes Ltd.), 378
- Mineral insulated (Smiths Industrial Division), 663
- Portable (Thor Tools Ltd.), 811
- Railway point (James Mills Ltd.), 797
- Rotary, for billets (David Etchells (Furnaces) Ltd.), 810
- Unit, Activair (Roberts Electrical Co. Ltd.), 292
- Warm air, Humex (Roberts Electrical Co. Ltd.), 292
- Water, Ascot, 596
- Container from alumina ceramic, 146
- Heath, A. A., on Permalit Ltd., 49
- Heath, B., on Triplex Safety Glass Co. Ltd., 813
- Heath, E. J., & Co. Ltd., formation of, 73; aims of, 73; H. Eccles-Williams appointed chairman, 73; S. L. Elliott appointed managing director, 73
- Heating on a budget scheme (Coal Utilization Council), 796
- Central, electric, 460
- Electric, running costs, 460
- Regulator for. See *Correction*, 412
- District, and nuclear power plant Agesta, test operation in Stockholm, 626
- Heating, domestic, clean air and fuel efficiency exhibition, 71
- Elements, finger (Cooper Electroheat Ltd.), 641
- Floor warming elements (Heating Investments Ltd.), 144
- Gas, 596
- from gas-turbine unit (Centrax Ltd.), 704
- of greenhouses, 292
- Home, and hot water (Gas Council publication), 596
- and humidifying load analysis, by F. W. Hutchinson (book), 124; (review), 512
- Industrial process, exhibition, 41
- Heating Investments Ltd., floor warming elements, 144
- System, Unit Plan, 460
- Underfloor, for flats, 106
- Unit (trade publication), 422
- Ventilating and Air Conditioning Exhibition, 380
- and Fuel Efficiency Exhibition, 379
- System (Andrew Air Conditioning Ltd.), 100
- Heatrae Ltd., using steam from test equipment, 35
- Heckmatt, H., on mechanical aspects of operation of vane type hydraulic pumps, 459-460
- Heco Industries Ltd., Heco Mini-Office, 628; Perfecta home office unit, 628
- Heco Mini-Office (Heco Industries Ltd.), 628
- Heeley Rolling Mills Ltd., roller hearth furnace installed (Chatburn & Chantry Ltd.), 807
- Heenan & Froude Ltd., waste disposal plant for Bradford Corp., 305; hydraulic dynamometers for Russia, 828
- Height gauge, Accured (Amar Gauge & Tool Co. Ltd.), 440
- Heikes, R. R., on Thermoelectricity: Science and Engineering (book), 156
- Helicopter, Augusta Bell, for Royal Netherlands Navy, 201
- Heliograph, radio, for Australia, 61
- Helmet, shotblast, Til-Lucent (Tilghman's Ltd.), 170
- Helmsman, automatic, for all sizes of ships (S. G. Brown Ltd.), 798
- Hemming, G. W., on Billiards Mathematically Treated, 738
- Henchy, F. B. N., appointed chief engineer of Marconi's Mechanical Products Division, 845
- Henderson, J. J., on a method of fairer pay for supervisors, 437
- Henisch, H. K., on Electroluminescence (book), 392; (review), 816
- Hennessy, J., review of Structure of Industry in Britain, 23; biographical note, 24; review of Anatomy of Britain, 359; biographical note, 360; review of Industries of London Since 1861, 481; biographical note, 482; review of Advertising in Action, 623; biographical note, 624; review of American and British Technology in the 19th Century, 726; biographical note, 728
- Hennessy, Sir Patrick, on Ford Motor Co. Ltd., 708
- Hepseal vitrified pipe joints (Hepworth Iron Co. Ltd.), 147
- Hepworth & Grandage Ltd., position and prospects, 177
- Hepworth Iron Co. (Engineering) Ltd., copy-turning hemispherical forms, 175
- Hepworth Iron Co. Ltd., Hepsal vitrified pipe joints, 147; vitrified clay pipes (trade publication), 856
- Heraeus consumable electrode vacuum remelting furnace, 408
- Heraeus, W. C., GmbH, electron beam furnace, 109
- Herald aircraft, sales (Handley Page Ltd.), 813
- Herbert, Alfred, Ltd., screw forming exhibition, 299
- Herbst, P. G., on Autonomous Group Functioning: An Exploration in Behaviour Theory and Measurement (book), 624
- Heron, Dr. A., on employing the older man, 280
- Herron, R. F., Ltd., Christ Church, Staines, 747
- Heslop, Dr. J., review of Progress in Non-Destructive Testing, 322; biographical note, 324
- Heymann, Dr. R. E., on approach to early art from psychology of technical drawing, 553
- Heywood, R. B., on Designing Against Fatigue (book), 422
- Hi-D Grinding concentrate (D. A. Stuart Oil Co. (Great Britain) Ltd.), 147
- Hi-Den polyethylene tubing (Sterling Cables Ltd.), 757
- Hi-Den zircon grinding medium (W. Podmore & Sons), 83
- Hiab log and lumber loader (George Cohen, Sons & Co. Ltd.), 15
- Hicks, E., on Shellac: Its Origin and Applications (book), 252
- Hicycle polishing tools (Consolidated Pneumatic Tool Co. Ltd.), 357
- Higginbotham, W. H., on Edgar Allen & Co. Ltd., 241
- Higgins, T. J., on Progress in Control Engineering (book), 856
- High Brooms Brick & Tile Co. Ltd., Dyad double rotor hammermill installed, 845
- High Marnham power station, details of, 474, 501
- High Precision Equipment Ltd., licensing agreement with Baird Machine Co., 336
- High Voltage Engineering Corp., tandem Van de Graaf accelerator for Liverpool University, 762
- High Voltage Engineering (Europa) NV, tandem Van de Graaf accelerator for Liverpool University, 762
- Highway Research Abstracts, 203
- Highway Research Board (US), Highway Research Abstracts, 203
- See also *By-Pass; Motorway; Road; Traffic*
- Higson, G. R., on strain gauges of semiconductor materials 522-523

- Hilbert space, Introduction to, by S. K. Berberian (book), 88
- Hildred, Sir William, on International Air Transport Association, 329
- Hilger & Watts Ltd., Polyvac spectrographic laboratory for Spartan Steel & Alloys Ltd., 338; Polyprint polychromator, 492
- Hill, Prof. E., Russian language course, 280
- Hill, T. P., on profiting from the Common Market, 230
- Hillier, J. A., on how successful is traffic engineering, 679-681. See LETTER, 834
- Hillman Super Minx motor car, road test of (Rootes Group), 165
- Minx motor car (Rootes Group), 13
- Hilton, Dr. W. F., review of Handbook of Astronautical Engineering, 286; review of Design Guide to Orbital Flight, 286; biographical note, 288; association with Perspective Engineering Ltd., 313; review of Jet Propulsion Fuels, 358; review of Rocket Engines, 358; biographical note, 360
- Hindmarch/Berg controllable pitch propeller (T. Hindmarch & Co. Ltd. and J. W. Berg & Co. Ltd.), 848
- Hindmarch/MWD marine reverse reduction gear (T. Hindmarch & Co. Ltd.), 846-848
- Hindmarch, T., & Co. Ltd., Hindmarch/MWD marine reverse reduction gear, 846-848; Hindmarch/Berg controllable pitch propeller, 848
- Hine, R. J., on viscosity of water, 299
- Hinton, Sir Christopher, on *Some Points of Interest in the Design and Operation of the CEGB System*, 279; address to World Power Conference, 697
- Hird-Brown Ltd., three colour shunting lamp, 78; turbidity meter, 170
- Hirn, on air bearings, 345
- Hirst, A. C., on as good as a rest, 40; on engineers and foreign languages, 70. See LETTER, 664; on engineers as translators, 134; on with apologies to Eliza Doolittle, 635
- History of austenitic irons and the evolution of the British Standard, by A. B. Everest, 620
- of British steel industry by J. C. Carr and W. Taplin (review), 251
- of electric arc welding in USSR, by Prof. C. Khrenov, 553
- of science, appreciating by K. D. C. Vernon, 553
- of Science, International Congress of, 553
- Hitachi Zosen, climbing crane for chimney erection, 75
- Hoare, F. E., on Experimental Cryophysics (review), 390
- Hoare, Col. R. J., demonstration of Ferrari motor cars for ENGINEERING, 13
- Hobbing machine, gear, Staehely (BPS Machinery & Spares Co. Ltd.), 341
- (Lees-Bradner Co.), 237
- Hobson, H. M., Ltd., design of hydraulic test bench, 30; Mona-Hobson form grinding machine, 111
- Hoists, chain, Munck (Crane & Hoist Supplies), 170
- See also *Crane; Gantry; Transporter*
- Holden, H. A., review of Surface Treatment of Steel, 816; biographical note, 817
- Holders for dial indicators (British Indicators (Sales) Ltd.), 411
- Hole location, checking, Concentri-Chek instrument for (British Indicators Ltd.), 672
- Holland & Hannen and Cubitts Ltd., new chemistry block for Manchester University, 104; sea defences for Margate, 304; new car body plant for Pressed Steel Co. Ltd., 544; quarterly index of construction activity, 808
- Holland & Hannen and Cubitts (Southern) Ltd., new office block for Prudential Assurance Co. Ltd., 804
- Holland Cranes, overhead crane on circular track for Netherlands Nuclear Reactor Centre, 800
- Hollander, Prof. F. Q. D., on professional engineers and the Common Market, 33
- Holliday, L., on *Interaction of Technologies*, 352
- Hollington, M. R., on ABC of Prestressed Concrete, 775
- Hollis Bros. Ltd., new factory for, 374; timber flooring, 374
- Holloway, D. H., review of Ultra-Violet and Infra-Red Engineering, 87; biographical note, 88
- Holman Bros. Ltd., hammer unit, 208; vole drill, 674; Silver 82 rock drill, 695; Silver Feather rock drill, 695
- Holmes, W. C., & Co. Ltd., improvements in air blower design, 163
- Holmquist centreless grinding machine (Selson Machine Tool Co. Ltd.), 506
- Holmquist, Malcus, & Co., centreless grinding machine, 506
- Holophane Ltd., position and prospects, 581; profits, 581
- Holoplast Ltd., Corroplast sheeting for Reed Paper Group's new extension, 842
- Holset Engineering Co. Ltd., use of austenitic iron castings, 620
- Holst & Co. Ltd., new reservoir for Lee Valley Water Co., 503; malt and barley silo for R. & W. Paul Ltd., 713
- Holz, F. G., on finding tougher materials for cutting tools, 491
- Holzbock, W. G., on Instruments for Measurement and Control (book), 692
- Home, ergonomics in, 660
- Home Heating and Hot Water*, 596
- Homes, Plain Words on, 496
- Power demands, 96
- Working at, 628
- Workshop, 396
- Honeycomb shear webs, 838
- Honeywell Controls Ltd., electronic air cleaner, 564
- Hong Kong water supply, 105
- Hook, C., on platforming ocean waves on a hydrofoil, 830-831
- Hooker, on serving the Common Market, 612
- Hoover Ltd., shampoo polisher machine, 32
- Hopper, feed (Amigo Engineering Products Ltd.), 507
- Yeast, for Distillers Co. Ltd. (Whessoe Ltd.), 189
- Hopthrow, Brig. H. E., on water in industry, 606
- Hopwood, W., & Co. Ltd., Conflow steam traps, 378
- Hordern-Richmond Ltd., acquired by Permali Ltd., 49
- Horn, fog (Wallace & Tiernan Ltd.), 714
- Horseley Bridge & Thomas Piggott Ltd., Spencer Steel Works, 535; suspension towers for River Forth overhead power line, 713
- Horstmann Gear Co. Ltd., screw caliper gauges, 410
- Horstmann table lamps (Simplus Products Ltd.), 428
- Hose (trade publication), 324
- Hose-end coupling, Linemaster (Zwicky Ltd.), 163
- Hose handling equipment (Matthew Hall & Co. Ltd.), 107; (Woodfield Rochester Ltd.), 107
- Plastic (BTR Industries Ltd.), 689
- Hospital Building in England and Wales*, 129
- Hospital modernization plans, 129
- Putney, use of aluminium-clad chimney, 216
- Hotel, 33-floor, in London (Token Construction Co. Ltd.), 138
- Plain Words on, 770
- Houghton, P. S., review of Gear Handbook: The Design, Manufacture and Application of Gears, 86; biographical note, 88; on Materials for Engineering Production (book), 324
- Hours of work, Plain Words on, 530. See LETTER, 635; see also *Overtime*
- House, air (RFD Co.), 153
- All-electric, 96
- Building costs, 808
- Goes into the factory, 74
- of Lords, debate on population, industry and planning, 733
- Sectional (trade publication), 324
- Houseman & Thompson Ltd., self-contained boiler plant, 708
- "Housewarming Plan" (NCB), 796
- Housing from factory, conference, 502
- Higher densities for, 774
- and Local Government, Ministry of, *Town Centres—Approach to Renewal*, 129; *Some Aspects of Designing for Old People*, 660; *Grouped Flats for Old People*, 660; *Planning Bulletin No. 2—"Residential Areas—Higher Densities,"* 774; *Smoke Control (England and Wales)* 1963-1966, 829
- Precast, behind the Iron Curtain, 444
- Comparing the cost, 502
- Scheme, Khashm el Girba, Sudan, 407
- Hovercraft, characteristics of, 98
- Hovercraft Developments Ltd., Hovercraft terminal dock (E. W. H. Gifford & Partners), 607
- Handling and manoeuvring, 99
- Power units for, 98
- Research, agreement between SAAB and Vickers-Armstrongs (Engineers) Ltd., 836
- Service (British United Airways), 525
- (Southdown Motor Services), 525
- Worlds first, 65
- Sidewall, by C. F. Morris, 525
- (Denny Hovercraft Ltd.), 525
- Second generation of (Denny Hovercraft Ltd.), 566
- Terminal dock, 607
- Testing on scheduled service, 98-99
- Uses of, 797
- Vickers VA3, protection with Cellon-Docker polyurethane paint, 557
- VA-3, trials completed (Vickers-Armstrongs Ltd.), 525, 527
- Hovorka, J., on Mechanics of Inertial Position and Heading Indication (review), 359
- Howard Rotovator Co. Ltd., to market products of Rotary Hoes Ltd., 81; formation of, 81
- Howarth, A., on electrical chairs at Manchester, 134
- Howden, James & Co. Ltd., air heaters and fans for Reed Paper Group's new extension, 842
- Howitzer, self-propelled, T195, 631
- Hugh Steeper artificial arm (Hugh Steeper Ltd.), 317-319
- Hughes, F. A., Ltd., case history of Guardian cathodic protection on ship *Gladstone Star*, 621
- Hugon, A., on Industrial Constructions: The Complete Factory (review), 155
- Hull form of high speed power boat, 226
- Human body, vibration effects on, 32
- Humber Hawk, motor car, improvements to, 333
- Super Snipe, motor car, improvements to, 333
- Humble, J. W., on management succession, 244
- Humex warm air heating system (Roberts Electrical Co. Ltd.), 292
- Humidifying and heating load analysis, by F. W. Hutchinson (book), 124; (review), 512
- Humphrey, W. E., challenge to book reviewers, 314
- Humphreys & Glasgow Ltd., chemical plant for Czechoslovakia, 572; fabrication contracts placed with Newton Chambers & Co. Ltd., 572; orders from Iczan Ltd., 572
- Humphreys, Howard, & Sons Ltd., Port of Spain "B" power station, 73
- Humphreys, J. H., on Braithwaite & Co. Engineers Ltd., 381
- Humphreys, W. O., on research in industry, 415
- Hunter, G. (London) Ltd., Europa portable conveyor, 48
- Hunter, L. P., on Handbook of Semi-conductor Electronics (book), 56
- Hunterston atomic power station, progress at, 857
- Reactor A, progress on, 126
- Hunting Group of Companies, instrument servicing, 20; historical note, 20
- Hunting Light Engineering Group, instrument servicing, 20
- Hurst, Dr. R., on civil fast atomic reactor, 561
- Husband & Co., radio telescope for Manchester University, 436; radio telescope for Jodrell Bank, 491
- Hutchinson, D. P., development of strip shearing machine, 57
- Hutchinson, F. W., on Heating and Humidifying Load Analysis (book), 124; (review), 512
- Hutton, G., on demand for electricity, 741
- Hyclid gasket material (Fireproof Tanks Ltd.), 50
- Hyde Park Corner underpass (Cubitts-Fitzpatrick-Shand), 543-544
- Landscaping work, 357
- Hyde Park/Marble Arch road improvement scheme (Cubitts-Fitzpatrick-Shand), 543-544
- Hydra-Digga Loadall excavator (J. C. Bamford (Excavators) Ltd.), 449
- Hydralite jack, heavy duty (Tangyes Ltd.), 518-520
- Hydraulic Components Co. Ltd., check valve, 611
- Control systems, design of, by E. E. Lewis and H. Stern (review), 286
- Engineers, fluid mechanics for, by H. Rouse (book), 482
- Equipment (trade publication), 552
- Fluids, and engineering applications, by R. H. Warring (review), 323
- See also *Fluids*
- Measurements, theory and practice of: hydrometry, by A. T. Troskolanski (review), 23
- Press. See *Press*
- Pump. See *Pump*
- Systems, mineral oil viscosity requirements of, by T. L. Jackson, 459-460
- Study and determination of, by M. Guillon (review), 323
- Hydraulics and 110 volts for the GPO, 406
- in mechanical handling, by J. R. Fawcett (book), 124
- Oil, course on, 352
- Practical handbook, by H. Richter (book), 792
- Research, 1961 (DSIR publication), 75
- See also *Irrigation; Water*
- Hydro-Copier copying machine (Vero Precision Engineering Ltd.), 440
- Hydro-electric power resources, 638
- Scheme, Rihand, 404
- Schemes in Afghanistan, 266
- Hydro-Pneumatic dredger (Hymatic Dredges Ltd.), 431, 549
- Hydro-Spray spraying equipment, Graco (F. W. Berk & Co. Ltd.), 689
- Hydrocyclones, nozzles for from Roydalox alumina ceramic, 146
- Hydrofoil craft, Aquavion (International Aquavion (GB) Ltd.), 100
- Waterman Aquavion (Duncan Macneil & Co.), 228
- Waterman Aquavion (Wallace Bros. (Holdings) Ltd.), 228
- Hydrogen embrittlement, investigation of, 521
- Hydrostatic suspension unit for motor cars, 194
- Hydrological applications, some, and the theory of extremes, by Prof. E. J. Gumbel, 160
- Determination of waterway areas, by Prof. Ven Te Chow, 33
- Research unit set up by DSIR, 33
- Hydrology, 125
- Measurements in, symposium on, 71
- Hydrometry, theory and practice of hydraulic measurements, by A. T. Troskolanski (review), 23
- Hymatic Dredges, Ltd., formation of, 431, 549; Hydro-Pneumatic dredger, 431; Hydro-Pneumatic dredging equipment, 549
- Hymatic Engineering Co. Ltd., stop valves, 270; high pressure air valves, 715
- Hypalon/butyl cable (AEI Ltd.), 189

I

- IBM Corp., semiconductor laser materials, 763
- IBM (United Kingdom) Ltd., 1620 computer for de Havilland Aircraft Co. Ltd., 100; Fortran programming system, 100; data processing system, 580; on jobs, 585
- Ice breaker, atomic propelled, *Lenin*, 4
- Detector for roads, 705
- Effect on railways, 797
- Protection system for aircraft, Spraymat (D. Napier & Son Ltd.), 90-92
- Tyre (Dunlop), 133
- Iczan Ltd., orders placed with Humphreys & Glasgow Ltd., 572
- ICM (Manufacturers) Ltd., Tent-o-Matic tent, 160
- Icos. See *Impresa Costruzione Opere Specializzate*
- Ideal Limbs Ltd., artificial limbs, 317; historical note, 317
- Ideal-Standard Ltd., use of Dexion slotted angle for storage racks, 436
- Ideas into action; plea for plan and teamwork, by P. C. Blount (book), 456
- Idler mounting, Limberoller (Joy-Sullivan Ltd.), 207
- Ignatron, cinema film on, 649
- Iley, T. M., on Training Methods in Government Training Centres, 825
- Iford Ltd., historical note, 119; Sportsman Vario 35 mm camera, 119-121; Advocate camera, 119; Sportsmaster camera, 119; connection with Dacora Co., 119; Azoflex copying machine, 476; non-screen X-ray films, 853
- Illing, Prof. V. C., on oil technology, 604
- Illinois University, large fixed radio-telescope, 395
- Illuminating engineering, scientific basis of, by P. Moon (book), 482
- Illumination. See *Light; Lighting; Lamp*
- Imhof, Alfred, Ltd., cabinets and consoles (trade publication), 184
- IMPA Ltd., plastic flange shields, 367
- Impact breaker, Wakefield (Construction Machinery Ltd.), 674
- Imperial Chemical Industries of Australia & New Zealand Ltd., agreement with British Nylon Spinners Ltd., and BNS Australia Pty. Ltd., 436
- Imperial Chemical Industries Ltd., courses in foreign languages, 33; new factory for pharmaceuticals division, 44; ethylene storage sphere (Whessoe Ltd.), 217; priming structural steel at the mill, 234-235; aqueous latex primers, 234; first Bristol plant in production, 249; gas from petroleum process, 269; Trisec process of trichlorethylene asa drying medium, 320; Silcoloid 201 clear silicone rubber, 321; heat treatment division moved to Birmingham, 452; use of strip-wound pressure vessels, 556; Maranyl A190 glass-filled nylon compound, 621; demonstration caravan for Maranyl A190 nylon product, 637; isolating water pipes by freezing, 653; Drikold solid carbon dioxide, 653; Silicoset cold cure rubber, 653; Ulstron ropes, 757; Trilac resin lacquer for metals, 853
- Imperial College, rebuilding and rehousing schemes, 516-517; research on danger of standing waves in oil tankers, 858-859
- Imperial Metal Industries (Kynoch) Ltd., electron beam furnaces ordered, 109; chemical and petroleum industries (trade publication), 184; ICI Ltd. heat treatment division moved to, 452; GWB batch type furnace installed, 471; titanium production, 676; titanium for pumps, 703; Sendzimir rolling mill installed, 807
- Implants, surgical, of titanium, 678
- Imports, 265
- of methane, 257
- Impresa Costruzione Opere Specializzate-Icos construction system, 543
- Improved Appliances and General Engineering Co. Ltd., Oprim egg boiler, 128
- Inca woodworking machine (Startrite Machine Tool Co. Ltd.), 396
- Incandescent Ltd., annealing furnaces for Spencer Steelworks, 652; semi-muffle furnace (trade publication), 856
- Incentive wage systems, effect of on managerial authority: piecework abandoned, by W. Brown (review), 655
- Independent Television Authority, new television aerial at Croydon, 773
- Index, prospect, of construction activity, 808
- Indexing, course on, 218
- Head, TC (United Technical Supplies Ltd.), 542
- Systems, 545
- Table, automatic (Allen Keir Ltd.), 410
- Unit, rotary (Berridge Aircraft Ltd.), 745
- India, second five-year plan, 404; India, Rihand hydro-electric project, 404
- Indian Ocean International Expedition, preliminary report, 328
- Indicator, contents (Flight Refuelling Ltd.), 295
- Multi-point (Smith's Industrial Division), 240
- Indicrat ratio indicator (Ferranti Ltd.), 80
- Induction motor. See *Motor, electric*
- Industrial administration, introduction to, by F. R. J. Jervis and W. F. Frank (book), 252; (review), 727
- Industrial Administration (R & A) Ltd., group apprenticeship development, 243
- Architecture, Plain Words on, 102
- Industrial Charter—Status and Security at Work*, 414
- Industrial Chemical Group, AERE, Harwell beta-ray radiation shield, 128
- Constructions: complete factory, by A. Hugon and R. Traverse (review), 155
- Fire Protection Association, conference of, 370
- Grants Committee, report *Research for Industry* 1961, 129
- Mobility and apprenticeships, 414
- Operations Unit of DSIR, 493. See LETTER, 635
- Organization and management, by L. L. Bethel, F. A. Atwater, G. H. E. Smith and H. A. Stackman (review), 759
- Industrial Pumps Ltd., Flygt Bibo submersible pump, 840
- Relations, research into, 754
- Safety Conference and Exhibition, 785
- Training Council, grant to assist Engineering Industries Group Apprenticeship scheme, 242; origins of, 242; training syllabuses of, 242; *Craft Apprenticeship—Training for a Skilled Craft or Trade*, 243, 244; *Training Boys in Industry—the Non-Apprentice*, 244; *Training Girls in Industry*, 787
- Trends, FBA inquiry, 501
- Welfare Society, course on "straight thinking," 448; conference on trends in apprenticeship training, 824
- Industry(ies) in Britain, structure of, by G. C. Allen (review), 23
- British, and town planning, by A. Goss (review), 758
- Disincentives within, by A. J. M. Sykes, 167-168
- Pattern of research in, conference on, 77, 103
- Reorganization into larger units, 404
- Research in, conference on, 65
- Conferences for, 469
- Foreign languages in (FBI report), 33
- Government economic policy and, by J. M. Livingstone, 265
- Introducing schoolboys to, 383
- Introduction to, course on, 687
- of London Since 1861, by P. G. Hall (review), 481
- Research for, 1961 (report of Industrial Grants Committee), 129
- Training boys in—the non-apprentice (Industrial Training Council booklet), 244
- Girls in (Industrial Training Council publication), 787

- Inert atmospheres in chemical, metallurgical and atomic energy industries, by P. A. F. White and S. E. Smith (review), 122
- Inertial position and heading indication, mechanics of, by W. R. Markey and J. Hovorka (review), 359
- Systems, research on, 627
- Inflatable framework tubes, 284
- Infra-red radiation, electricity to, converter for (MIT), 292
- Radiation, gas fired, drying paint by, by F. J. Brewer, 780
- Radiation units, gas fired (Parkinson Cowan), 780
- Sensitive devices, 683
- Spectroscopy, Unicam summer school in, 212
- and ultra-violet engineering, by W. Summer (review), 87
- Injun I satellite, telemetry data from, 365
- Inland waterways. See *River, etc.*
- Innovation chime unit (Evered & Co. Ltd.), 700
- Inserta mailing machine, Bradma (Adrema Ltd.), 14
- Insley Industrial Ltd., Destaco clamps, 475
- Inspection, magnetic particle, course on, 787
- Techniques, penetrant, course on, 787
- Institute of Advanced Studies in Engineering Sciences, creation of, 97; by Prof. S. A. Tobias, 178-180
- of Directors, *Export Action Now*, 572
- of Linguists, interest in by industry, 33
- of Marine Engineers, presidential address by H.R.H. Duke of Edinburgh, 496
- of Practitioners in Advertising, *Marketing in Europe*, 12
- of Welding, conference on welding tubes to tube plates, 197; School of Welding Technology, 278; courses available, 278; *British Welding Journal*, 278; autumn meeting of, 434; course on welding of agricultural machinery, 787; course on joining processes, 787; course on interpretation of weld radiographs, 787
- Institution of Civil Engineers, letter to members from Sir George M. McNaughton, 33; symposium on conservation of water resources, 231; ONC and HNC not to be exemptions for Institution's examinations, 485; symposium on conservation of water resources, 606-607
- Institution of Electrical Engineers, conversazione, 33; convention on high frequency communication, 197; symposium on automatic production in electric and electronic engineering, 335; symposium on electronic equipment reliability, 402; conference on design and use of microwave valves, 434; conference on satellite communications, 765
- of Engineers and Shipbuilders in Scotland, James Watt Day, 370, 525; James Watt dinner, 566
- Engineering, 461
- of Highway Engineers, annual lunch, 765
- of Locomotive Engineers, presidential address by J. F. Alcock, 429
- of Mechanical Engineers, symposium on experiments in graduate training, 335; symposium on textile processing mechanisms, 402; presidential address by J. H. Pitchford, 565; review on engine oil change intervals, 748
- of Metallurgists, course on heat treatment of metals, 6; *Purer Metals* (book), 592
- of Production Engineers, annual dinner, 733
- of Structural Engineers, symposium on aluminium in structural engineering, 770; *Structural Uses of Aluminium*, 809; research scholarships, 851
- of Works Managers, *Course Handbook*, 415
- Instruction, successful, by Capt. R. B. Laurie, 825
- Visual, in advanced workshop technology, 374
- Instruments (trade publication), 220
- Concentri-Chek, for checking hole location (British Indicators Ltd.), 672
- Electronic (trade publication), 856
- Landing system for aircraft, 736, 761
- for measurement and control, by W. G. Holzbock (book), 692
- Measuring, industrial process, by G. C. Carroll (book), 124
- Scientific (trade publication), 124
- — Automation and electronics, six-language dictionary on, by A. F. Dorian (book), 456
- Servicing, new facilities for (Hunting Group of Companies), 20
- Instrumentation, electronic, principles of, by W. A. Lynch and J. G. Truxal (review), 551
- Role in evolution of modern physics, by Dr. F. A. White, 553
- Insulant powder, automatic plant for drying (L. A. Mitchell Ltd.), 338
- Insulating material, calcium silicate Caposil (Cape Insulating and Asbestos Products Ltd.), 51
- Insulation, aluminium/kraft paper (British Aluminium Co. Ltd.), 83
- Calcium silicate, New therm (Newalls Insulation Co. Ltd.), 652
- Lags, Therbloc (Stillite Products Ltd.), 652
- Magnesia, 85 per cent (Newalls Insulation Co. Ltd.), 652
- Mineral wool (Stillite Products Ltd.), 764
- for rail diesel coach (Chancery Insulation Ltd.), 432
- Ross-Lite (Ross Insulation Products Ltd.), 764
- at Spencer Steelworks, 652
- for warmth, 764
- Insurance underwriter's concern for aluminium superstructures for ships, 429, 432
- Intake systems, scientific design of, by P. H. Smith (book), 482
- Integrals of Bessel Functions, by Y. L. Luke (book), 792
- Integral LTDA, design of Miraflores Dam, 503
- Intensifier, air-coil (Maxam Ltd.), 810
- Interaction of technologies, by L. Holliday, 352
- Intercom equipment (Spemby Ltd.), 16
- Unit (Centrum Electronics Ltd.), 840
- Inter-Continental Cars, agents for DAF Variomatic motor car, 229
- Interface detector (trade publication), 392
- Internal-combustion engine. See *Engine*. See also *Aircraft engine; Motor-car engine; Boat; Tractor; Turbine, gas*
- International Air Transport Association, annual report of, 329
- International Alloys Ltd., delivery of molten aluminium by road, 644
- Apprentice competition, awards in, 415
- International Aquavion (GB) Ltd., formation of, 100; Aquavion hydrofoil craft, 100; to take over International Aquavion SA, 100
- International Aquavion SA, to be taken over by International Aquavion (GB) Ltd., 100; acquired by Duncan Macneill & Co. and Wallace Bros. (Holdings) Ltd., 228
- Bank of Reconstruction and Development, finance for improvements to port of Bombay, 136
- International Business Machines Corp., research fellowships, 95
- International Business Machines Ltd., "shoe-box" project, 257, 291
- International Civil Aviation Organization, aerodrome requirements, 775
- International Combustion Group, Riley oil burner, 379
- International Combustion Ltd., Sulzer Mono-tube boiler for Drakelow C power station, 2-4
- Commission on Large Dams, H.R.H. Duke of Edinburgh as patron of the Congress of, 803
- International Computers and Tabulators (Engineering) Ltd., magnetic film computer memory, 327
- International Computers & Tabulators Ltd., equipment for automatically recording movements of railway wagons, 632
- Congress of the History of Science, 553
- International Construction Co. of London, tar dolomite plant for Spencer Steel Works, 537
- Council for Building Research, Congress on Innovations in Building, 376; Congress of, 444
- International Esso Group of Cos., use of "True Motion" radar for tanker fleet, 201
- Federation of Air Line Pilots' Associations, conference of, 761
- International Focus on Technological Development, 550
- International General Electric Co., air-over-frame ventilation of electric motors, 191; electrolytic machining technique, 393; computer system for Spencer Steel Works, 532
- Indian Ocean Expedition, preliminary report, 328
- Labour Conference, address by J. Hare, 89
- Laundry, Dry Cleaning and Allied Trades Exhibition, 738
- Machine Tool Design and Research Conference, 504
- Motor Show, 401
- International Nickel Co. (Mond) Ltd., symposium on austenitic iron castings, 620-621; sewage and effluent purification plant installed, 774
- Organization for Standardization, first and second meetings, 701
- International Paints Ltd., stoving paint, 419
- Power and Engineering Consultants, Portage Mountain Dam, 641
- International Rectifier Co. (Great Britain) Ltd., high power high voltage rectifier, 253; silicon controlled rectifier (trade publication), 392; rectifiers (trade publication), 592
- International Rectifier Corp., high power high voltage rectifier, 253
- Road Federation, fourth World Meeting, 746
- Standards Organization tool colour codes, 109
- International Systems Control Ltd., computer systems, 191; computer control of rolling mill for Steel Co. of Wales, 337
- Union of Marine Insurance, conference of, 429, 432
- Interservices Ltd., Kwik-set plug gauges, 238
- Intertherm Ltd., formation of, 17
- Inverform modification to Fourdrinier paper-making machine 344
- Inverter, static (Plessey Co. (UK) Ltd.), 810
- Invest-Import, contracts arranged for Rudnici i Zelezara with Davy and United Engineering Co. Ltd. and Wellman Smith Owen Engineering Corp., 740
- Investment, 265
- Castings. See *Castings*
- in railways, 225
- in science, by Sir John Cockcroft, 293
- Ion-exchange membranes, 312
- Plant, demineralization, Deminrolit, 807
- Iran, multiple-purpose river basin development; water resources development in (UN Survey), 266
- Iranian Oil Exploration & Producing Co., use of mobile turbine pumping units (Ruston & Hornsby Ltd.), 399
- Iraq, Fao offshore tanker terminal (Raymond-Costain-De Long), 503
- Iridite chromate coating for aluminium (Forestal Industries (UK) Ltd.), 389
- Iron, austenitic, in automotive, aeronautical, agricultural, civil and general engineering industries, by J. Morrison, 620
- in chemical and petroleum industries, by G. L. Swales, 620
- History of, and the evolution of the British standard, by A. B. Everest, 620
- Properties of, symposium on, 71
- Cast, austenitic, applications of, by J. Morrison, 814-815
- Austenitic, applications requiring heat resistance, 814
- Austenitic, in crop spraying equipment, 815
- Austenitic, in food machinery, 815
- Austenitic, galvanic corrosion of, 815
- Austenitic, graphitic corrosion of, 815
- Austenitic, piston ring carriers of, 814
- Iron, cast, austenitic, in refrigeration equipment, 815
- Austenitic, resistance to petroleum, 815
- Austenitic, resistance to sea water corrosion, 814
- Austenitic, resistance to soil corrosion, 815
- Austenitic, in steam raising plant, 814
- Austenitic, for turbochargers and manifolds, 814
- Austenitic, valve seats, 814
- Non-magnetic, Nomag (Ferranti Ltd.), 114
- Curtain, precast housing behind, 444
- Liquid, electromagnet control of, by O. Tedder, 174
- Men of: the Crowleys in the early iron industry, by M. W. Flinn (book), 288
- Non-magnetic, metallurgy and applications in the electrical industry, by O. Ogden and T. I. Jones, 621
- Ore (trade publication), 156
- See also *Ore*
- and steel, manufacture of, by G. R. Bashforth (book), 792
- and steel works of the World, by H. G. Cordero (book), 592
- See also *Steel; Metallurgy*
- Ironbridge B power station, proposals for, 104
- Irradiated wood, 312
- Irradiation plant for sterilization, 757
- Irrigation areas in Afghanistan, 266
- Irving, D. B., on shedding the power peak problem, 597
- Irving, R., on mechanical aspects of operation of vane type hydraulic pumps, 459-460
- Isaac, P. C. G., presidential address to British Occupational Hygiene Society, 397
- Isaacson, E. De St. Q., on Rock Pressure in Mines (book), 656
- Isatome quartz crystal clock, 793
- Isatron quartz chronocomparator, 793
- Iso Rivolta GT Coupe motor car fitted with Dunlop disc brakes, 740
- Isolator, ferrite (Marconi's), 47
- Isopactor soil compactor (Armstrong Whitworth), 674
- Isora Illuminating Ceilings Ltd., Series 60 translucent panels, 173
- Ispra Establishment of Euratom, test atomic reactor for, 659
- I.T.E. Circuit Breakers Ltd., Bulldog Pushmatic circuit breakers, 79
- ITEK Corp., automatic drafting machine, 274

J

- JACK, heavy duty, Tangye Hydralite (Tangyes Ltd.), 518-520
- Jackblock building system for Britannia House, Brussels, 775
- System (Richard Costain (Construction) Ltd.), 711
- Jacket, heat resisting, for steel operatives (United Steel Cos. Ltd.), 337
- Jackson, Dr. C. J., delegation to Western Germany, 340
- Jackson, L. C., on Experimental Cryophysics (review), 390
- Jackson, Dr. N., on road design. See *LETTER*, 6; on why the lorry driver objects to headlights, 196-197. See *LETTER*, 264
- Jackson, P., oil engine development, 215
- Jackson, W. A., on fire damage, 329
- Jackson, Sir Willis, opening address to conference on engineering education, 7; on professional engineers and the Common Market, 33; presidential address to British Association for Commercial and Industrial Education, 244; presidential address to British Association for Commercial and Industrial Education, 429; presidential address to Association of Supervising Electrical Engineers, 555; on Education for Europe, 785
- Jaguar Cars Ltd., use of neoprene to caulk body joints, 357; use of Loctite sealant resin, 388; use of Weldall-Grigg presses, 430
- Jamaica Project, 708
- James Watt, by L. T. C. Rolt (book), 552
- James Watt Day, 370, 525
- Japan Camera Research Association, lens research, 860
- Exports to, 673
- Trade with, 733
- with UK, 637
- Mission to UK, 637
- Jaques, Dr. E., on industrial relations, 754; on Changing Culture of a Factory (book), 754; on Measurement of Responsibility (book), 754; on Equitable Payment (book), 754
- Jarvie, J. G., on United Dominions Trust Ltd., 209
- Jarvis, J., & Sons Ltd., Barbican building scheme, 138; use of Peingeon Ideal tower cranes, 138
- JD Tractors Ltd., Deere crawler loader tractor, 580
- Jena Review (Carl Zeiss publication), 154
- Jenkins, W. J., & Co. Ltd., processing equipment, 306; purchase of goodwill of Plowright Bros. Ltd., 581
- Jensen, J., on Design Guide to Orbital Flight (review), 286
- Jensen motor car with Chrysler V8 engine, 468
- Jervis, F. R. J., on Introduction to Industrial Administration (book), 252; (review), 727
- Jessop-Saville Ltd., vacuum induction melting furnace installed (GEC/Vacuum Industrial Applications Ltd.), 373
- Jet Provost aircraft for Venezuelan Air Force, 372
- Units, marine, design and uses of, 526-527
- J & H Transport Services (Peckham) Ltd., use of aluminium bodies for road vehicles, 389
- Jig-boring machine, GSP-Matic (Ateliers GSP), 204
- Jig drilling (A. A. Jones & Shipman Ltd.), 111

K

- KALYANI Engineering Works, visit by D. R. S. Turner, 469
- Kampf copy milling machine (Embassy Machine & Tool Co. Ltd.), 307
- Kane, Douglas (Sealants) Ltd., Loctite sealant resin, 388
- Kanigen plating process (Fescol Ltd.), 479
- Kaplan turbines for Toledo Bend Project (English Electric Co. Ltd.), 740
- Kaplan, W., on Operational Methods for Linear Systems (book), 252; (review), 855
- Kariba Dam, cost of, 661
- Kay, Dr. H., award of Vernon Prize, 89; biographical note, 89
- Kay, Dr. J. M., on Engineering Training for Nuclear Power, 448
- Kean, D. J., on Montgomerie Reid Engineering Co. Ltd., 177
- Keelavite Hydraulics Ltd., relief valve, 810
- Keeton, Sons & Co. Ltd., Universal folding brakes, 541; sheet metal working equipment (trade publication), 624
- Keir, Allen, Ltd., automatic indexing table, 410
- Kelf-Cohen, R., appointed secretary of Electronics Industries Supply Board, 413
- Keller, K. O., oil engine development, 215
- Kellogg International Corp., use of strip-wound pressure vessels, 556
- Kelly, A., design of excavators, 449
- Kelly, R. A., on Use of English for Technical Students (review), 154
- Kelston Engineering Co. Ltd., contractors' pump, 745
- Kemp, K. O., on studying laminar flows by birefringence, 157

- Kempsafe-Tangyes industrial heater (Tangyes Ltd.), 378
- Kempson, G., on danger of standing waves in oil tankers, 858-859
- Kendall, A., admitted to College for Heating, Ventilating, Refrigeration and Fan Engineering, 555
- Kenex Coach-Work Ltd., introduction of Porsche-Diesel tractors, 436
- Kennedy, G., on cooling water plant, 639
- Kennedy, President, on American and Russian space achievements, 193
- Kent Floor Machine Co. Ltd., possible acquisition of by Newton, Chambers & Co. Ltd., 241; Ronuk Ltd. to service Kent floor machines, 241
- Kent, George, Ltd., carbon content tester, 110; position and prospects, 241; exports, 241; current contracts, 509; use of models, 509; electronic instruments (trade publication), 856
- Kent, Cmdr. P. W., on George Kent Ltd., 241
- Kenyon, William, & Sons (Thermal Insulation) Ltd., insulation at Spencer Steelworks, 652
- Kern, W. R., on Brno Trade Fair, 44
- Key Engineering Co. Ltd., expansion programme, 477; skirting and dado ducting, 744
- Khashm el Girba housing scheme in Sudan, 407
- Khrenov, Prof. C., on history of electric arc welding in USSR, 553
- Kidde, Walter, & Co. Ltd., inflatable shelter, 284; use of plastic hose, 689
- Kiekhaefer Corp., inboard/outboard motor units, 529
- Kilburn, Prof. T., development of circuitry for Ferranti Atlas computer, 827
- Kilmuir, Earl of, to be chairman of Plessey Co. Ltd., 781
- Kincaid, John G., use of Kismatic paint spray equipment, 479
- Kine Engineering Co. Ltd., machine tools (trade publication), 156
- Kinematics of epicyclic gearing, by H. Klein (review), 454
- Kinetrol Ltd., pneumatic actuator, 35; rotary damper, 745
- King, Dr. A., on education for the professional engineer, 1; on criteria for professional recognition, 8-9
- King, H. J. H., & Co. Ltd., design of self-cleaning air filter, 330
- King, R. A., review of Junction Transistor Circuit Analysis, 726; biographical note, 728
- King self-cleaning air filter (Cooper Mechanical Joints Ltd.), 330
- King Street Bridge, repairs to, 375
- Kingsbury, Prof., on air bearings, 345
- Kingscliffe Insulating Products Ltd., insulation at Spencer Steelworks, 652
- Kingston (Architectural Craftsmen) Ltd., laminated timber roof beams, 203
- Kinnis & Brown Ltd., Aqua-Clear water treatment, 479; water treatment, 592
- Kipping, Sir Norman, on research in British industry, 65; on how to decide on the right scale of research, 103
- Kirk, L. A., on automatic control in paper manufacture, 438-439
- Kirkbride, A. B., & Associates, mobile exhibition vehicle for British Aluminium Co. Ltd., 404
- Kismatic paint spray equipment (Kismet Ltd.), 479
- Kismet Ltd., Kismatic paint spray equipment, 479
- Kissam, P., on Optical Tooling for Precise Manufacture and Alignment (book), 624
- Kitching, D. M., award of BBC research scholarship, 315
- K. & L. Steelfounders & Engineers Ltd., Richmond tape controlled drilling machine, 608
- Klein, H., on Kinematics of Epicyclic Gearing (review), 454
- Klein, L., on River Pollution (book), 624
- Klement-Gottwald National Prize, award of, 224
- Kline, M., on Mathematics: A Cultural Approach (review), 690
- Klinger, Richard, Ltd., development of rubber asbestos jointing material, 281; Klingerit jointing material, 281-283; historical note, 281
- Knitting machines, stocking, Czechoslovak, 424
- Knowledge, Plain Words on, 230
- Koelle, H. H., on Handbook of Astronautical Engineering (review), 286
- Koenigsberger, Professor F., review of Metalworking Automation, 513; biographical note, 514
- Kold-Lube cold working lubricant (R. D. Nicol & Co. Ltd.), 83
- Komati power station (Mitchell Engineering Ltd.), 268
- Kompass Register, 804
- Kon Rotterdam Beton-en-Aanneming Mij. v/h Waning & Co., Rotterdam depot for British-Borax (Holdings) Group, 305
- Kontak Manufacturing Co. Ltd., sale of manufacturing and selling rights to Collimat Development Co. Ltd., 715
- Korea, Republic of, multiple-purpose river basin development: water resources development in (UN Survey), 266
- Kork, J., on Design Guide to Orbital Flight (review), 286
- Kornhauser, W., on Scientists in Industry: Conflict and Accommodation (book), 592
- Kraft, D., on Design Guide to Orbital Flight (review), 286
- Krick, E. V., on Methods Engineering: Design and Measurement of Work Methods (review), 455
- Kriegel, W. W., on Mechanical Properties of Engineering Ceramics (book), 184
- Kriton, M., on training managers, 382
- Küchemann, D., on Progress in Aeronautical Sciences (book), 482
- Kudo, H., on Mechanics for Metal Extrusion (review), 758
- Kurti, N., on Experimental Cryophysics (review), 390
- Kuwait Airways, aircraft and equipment ordered from de Havilland Aircraft Co. Ltd. and British Aircraft Corp., 201
- Distillation of sea water at, by J. D. Addison and R. S. Silver, 130-132
- Kwik-set plug gauges (Interservices Ltd.), 238

L

- LABELLING machine, universal (Purdy Machinery Co. Ltd.), 844
- Laboratory manual for engineering science, by E. C. Halliday and B. P. Morris (book), 656
- See also *National Engineering; National Physical*
- Labour Conference, International, address by J. Hare, 89
- Minister of, meeting with National Joint Advisory Council, 242; school leaver statistics, 242
- Shortage in British industry, 293
- Lachmann, Dr. G. V., review of Theory of Transonic Flow, 623; biographical note, 624
- Lacon ladders (Light Alloy Construction Ltd.), 224
- Lacquer, resin, for metals, Trilac (ICI Ltd.), 853
- Lacrinoid Products Ltd., Allplas spheres, 432
- Ladder, combination, Andy-Lad (Crossley Bros.), 224
- Lacon (Light Alloy Construction Ltd.), 224
- Laeis-Werke A-G., tar dolomite plant for Spencer Steel Works, 537
- Lago, G., on Control System Theory: Feedback Engineering (book), 288
- Laing, John, & Son Ltd., position and prospects, 17; industrial projects, 17; overseas developments, 17; associated and subsidiary companies, 17; Sectra system building site production line, 267; overseas orders, 407; annual apprentices day, 787
- Laing, John, Construction Ltd., Coventry Cathedral, 17; new London offices for British Petroleum Co., 404; Manchester headquarters of Co-Operative Insurance Society Ltd., 573; Commonwealth Institute building, 574-575
- Laing, W. K., on John Laing & Son Ltd., 17; on John Laing Construction Ltd., 17; on apprentices, 787
- Laithwaite, Dr. E. R., development of linear induction motor, 97, 731; development of linear electric motor, 463
- Lake, C. J., on Lake & Elliott Group of Companies, 549
- Lake & Elliot Founders & Engineers Ltd., position and prospects, 549
- Lake & Elliot Group, position and prospects, 549; companies comprising group, 549
- Lake & Elliot Jacks & Equipment Ltd., position and prospects, 549
- Laker, F. A., on Hovercraft on scheduled service, 98-99
- Lamberton & Co. Ltd., cold billet shear, 78
- Lamble, J. H., on Principles and Practice of Non-Destructive Testing (book), 817
- Laminar boundary layer equations, by N. Curle (book), 422
- Flows, studying by birefringence, by K. O. Kemp, 157
- Lamp fittings, signal (trade publication), 482
- Mercury discharge, Lifeguard (Crompton Parkinson Ltd. and Canadian Westinghouse Co.), 800
- Quartz iodine (GEC Ltd.), 253
- Shunting, three colour (Hird-Brown Ltd.), 78
- Table, Dazor (General Trade & Equipment Ltd.), 428
- — Horstmann (Simplus Products Ltd.), 428
- — (Philips Electrical Ltd.), 428
- Lamson Engineering Co. Ltd., vertical conveyor, 506
- Lancashire Dynamo & Crypto Ltd., terminal boxes for Nelson High Power Laboratories, 589
- Lancashire Dynamo Nevelin Ltd., use of aluminium extrusions as heat sinks, 419
- Lanchester, Dr. F. W., on motor cars and skidding, 832
- Land, Dr. E. H., design of Polaroid camera, 164
- Land & Marine Contractors Ltd., Fawley to London pipeline, 202
- Landing, aircraft, better guidance for, 736
- System, aircraft, all weather—, the last 100 feet, 761
- — Aircraft, BLEU, 761
- — Automatic, for Short Belfast Aircraft, 222
- Landis Machine-Maiden Ltd., threading machine, 714
- Lane, R. G. T., review of Dam Geology, 513; biographical note, 514, 624; review of Geology and Engineering, 622, 624
- Langhaar, H. L., on Energy Methods in Applied Mechanics (book), 760
- Langley, Bgd. C. A., retirement of, 597; on morale of the railways, 597
- Language barriers, breaking, 612
- Data processing, 827
- — Processing, Algol, 827
- — Processing, Cobol, 827
- — Processing, Fortran, 827
- — Processing, Mercury Autocode, 827
- as engineering tool. See LETTERS, 41, 70
- Foreign, competence in and the Common Market, 25
- — Courses in, 33
- — in industry (report of FBI), 33
- Lansing Bagnall Co. Ltd., Storemaker fork lift truck, 378; Spacemaker reach truck, 582-584; historical note, 584
- Lapmaster lapping machine (Payne Products International Ltd.), 271
- Lapointe continuous broaching machine (Lapointe Machine Tool Co.), 646-648
- Lapointe, J. N., historical and biographical note, 646; foundation of Lapointe Machine Tool Co., 646
- Lapointe Machine Tool Co., Lapointe continuous broaching machine, 646-648; historical note, 646 formation of, 646

- Lapointe Precision Engineering Co. Ltd., association with Lapointe Machine Tool Co., 648
- Lapping machine, Lapmaster (Payne Products International Ltd.), 271
- Lark II welding transformer (ETS Ltd.), 378
- Larsen & Nielson of Copenhagen, factory made buildings, 74
- Laser, coherent radiation with, 764
- Cutting with, 31
- Diagram, semiconductor, 763
- Diode, 763
- Hole in stainless steel, 764
- Materials, semiconductor, 763
- New modulation technique for (General Dynamics Corp.), 327
- Ruby (CSF (UK) Ltd.), 781
- Symposium on, 770
- Systems, practical, 763-764
- Welded seams, 763
- Welding trials, 764
- Welds, 763
- Lashko-Avakyany, S. V., on Brazing and Soldering of Metals (book), 88; (review) 854
- Lashko N. F., on Brazing and Soldering of Metals (book), 88; (review), 854
- Latex primers, aqueous (ICI Ltd.), 234
- Latham, F. W., film on work sampling, 686; review of Elements of Production Planning and Control, 690; biographical note, 692
- Lathe, copying (Strojimport and Strojexport), 412
- Latina atomic power station, closed circuit television for (Pye TVT Ltd), 793
- Launch, motor. See *Boat*
- Laundering machine, automatic, prototype of, 100
- Laundry, Dry Cleaning and Allied Trades, International Exhibition, 738
- Laurence, Scott and Electromotors Ltd., Pitt-Scott (Johnson type) winches for Palmers Hebburn dry dock, 747
- Laurie, Capt. R. B., on successful instruction 825
- Lavrenko, K. D., general address on world energy resources, 604
- Lawn mower, battery electric (H. C. Webb & Co. Ltd.), 185-187
- — Manufacture developments (Ransomes Sims & Jefferies Ltd.), 298
- Lawrence, H. R., on High Speed Problems of Aircraft and Experimental Methods (book), 156
- Lawrie, J. T., Ltd., Saran-lined pipes, 853
- Laycock Engineering Ltd., Fluidmix fluid mixing machine, 745
- Layout fixture (Aldridge Tool & Engineering Co. Ltd.), 440
- Fluid (Spectra Chemicals Ltd.), 115
- Layton diaphragm pump (Henry Sykes Ltd.), 14
- Layton, E., on practical Training of Architects (RIBA publication), 461
- Lazard Bros. & Co. Ltd., negotiations with Invest-Import and Rade-Koncar, 740
- LD process at Spencer Works, 609
- Lea, Dr. F. M., on building industry, 329
- Lead-based anti-seize compound, Led-plate (Constructional Products (Chadderton) Ltd.), 389
- Lead, conference on, 6
- Development Association, conference on lead, 6
- Tester (J. Goulder & Sons Ltd.), 410
- Leadership, youth training for, by Air Vice Marshall T. N. Coslett, 825
- Learning and teaching machines, programmed, by R. Goodman, 316
- Leck, Dr., development of electrometer DC amplifier, 715
- Lectures for National Productivity Year, 448
- Led-Plate lead based anti-seize compound (Constructional Products (Chadderton) Ltd.), 389
- Lede Group, cutting head, 78
- Lede Ltd., test oscillator, 142; flask shaker, 744
- Lee, D. H., on Introduction to Deep Foundations and Sheet Piling (review), 182
- Lee, Howl & Co. Ltd., extensions to works, 89; high pressure pump, 776
- Lee Valley Water Co., new reservoir for, 503
- Leeds University, oil film studies, 223
- Lees-Bradner Co., hobbing machine, 237
- Lefforge, J. W., on Electrical Encapsulation (book), 792
- Leg, artificial (Chas. A. Blatchford & Son Ltd.), 317
- Leggett, R. F., on Geology and Engineering (book), 56; (review), 622
- Leipzig Trade Fair, countries represented, 836
- Leisure Plain Words on, 806. See LETTER, 40
- Leitmann, G., on Optimization Techniques: With Applications to Aerospace Systems (book), 856
- Lenel, K. R., on design versus styling, 102
- Lenin atomic propelled ice breaker ship, 4
- Lens research, 860
- Lesbrook Ltd., position and prospects, 113
- Lesney Products & Co. Ltd., formation of, 718; historical note, 718; "Matchbox" die-cast toys, 718-720
- Level control (Bayham Ltd.), 744
- Controller, liquid, Resistron (Thomas Industrial Automation Ltd.), 714
- Crossing, prefabricated (Stelcon Industrial Floors Ltd.), 107
- Indicator, water, Dewrance-Yarway Color-Port (Dewrance & Co. Ltd.), 811
- Levellers, precision inverted roller, Voss (Foster Yates & Thom Ltd.), 710
- Levine, N., on Table of Sines and Cosines to Ten Decimal Places at Thousandths of a Degree (book), 422
- Levy, Dr. F. L., review of Handbook of Refrigeration Technique, 55; biographical note, 56
- Lewin Road Sweepers Ltd., Lewin salvage trailer, 675
- Lewis, A. D., on Gas Power Dynamics (book), 592
- Lewis, E. E., on Design of Hydraulic Control Systems (review), 286
- Leybold-Elliott Ltd., vacuum plant (trade publication), 692
- Leyland Motors Group, concrete mixers (trade publication), 88
- Leyland Motors Ltd., buses for Montevideo, 232; use of light alloys, 401; neoprene rubber radiator cowl, 557
- Leytonstone Jig & Tool Co. Ltd., tools (trade publication), 482
- Liberal studies, booklet on (Ministry of Education), 485
- Libya, Port Brega, prefabricated oil refinery for, 695
- Life, expectation of, 9
- Lifeguard mercury discharge lamp (Crompton Parkinson Ltd. and Canadian Westinghouse Co.), 800
- Lif jackets, historical notes on, 151
- Liferaft, RFD 21UL, inflatable (RFD Co.), 151-153
- Lifting bag. See *Bag, air lifting*
- and chain gear (trade publication), 288
- Equipment for steel plate, Vac-U-Lift, 577
- Light Alloy Construction Ltd., Lacon ladders, 224
- Beam, cutting with, 31
- — Units, New Look (Photronic Controls Ltd.), 48
- at your elbow, 428
- Polarized, production and use, by W. A. Shurcliff (book), 252
- Source, photo-electric (Elcontrol Ltd.), 111
- See also *Illuminating; Lamp; Lighting*
- Lightbody, A., review of Short-Range Guided Weapons, 54; biographical note, 56
- Lightfoot, E., on Moment Distribution: Rapid method of Analysis for Rigid-Jointed Structures (review), 22
- Lighting, advice on (British Lighting Council), 428
- Council, British. See *British*
- Equipment (trade publication), 252
- Masts in steel (Uddeholm Ltd.), 399
- Street, 680. See LETTER, 834
- — Columns, 680. See LETTER, 834
- Lighting and Town Planning*, 1
- Lighting. See also *Illuminating; Lamp; Light*
- Likhachev Motor Works (ZIL), development of electromagnet control of liquid iron, 174
- Limb, artificial (Ideal Limbs Ltd.), 317
- Limberoller idler mounting (Joy-Sullivan Ltd.), 207
- Limnoria, marine borer, 605
- Limpetite neoprene coating for power station condenser, 757
- Linatex centrifugal pump (Wilkinson Rubber Linatex Ltd.), 675
- Lincoln Laboratories, semiconductor laser materials, 763
- Lincoln Powereal ball valves (Mashedor Design Studies Ltd.), 737
- Linderfort Ltd., Linderode spark erosion circuit, 16
- Linderode spark erosion circuit (Linderfort Ltd.), 16
- Lindlay, E. M., on Practical Introduction to Microbiology (book), 392
- Lindley, A., on General Electric Co. Ltd., 145
- Lindley, B. C., on space demands nuclear power systems, 457-458
- Line construction unit, Tel-E-Lect (Tel-E-Lect Products Inc.), 406
- Fault locator, power (Ferranti Ltd.), 793
- Linear electric motor. See *Motor, electric*
- Systems, operational methods for, by W. Kaplan (book), 252; (review), 855
- Linemaster hose-end coupling (Zwicky Ltd.), 163
- Liner, *Northern Star* (Shaw Savill), 34
- *Southern Cross* (Shaw Savill), 34
- See also *Ship*
- Linford, A., on Flow Measurement and Meters (review), 184
- Lining, tank, plastic, Pentaphane (British Cellophane Ltd.), 589
- Linstead, Sir Patrick, on Quality in Scientific Education, 723
- Lion diesel electric locomotive (AEI-Sulzer-Birmingham Railway Carriage & Wagon Partnership), 799
- Lipton, L., Ltd., maintenance service for fork lift trucks, 804
- Liquid, dielectric, electronic processes in, conference on, 464
- Immiscible, valve for separating (Metaducts Ltd.), 228
- Liquid Metal Applicators Ltd., metal tank repairs with glass reinforced epoxy resin, 284-285
- Lissner, H. R., on Strain Gauge Primer (book), 792
- Lister, B., on BRM and Lotus motor cars, 833
- Little Giant mechanical handling attachments (Oldham & Sons Ltd.), 349
- Littlewood, W., on supersonic airliner, 97
- Liverpool University, tandem Van de Graaf accelerator installed, 762
- Livingstone Control Ltd., precision pressure gauge (trade publication), 514
- Livingstone, J. M., on Government economic policy and industry, 265
- Lloyd, Maj. Gen. C., on reorganization of City and Guilds, 150
- Lloyd, F. H., & Co. Ltd., position and prospects, 81
- Lloyd, F. N., on F. H. Lloyd & Co. Ltd., 81
- Lloyd-Lowles, D. G. N., on Tap & Die Corp. Ltd. 477
- Load analysis, ultimate, of reinforced and prestressed concrete structures, by L. L. Jones (book), 88; (review), 391
- Cell. See *Cell*
- Loader, crawler mounted (Eimco (Great Britain) Ltd.), 473
- Hydraulic, Mil Master (Midland Industries Ltd.), 549
- Logs and lumber, Hiab (George Cohen Sons & Co. Ltd.), 15
- Local Authorities. See *Municipal*
- Lockheed Aircraft Corp., MHD generation, 256
- Lockheed Scholarship of Automotive Products Group, 787
- Locking with sealant resins, 388
- Lockyer, K. G., on Factory Management (book), 252; (review), 727

- Locomotives, diesel electric (trade publication), 624
- Electric, for British Railways, 436
 - Electric, for British Railways (Clayton Equipment Co. Ltd.), 527
 - Electric, Falcon (Brush Electrical and Hawker Siddeley), 799
 - Electric, Lion (AEI-Sulzer-Birmingham Railway Carriage & Wagon Partnership), 799
 - Electric, Type 4, for British Railways, 799
 - Engines for (Sulzer-Vickers-Armstrongs), 740
 - Electric, Bo-Bo (AEI Ltd.), 735
 - Shunting (Sentinel (Shrewsbury) Ltd.), 169
 - Loctite sealant resin (Douglas Kane (Sealants) Ltd.), 388
 - Lodge-Cottrell Ltd., fume cleaning plant for Spencer Steel Works, 536; electrical precipitation (trade publication), 656
 - Loewy, E., review of Design and Construction of Ports and Marine Structures, 591; biographical note, 592
 - Loewy Engineering Co. Ltd., steel extrusion presses for Sandvikens Järnverks AB, 44
 - Log and lumber loader, Hiab (George Cohen Sons & Co. Ltd.), 15
 - Logic of modern physics, by P. W. Bridgman, 754
 - Logical basis for management studies, by Professor R. E. Johnstone, 754-755
 - Londex Ltd., push button switches and signal lamp fittings (trade publication), 482; measuring relay (trade publication), 624
 - London, air traffic control centre, 332
 - Airport, use of 360° X-ray equipment, 703
 - County Council, cost of extensions to Western Avenue, 503; realigning Waterloo Bridge approaches, 641
 - Group for the Study of Administration of Research and Development, first public meeting, 701
 - Industries of since 1861, by P. G. Hall (review), 481
 - Master Builders Association, shorter building apprenticeships confirmed, 211
 - Noise survey, 158
 - London and Scandinavian Metallurgical Co. Ltd., Losca hydraulic presses, 440
 - London/South Wales Motorway, 775
 - London Spinning Co., safety nets for Medway Bridge, 203
 - Traffic, 681
 - Transport, review of, 161
 - Executive, Routemaster coaches for Green Line service, 35; Victoria underground line, 225; Routemaster bus, 385-387
 - University, Consort II training atomic reactor for (GEC (Engineering) Ltd.), 786
 - Long-Lok Ltd., self-locking bolts and screws, 757
 - Longacre Press Ltd., Eagle Book of How it Works (review), 855
 - Longden, M., on Wallis and Longden Ltd., 81
 - Longjohn mobile staging (Access Equipment Ltd.), 506
 - Lonsdale, Dame Katherine, on Scientific Challenge, 485
 - Loopers to control tension in hot strip mill, 844
 - Lord, J., chairman of study group on National Exhibition Centre, 201
 - Lord, J. H., on Whessoe Ltd., 49
 - Lords, House of, debate on industry, population and planning, 733
 - Lorry. See *Motor Vehicle*
 - Los Alamos Scientific Laboratory, caesium diodes, 256
 - Los Angeles, Vincent Thomas bridge, 605
 - Losca hydraulic presses (London & Scandinavian Metallurgical Co. Ltd.), 440
 - Lotus Elan motor car, 467
 - Ford engine, 13
 - Motor car, by B. Lister, 833
 - Loud speakers: theory, performance, testing and design, by N. W. McLachlan (book), 220
 - Loughborough College, address by Sir John Baker, 150
 - Lovell, Sir Bernard, on Mariner II space problem, 829
 - Lubricant, Black Moly (John W. Miller & Son Ltd.), 19
 - Cold working, Kold-Lube (R. D. Nicol & Co. Ltd.), 83
 - Molybdenum disulphide, Black Moly (John W. Miller & Son Ltd.), 249
 - Molybdenum disulphide (Molykote), 757
 - Molybdenum G, 672
 - Ptfc, Fluoro-Glide (Systems Engineering Services Ltd.), 147
 - Lubricating Britain's new strip mills, by J. A. Robertson, 301
 - Lubrication, air, for machine tools, 346
 - Equipment, Wanner (Step Industrial Equipment Ltd.), 15
 - and friction, by P. Freeman (book), 624
 - Gas film, by W. A. Gross (book), 422
 - of linear actuators (Teleflex Products Ltd.), 61
 - Turbine, by G. H. von Fuchs, 127
 - Lucas, Joseph, & Co. Ltd., traction motor for battery electric lawn mower, 187
 - Luke, Y. L., on Integrals of Bessel Functions (book), 792
 - Lumbard, D., on accident at Dungeness atomic power station, 233
 - Lumber and log loader, Hiab (George Cohen Sons & Co. Ltd.), 15
 - Lumsden, Q., on prospect for steel strip, 540
 - Lurgi Chemie, sinter plant for Spencer Steel Works, 534
 - Luwa spray drying equipment made to measure (Steels Process Plants Ltd.), 709
 - Lychagin, A. S., on Open Hearth Furnace Design (review), 790
 - Lye Trading Co. (Tinplate) Ltd., development of high speed automatic tinplate classifying machine, 778-779
 - Lynch, W. A., on Principles of Electronic Instrumentation (review), 551
 - Lysaght's Scunthorpe Works, shunting locomotives ordered from Sentinel (Shrewsbury) Ltd., 169
- ## M
- M1 Motorway extension, 201
 - M5 Motorway, landscaping of (A. Monk & Co Ltd.), 107
 - M6 Motorway, road to join with A34, 201
 - M60 battle tank, 630
 - M218 aircraft (Beagle Aircraft Ltd.), 259
 - Mac. See also *Mc*.
 - Macarty, B., on wage structure, 57
 - MacCarthy Services Ltd., degreasing plant (trade publication), 56
 - MacDonald, F. A., & Partners, concrete bridge over River Ayr, 503
 - MacGregor, A. A., review of New Ways Through the Glens, 251; biographical note, 252
 - Machinability studies (Metcut Research Association), 491
 - Machine, automatic, single spindle (Wickham Ltd.), 47
 - Capacity, exploiting, 673
 - Control, Plain Words on, 166
 - Machine Economy Ltd., Teamatic tea vending machine, 256
 - Elements, design of, by M. F. Spotts (book), 288
 - Guards of plastic (Short Bros. & Harland Ltd.), 51
 - Special purpose, 129
 - Theory of, by W. G. Green (book), 552
 - Tools (trade publication), 156
 - Air bearings for, 253
 - Air lubrication of, 346
 - Air-supported tables for, 346
 - Chip removing, by W. Charchut (review), 691
 - Control, by R. S. J. Good, 504
 - Design and research conference, international, 504
 - Design, course in, 212
 - Design scholarships, 280
 - Dynamic tests on, 730
 - Exhibition, European, 733
 - Export statistics, 501
 - Fair, Osaka, 673, 733
 - Mitchell Committee on, 97
 - and optical gratings, cinema film, 374
 - Research and development contract to Staveley Industries Ltd. from DSIR, 53
 - Research, DSIR grants for, 178
 - Setting-up the stability chart of, by Professor J. Peters, 505
 - and solid mechanics, course on, 315
 - Statistics, 104
 - and tools, by B. D. H. Bruins (review), 691
 - Trades Association, cinema films for teacher and training officer, 211; course in machine tool design, 212; machine tool design scholarships, 280; export statistics for machine tools, 501; exports of machine tools continue to rise, 501
 - Vibration, by Professor Tobias, 504
 - Vibration and design in, 504
 - Machinery for high speed power boat, 227
 - Machining, electrolytic, technique (International GEC), 393
 - Process, monitoring, digital follower for (Paramatic Development Ltd.), 67
 - Spark erosion, Linderode circuit, 16
 - Erosion, Sparatron, 475
 - Tools for, by J. Witthoff (review), 691
 - Machlett X-ray tube, 507
 - Mackay Industrial Equipment Ltd., free Fiat car with every tractor or shovel loader purchased, 529; exhibit at Public Works Exhibition, 529
 - Mackenzie, C. H., committee on generation and distribution of electricity in Scotland, 829
 - MacLarty, B. N., on recalling trial broadcasts of 1922, 729
 - MacLellan, P. & W., Ltd., Cokenzie power station, 713
 - Macmillan, Professor R. H., on Non-Linear Control Systems Analysis (review), 481; on mechanical power transmission research, 627-628; on Progress in Control Engineering (book), 856
 - Macneil, Duncan, & Co., acquisition of International Aquavion SA, 228; Waterman Hydrofoil craft, 228
 - Macron multi-purpose machine tool oil (Shell-Mex & BP Ltd.), 147
 - Madan, Charles S., Ltd., Air-Hydro pump unit, 653
 - Maddison, T. B., on disc brakes for railway rolling stock, 661
 - Magic-Door, Stanley, automatic door (Tonks-Rowley Automatic Doors Ltd.), 342
 - Magnesia, 85 per cent, insulation (Newalls Insulation Co. Ltd.), 652
 - Magnesium diecastings (trade publication), 856
 - Magnesium Elektron Ltd., Travel-Master portable dictaphone, 621
 - Magnets, Alcomax (James Neill & Co. (Sheffield) Ltd.), 580
 - Permanent, and magnetism, by D. Hadfield (book), 220
 - Pot, Eclipse (James Neill & Co. (Sheffield) Ltd.), 580
 - Magneti Marelli brake control system (Trico-Folberth Ltd.), 433
 - Magnetic circuits, complicated and highly saturated, nomographic computation of, by O. Benedikt (book), 156
 - Field, probe, microscopic (National Bureau of Standards), 490
 - Film computer memory (GEC Ltd.), 327
 - Oxide materials, by K. J. Standley (review), 360
 - Particle inspection, course on, 787
 - Magnetism and permanent magnets, by D. Hadfield (book), 220
 - Magneto-fluid mechanics, introduction to, by V. C. A. Ferraro and C. Plumpton (review), 654
 - Magnetohydrodynamic converters, 254
 - Magnetohydrodynamics, 276
 - Symposium on, 393
 - Magnetoplasmadynamic power generation flow diagram for (C. A. Parsons & Co. Ltd.), 254
 - Magnetrons (Ferranti Ltd.), 715
 - Magnistors, characteristics of, 684
 - Magnostatic frictionless permanent magnet bearing (Armour Research Foundation), 521
 - Mailing machine, Bradma Inserta (Adrema Ltd.), 14
 - Mains, electric. See *Cable*
 - Main Water Heaters Ltd., heater container from alumina ceramic, 146
 - Major, A., on Vibration Analysis and Design of Foundations for Machines and Turbines (book), 760
 - Malim Nawar power station, 232
 - Maltby Main Colliery, strike at, 25
 - Man in Charge, cinema film, 585
 - MAN Turbomotoren Co., cooperation with Rolls-Royce Ltd., on turbine engines, 851
 - Management and engineering: total quality control, by A. V. Feigenbaum (review), 219
 - Consultants Association, *Overseas Marketing*, 336; *Ten Questions—the Challenge of the Common Market*, 565; *Can the Wholesaler Survive?* 740
 - Developing (Supervisory Training Services publication), 617
 - Dis-incentives, 168
 - Education for, by Sir John Cockcroft, 619
 - Exploration of, by W. Brown (book), 754
 - Factory, by K. G. Lockyer (book), 252; (review), 727
 - General, course on, 851
 - Industrial, organization and, by L. L. Bethel, F. A. Atwater, G. H. E. Smith and H. A. Stackman (review), 759
 - Machine, Plain Words on, 134
 - Practice, course in, 649
 - Production and the Common Market, symposium on, 612
 - Responsibility of, 812
 - Sales, course in, 649
 - Management Selection Ltd., selling in a foreign market, 429; demand for executives, 765; appointment statistics, 765
 - Studies, logical basis for, by Prof. R. E. Johnstone, 754-755
 - Succession, planning, course on, 244
 - Training courses, 617-618
 - Course for Staff of S. Smith & Sons (England) Ltd., 787
 - European look at, 447
 - Issues in, by J. W. Platt, 447
 - Made to measure, 617-618
 - New developments in, by N. Fisher, 244, 447
 - at Spencer Steel Works, 539
 - (Value Engineering Ltd.), 515
 - What goes on in, 382
 - Understanding, by R. W. Rowbottom and H. A. Greenwald (book), 552
 - Manager, engineer as, by C. T. Melling, 555
 - Training (Acton Society Trust publication), 382
 - Managerial authority, effect of wage incentive systems on: piecework abandoned, by W. Brown (review), 655
 - Skills, productivity out of, by A. J. Speakman, 812
 - Manchester College of Technology and Science, Professors of Electrical Engineering, 134; course on solid mechanics and machine tools, 315; survey of building methods, 329
 - Joint Research Council, technical and scientific film shows, 687
 - Manchester Oil Refinery (Sales) Ltd., industrial X-ray equipment (trade publication), 856
 - University, linear electric motor, 95; linear induction motor development, 97; new chemistry block for, 104; Professors of Electrical Engineering, 134; radio telescope, 436; development of linear induction motor for rail traction, 731; development of Ferranti Atlas computer, 827
 - Mandrels, Perman (Europa Engineering Co. Ltd.), 341
 - Manifests of austenitic cast iron, 814
 - Mann, Albert, Engineering Co. Ltd., experimental rolling mill for BISRA, 21
 - Mannesmann-Export GmbH, latticed towers (trade publication), 88
 - Manning, J. F., on Moulton bicycle, 802
 - Manpower Ltd., historical note, 565; position and prospects, 565; activities of, 565
 - Mantle & Butterworth Ltd., Rogack block storage heater, 460
 - Mantle, E. C., on galvanized cisterns. See *LETTER*, 298
 - Manufacturers Sales & Display Ltd., formation of, 169; aims of, 169
 - Manufacturing industry, rising output of, 329
 - Maranyl A190 glass-filled nylon compound (ICI Ltd.), 621
 - Nylon demonstration caravan (ICI Ltd.), 637
 - Marbaix, Gaston E., Ltd., agents for Ekstrom drawing machine, 193, 200; presses (trade publication), 288; Mattison rotary surface grinding machine, 611; Roy cold heading machine, 643; milling machines (trade publication), 656
 - Marble Arch/Hyde Park road improvement scheme (Cubitts-Fitzpatrick-Shand), 543-544
 - Marchwood power station, 605
 - Marconi Instruments Ltd., measuring oscilloscope, 744
 - Marconi International Marine Co. Ltd. *Elettra III* research vessel, 568; Argus radar, 568; Seamarc echo sounder, 568
 - Marconi's Wireless Telegraph Co. Ltd., error correcting multiplex equipment (trade publication), 24; ferrite isolator, 47; 2MT transmitter, historical details of, 729; formation of Mechanical Products Division, 845; officers appointed to Mechanical Products Division, 845
 - Margate, sea defences at, 304
 - Marinair air conditioning for *Northern Star* liner (Carrier), 34
 - Marine borer, *Linnoria*, 605
 - Electrical practice, by G. O. Watson (book), 692
 - Engines. See *Engine, diesel; Engine, petrol; Turbine; and Boat*
 - Marine equipment, demonstrating at sea (Marconi), 568
 - Propulsion. See *Atomic propulsion; Engine; Turbine; Propeller*
 - Structures and ports, design and construction of, by A. De F. Quinn (review), 591
 - Mariner project, 193
 - Mariner II space probe, 829
 - Mark or marque? 530, 570
 - Marker cone for road obstruction, Motocone, 708
 - Roadside, of neoprene (Bank Bridge Rubber Co. Ltd.), 147
 - Markets. See also *Trade*
 - Marketing, courses on, 469
 - Marketing in Europe*, 12
 - Marketing, overseas (Management Consultants Association publication), 336
 - Markey, W. R., on Mechanics of Inertial Position and Heading Indication (review), 359
 - Marking machine, automatic (Electromark (GB) Ltd.), 48
 - for plastics (Phillips Bros. & Ellis Ltd.), 643
 - (Edward Pryor & Son Ltd.), 411
 - Marking-out machine (M. & W. Grazebrook Ltd.), 15
 - Markland, Dr. E., review of Flow Measurement and Meters, 184; biographical note, 184
 - Markon Engineering Co. Ltd., use of Loctite sealant resin, 388
 - Marples, E., on carriage of large and awkward loads by road, 161
 - Marples, Ridgeway & Partners Ltd., dry dock for Vickers-Armstrongs, 442-443
 - Marque or mark? 530, 570
 - Marriott, F., on pre-apprentice training, 485
 - Marryat & Scott Ltd., absorption of John Bennie Ltd., 509
 - Mars gas turbine water pumping set, Perkins, 145
 - Mars I Martian space probe, 829
 - Marsh, C. M., on water distribution system, 606
 - Marsh, H. S., Ltd., irradiation plant for sterilization, 757
 - Marshall, R. P., review of Inert Atmospheres in the Chemical, Metallurgical and Atomic Energy Industries, 122; biographical note, 124
 - Marshall, Prof. W. T., review of Flexible Bars, 590; biographical note, 592
 - Marskell, W. G., on designing roads to assist vision, 6. See *LETTER*, 196; on why the lorry driver objects to headlights, 264
 - Marston Excelsior Ltd., plastic vessels for Nimrod proton-synchrotron, 248
 - Martian space probe, Mars I, 829
 - Martin Co., simple atomic generator, 96; thermo-electric generators, 256
 - Martin, Sir Leslie, artificial sky, 76
 - Martinson, C. R., on Industrial Painting: The Engineered Approach (review), 421
 - Martonair Ltd., pneumatic circuit analysis (trade publication), 124; trip valves, 342
 - Marviken atomic reactor, development of, 94
 - Maser, optical, amplifier (Bell), 290
 - Symposium on, 770
 - Travelling wave, 95
 - Mashed Design Studies Ltd., Lincoln Powersal ball valves, 737
 - Masimport, order for plate mill plant to Davy & United Engineering Co. Ltd., 708
 - Mass flow system, report on (USAEC), 564
 - Measurement, seminar on, 292
 - Massachusetts Institute of Technology, diode generators, 256; computer prepared algebraic formulae, 274; electricity to infra-red radiation converter, 292; semiconductor laser materials, 763
 - Massey, B. & S., & Sons Ltd., position and prospects, 209
 - Massey-Ferguson Ltd., filters from Palmer Aero Products Ltd., 673
 - Massey, K. F., on B. & S. Massey & Sons Ltd., 209
 - Mast, aluminium/titanium (Saro (Anglesey) Ltd.), 217
 - Lighting, in steel (Uddeholm Ltd.), 399
 - Matbro Ltd., exhibit at British Industrial Equipment Exhibition, 529
 - "Matchbox" diecast toys (Lesney Products & Co. Ltd.), 718-720
 - Matchless Machines Ltd., microscopes (trade publication), 288
 - Materials, advanced, by C. Z. Carroll-Porzynski (book), 88
 - Better, for electrical generation, by M. G. Gemmill, 275-276
 - Ceramic, Electrox (Royal Worcester Industrial Ceramics Ltd.), 60
 - Elements of strength of, by S. Timoshenko and D. H. Young (book), 56
 - for engineering production, by P. S. Houghton (book), 324
 - Handling, course on, 264
 - and plant layout, course on, 315
 - Non-metallic, 276
 - Radiation to improve, by Dr. R. Roberts, 311-312
 - in space, symposium on, 231
 - Stacking of (RoSPA publication), 790
 - Strength of, by J. P. D. Hartog (book), 514
 - Mathematical programming, by S. Vajda (review), 454
 - Readings in, by S. Vajda (book), 728
 - Statistics, elements of, by J. F. Ratcliffe (book), 252
 - Mathematics: cultural approach, by M. Kline (review), 690
 - Dated, books on, 314
 - Mather & Platt Ltd., new stoving ovens installed, 268; Protectospray fire system for Spencer Steel Works, 536; use of austenitic iron castings, 620; use of terne coated steel, 724; pressure switch (trade publication), 728; boiler feed pumps for Reed Paper Group's new extension, 842
 - Mathieson, K., award of Buchanan Silver Medal, 485
 - Matrix slip gauges (Coventry Gauge & Tool Co. Ltd.), 776

- Matthew, G. D., on Cambridge Don examines his bookshelf, 402
- Matthew Hall & Co. Ltd., hose handling equipment, 107
- Matthew, Robert, Johnson-Marshall & Partners, Commonwealth Institute buildings, 574-575
- Matthews & Yates Ltd., fan unit with linear electric motor drive, 463; cooling and ventilating equipment for Spencer Steel Works, 537
- Mattison rotary surface grinding machine (Gaston E. Marbaix Ltd.), 611
- Mawdsley's Ltd., Emlux electromagnetic flowmeter, 239
- Maxam Ltd., air-coil intensifier, 810
- Maxerett braking system, Dunlop, 601
- Maxtroff ultra-deep conveyor belt (C. H. Johnson (Machinery) Ltd.), 100
- Maxwell, D. L., on "the bulge," 493
- Maybach Motorenbau GmbH, agreement with South Western Marine Factors Ltd. and Mercedes-Benz (Great Britain) Ltd., 529
- Mayne, D. Q., review of Operational Methods for Linear Systems, 855; biographical note, 856
- Mc. See also *Mac*
- McAlpine, Sir Robert, & Sons Ltd., Oldbury atomic power station, 305; Spencer Steel Works, 535; research establishment for Castrol Group of Companies, 581; Smithfield Poultry Market, 640
- McAlpine, Sir Robert, & Sons (South Wales) Ltd., Newport By-Pass, 136
- McCall, D., on storage of liquid fuels, 716
- McCandlish, J. E. C., on Scottish Electrical Training Scheme Ltd., 555
- McChesney, Dr. M., review of Shock Tubes, 183; biographical note, 184, 656; review of Shock Waves in Chemistry and Physics, 655
- McFadzean, Sir William, on British Insulated Callender's Cables Ltd. acquisition of Mount Lyell Investments Ltd. shareholding in Metal Manufacturers Ltd., 645
- McGrath, R., on Glass in Architecture and Decoration (review), 123
- McKee, Arthur E., Co., new refinery for Esso West Indies Ltd., 469
- McKelvey, Dr. V., on fossil fuels, 604
- McKenzie, S. C., on Cambridge Don examines his bookshelf, 707
- McLachlan, N. W., on Loud Speakers: Theory, Performance, Testing and Design (book), 220
- McMahon, D., on value of apprentice training, 316
- McNaughton, Sir George M., letter to members of Institution of Civil Engineers, 33; on water conservation, 629
- Measurement, conference on, 135
- International and metric units, by M. H. Green (book), 360
- Mass, seminar on, 292
- Mechanical, by T. G. Beckwith and N. L. Buck (book), 184
- Measuring instruments, industrial process, by G. C. Carroll (book), 124
- Machine, roundness, with air bearings (Optical Measuring Tools Ltd.), 348
- Set, transmission delay (Acton Laboratories Inc.), 364
- Meat Machinery and Butchers' Supplies Exhibition, 166
- Mechadome extractor ventilator (Greenwood's & Airvac Ventilating Co. Ltd.), 715
- Mechanical engineers, plasticity for, by W. Johnson and P. B. Mellor (review), 758
- Handling (trade publication), 856
- Hydraulics in, by J. R. Fawcett (book), 124
- Little Giant attachments for, 349
- Heart (Thorax Clinic and Swedish Aga Co.), 191
- Measurements, by T. G. Beckwith and N. L. Buck (book), 184
- Power transmission research, by Prof. R. H. Macmillan, 627-628
- Properties of engineering ceramics, by W. W. Krieger and H. Palmour (book), 184
- Mechanics, applied, energy methods in, by H. L. Langhaar (book), 760
- Worked examples in, by J. A. Cormack (book), 220
- Engineering, books on, 314
- Handbook of, by W. Flugge (book), 456
- Flight, by A. Miele (book), 728
- Fluid, solution of problems in, by J. F. Douglas (review), 854
- of fluids, by A. C. Walshaw and D. A. Jobson (book), 817
- of inertial position and heading indication, by W. R. Markey and J. Hovorka (review), 359
- Magneto-fluid, introduction to, by V. C. A. Ferraro and C. Plumpton (review), 654
- for metal extrusion, by W. Johnson and H. Kudo (review), 758
- Solid, and machine tools, course on, 315
- Wave, of crystalline solids, by R. A. Smith (review), 182
- Mechanization of motion, by L. Harris-Berger (review), 455
- Meddings, W. J., Ltd., drilling machine, 142
- Media, continuous, non-linear theory of, by A. C. Eringen (book), 856
- Medical research, optical probe for (Armour Research Foundation), 30
- Medway Bridge, safety nets for (London Spinning Co.), 203
- Mee, R. A., on Electrical Installation Work (book), 88
- Melbourne, repairs to King Street Bridge, 375
- Melford, Dr. D. A., development of Microscan X-ray analyser, 732
- Meller, George, Ltd., Coppus sentry valve, 432
- Melling, C. T., on Engineer as Manager, 555
- Mellor, H. & T. (Engineers) Ltd., coiling drum, 432
- Mellor, Dr. P., on forming of metals, 504
- Mellor, P. B., on Plasticity for Mechanical Engineers (book), 88; (review), 758
- Melman, Prof. S., on machine tool industry, 97
- Melting plant, coreless induction, for F. M. Parkin (Sheffield) Ltd. (GWB Furnaces Ltd.), 374
- Unit, induction (Balzers High Vacuum of Liechtenstein), 644
- Vacuum, service (Deritend Precision Castings Ltd.), 644
- Melville, Sir Harry, on limitations imposed on research, 97; on technological advances 193; on Department of Scientific and Industrial Research (book), 482
- Membranes, ion-exchange, 312
- Memory, computer, magnetic film (GEC Ltd.), 327
- Men of Iron: The Crowleys in the Early Iron Industry, by M. W. Flinn (book), 288
- Menaccanite, discovery by William Gregor, 676
- Mendes-France, M., on France and the Common Market, 836
- Mensforth, Sir Eric, on Firth Brown Tools Ltd., 209; created Bachelor Knight, 209
- Menzies, J. B., research at Birmingham University, 851
- Mercantile Traders Ltd., group economies scheme, 404
- Mercedes-Benz (Great Britain) Ltd., agreement with Maybach Motorenbau GmbH and South Western Marine Factors Ltd., 529
- Mercer, Coun. T. G., on air gauging, 576
- Mercer, Thomas, Ltd., cylinder bore gauge, 441
- Merchant ship. See *Ship; Liner; Tanker, etc.*
- Mercury Autocode data processing language, 827
- Mercury computer for planning overhaul of oil refinery (Ferranti), 159
- Merrill Pumps Ltd., pumps, 170
- Mervyn Harwell polarograph (Mervyn Instruments Ltd.), 642
- Mervyn Instruments Ltd., Mervyn Harwell polarograph, 642
- Merz & McLellan, Wairakei geothermal power station, New Zealand, 663
- Mesa transistor, 682
- Metaducts Ltd., flush bottom valves, 206; valve for separating immiscible liquids, 228
- Metal adhesives, 838
- for atomic reactors, 276
- Brazing and soldering of, by N. F. Lashko and S. V. Lashko-Avakyan (review), 854
- Ceramic material, Matamic (Morganite Research & Development Ltd.), 18-19
- Concrete joint made with epoxy resin, 837
- Course on heat treatment of, 6
- Cutting of, by E. Amini, 504
- Effects of radiation of (ASTM), 492
- Expanded, slotted design (Expanded Metal Co. Ltd.), 217
- Extrusion. See *Extrusion*
- Fatigue. See *Fatigue*
- Finishing (trade publication), 856
- and corrosion exhibition, 71, 703
- Machine (Amber Light Engineering Co.), 610
- Forming of, by Dr. P. Mellor, 504
- Hydrostatic extrusion of (National Engineering Laboratory), 191
- Metal Industries Group, position and prospects, 717
- Metal Industries Ltd., purchase of ex War Dept. land, 201; high power high voltage rectifier, 253
- Influence of temperature on mechanical properties of, by E. M. Savitsky (book), 482
- Lacquer, resin, Trilac (ICI Ltd.), 853
- Metal Manufacturers Ltd., Mount Lyells Investments Ltd., shareholding acquired by British Insulated Callender's Cables Ltd., 645
- Metal Mouldings Ltd., acquired by Graham Firth Steel Products Ltd., 813
- Metal & Pipeline Endurance Ltd., Pitchkote tarred tape for pipe protection, 389
- Purer (Institution of Metallurgists publication) (book), 592
- Reference Book, by C. J. Smithells (book), 184
- Resistivity under strain, 40, 70
- Rig testing of, 275
- Metal/rubber gaskets, users' comments on, 50
- Metals in the service of man, by A. Street and W. Alexander (book), 592
- Soldering and brazing of, by N. F. Lashko and S. V. Lashko-Avakyan (book), 88
- Spraying, gun, Swift, 475
- Ultra-high purity (ASTM) (book), 792
- See also *Metallurgy*
- Metallurgical industries, inert atmospheres in, by P. A. F. White and S. E. Smith (review), 122
- and mining congress, Commonwealth, 802
- Principles for engineers, by J. G. Tweeddale (book), 288; (review), 691
- Processes and physical chemistry, by A. K. Biswas and G. R. Bashforth (book), 184
- Services, hardness tester (trade publication), 252; research microscope (trade publication), 482
- Training at Spencer Steel Works, 539
- Metallurgy and allied sciences, Russian-English Dictionary, by T. Deruguine (book), 592
- of non-magnetic irons in electrical industry, by O. Ogden and T. I. Jones, 621
- Physical, for engineers, by A. G. Guy (book), 324
- Problems in boilers, 4
- of welding, by D. Sefirian (book), 124; (review), 854
- See also *Foundry; Iron; Iron and Steel; Metal; Steel, etc.*
- Metalworking Automation, by G. H. DeGroat (book), 24; (review), 513
- Metalworking Production*, 97
- Metamic crucibles, 18
- Metal/ceramic material (Morganite Research & Development Ltd.), 18-19
- Metco Ltd., flame spray gun, 16
- Metcut Research Associates, machinability studies, 491
- Meters (trade publication), 324
- and flow measurement, by A. Linford (review), 184
- Panel (trade publication), 252
- Power (trade publication), 856
- Metering head (Collimat Development Co. Ltd.), 715
- Methane, import of, 257
- Methods engineering: design and measurement of work methods, by E. V. Krick (review), 455
- Skill and Time Study. See *MST*
- Metric units, international measurement, by M. H. Green (book), 360
- Metrology, engineering dimensional, by L. Miller (book), 360
- Metropolitan-Cammell Carriage & Wagon Co. Ltd., order from Pakistan Eastern Railways, 772
- Metropolitan-Cammell-Weymann Ltd., bus bodies for Montevideo, 232
- Meyer, M. L., on importance of post-graduate courses, 40
- Meyer, Roth & Pastor, wire and strip forming machine, 238
- MG Midget GT Coupé motor car, 39
- MHD generator, Westinghouse Research Laboratories, 256
- Michigan tractor shovels (Jack Olding & Co. Ltd.), 675
- Micro-Touch tone arm, Zenith (United Mercantile Co. Ltd.), 364
- Micro Turbo, starter/gas generator systems, 313
- Microbiology, practical introduction to, by E. M. Lindlay (book), 392
- Microcell Ltd., to be integrated with Palmer Aero Product Ltd., 613
- Microfilm reader and printer (Burton Mount Corp.), 290
- Micrometers, internal (T. Bower & Co.), 411
- Microminiaturization in electronics, 682
- by G. W. A. Dummer (book), 156
- Microscan X-ray analyser (Cambridge Instrument Co. Ltd.), 732
- Microscopes (trade publication), 288
- Research (trade publication), 482
- Microwave propagation through plasmas (GEC Ltd.), 159
- Middleton-Hands, H., on Flexible Drives (Gilmans) Ltd., 477
- Middleton, R. F., on high performance soluble cutting oils, 805
- Midgley & Sutcliffe Ltd., Richmond tape controlled drilling machine, 608
- Midland Heating & Ventilating Co. Ltd., Auto Midac viscous air filter, 380; cooling tower, 508; fan room machinery for Hyde Park/Marble Arch road improvement scheme, 543-544
- Midland Industries Ltd., new range of agricultural implements, 549; Mil Master hydraulic loader, 549; position and prospects, 549
- Motorway Links, route fixed for, 232
- Midland Silicones Ltd., RTV731 cold cure rubber, 653
- Mil Master hydraulic loader (Midland Industries Ltd.), 549
- Miles, Dr. W. D., on usefulness of oral history in writing the story of a large scientific project, 553
- Military Engineering Experimental Establishment, self-cleaning air filters, 330
- (HMSO publication) (book), 514
- Mill, ball. See *Ball mill*
- Rolling. See *Rolling mills*
- Vibro Energy, Podmore-Boulton (W. Podmore & Sons and William Boulton Ltd.), 83
- Millard, Dr. R., on roads in tropical and sub-tropical countries, 746
- Millars' Machinery Co. Ltd., centrifugal pumps, 239
- Millbourn, Sir P. Eric, appointed to board of Elliott-Automation Ltd., 717
- Mille Coupe Bertone motor car fitted with Dunlop disc brakes, 740
- Miller, John W., & Son Ltd., Black Moly grease, 19; molybdenum disulphide lubricants, 249; Black Moly lubricants, 249
- Miller, L., on Engineering Dimensional Metrology (book), 360
- Milling machines (trade publication), 656
- Air supported table of, 346
- Copy, Firma Curd Nube (Soag Machine Tools Ltd.), 714
- Copy, Kampf (Embassy Machine & Tool Co. Ltd.), 307
- Dynamic tests on, 730
- (Strojimport and Strojexport), 412
- Universal (Selson Machine Tool Co. and G. Vernier), 143
- Vibration, and vibration mills, by H. E. Rose and R. M. E. Sullivan (review), 22
- Mills, B., on machine tool vibration, 504
- Mills, H. R., on *Technical Training in Underdeveloped Areas*, 293
- Mills, J., on timing unit for measuring discharge rate, 657-658
- Mills, James, Ltd., railway point heaters, 797
- Mills, J. H., on apprentices, 787
- Mills, rolling. See *Rolling mills*
- Vibration, and vibration milling, by H. E. Rose and R. M. E. Sullivan (review), 22
- Milner, J. K., on five bearing cranks in British cars, 570
- Mines, coal. See *Colliery*
- Economics, by S. J. Truscott (book), 624
- Rock pressure in, by E. De St. Q. Isaacson (book), 656
- See also *Coal; Colliery; Mining; Ores*
- Minerals for chemical and allied industries, by S. J. Johnstone and S. G. Johnstone (book), 156
- Oils. See *Oils*
- Recovery, 743
- Treatment, automated control at Parc Mine, 742-743
- Wool insulation (Stillite Products Ltd.), 764
- See also *Coal; Mining; Ore*
- Mini-Cooper motor car (BMC), 836
- Mini motor car, 500,000th (BMC), 836
- Miniaturized Office Machines Ltd., Parler Korder pocket dictating machine, 772
- Miniaturization, by H. D. Gilbert (review), 122
- Minibuzzer electric buzzer (V. & E. Friedland Ltd.), 700
- Mining, alluvial, for tin and gold, by H. L. H. Harrison (book), 324
- Mining & Chemical Products Ltd., Swift metal spraying gun, 475
- Mining & Compressor Engineering Co. Ltd., FMA air compressors, 776
- and Metallurgical Congress, Commonwealth, 802
- Research Establishment, open days, 493
- Minispa soup vending machine, Ditchburn, 256
- Ministry of. See *Education; Health, etc.*
- Minitrack Stations, 221
- Minnesota Mining & Manufacturing Co. Ltd., flame resistant duct sealing tape, 453
- Miracon sectional conveyor (Stephens Belting Co. Ltd.), 463
- Miraflores Dam contract to Taylor Woodrow (Overseas) Ltd., 503
- Mirrlees National Ltd., use of Churchill gear shaving machine, 109
- Missile guidance, by J. Clemow (book), 656
- Guided, Blue Water, future of (English Electric), 161
- Skybolt, cancellation of, 829
- and spacecraft, structural design of, by L. H. Abraham (review), 250
- SS-11, 631
- Mitchell Committee on machine tools, 97
- Mitchell Engineering Ltd., Belfast refinery for BP Co., 73; Komati power station, 268; Stubbe-Metalastik Serpentix flexible conveyor, 331; mechanical handling plant for Spencer Steel Works, 532
- Mitchell Hydraulics Ltd., servo control valve (trade publication), 856
- Mitchell, L. A. Ltd., continuous belt weighing machine, 239; automatic plant for drying insulating powder, 338
- Mitchell, Sir Stuart, on steam traction and British Railways, 257; on prospects for railway workshops, 397
- Mixers, concrete (trade publication), 88
- Z-blade, Guittard (Premier Colloid Mills Ltd.), 715
- Mixing machine, concrete, Gyramixer (Blaw Knox Ltd.), 611
- Fluid, Fluidmix (Laycock Engineering Ltd.), 745
- Unit, Airmix (Gardners of Gloucester), 735
- Spraymix (Gardners of Gloucester), 735
- MK Electric Ltd., electrical accessories (trade publication), 624
- M.L. Aviation Co. Ltd., metallic sealing washer, 600
- Mobil Oil Co. Ltd., to form joint company with Esso, Regent, Shell-Mex and BP for pipeline construction, 774; cutting oils (trade publication), 792
- Mobile Exhibitions Ltd., mobile exhibition vehicles, 12; association with Greville Wynne Ltd., 12
- Mobility, industrial, 414
- Models of concrete structures, tests of, by M. Amaratunga, 62-63
- of hydrofoil boats for test tanks, 831
- of multi-storey building for wind tunnel tests, 10
- of rivers for Tees Conservancy Commissioners, 75
- Structures, fire research using, 394
- of structures, size effects in, by E. H. Brown, 593-595
- Modern Wheel Drive Ltd., resources of, 846; associated companies, 846; Hindmarch/MWD marine reverse reduction gear, 846-848
- Modular units (Servo Consultants Ltd.), 15
- Mohawk Airlines, orders placed for four One-Eleven aircraft, 136
- Moles, Escravos Bar, cinema film on, 138
- Molybdenum disulphide solid lubricants (Molykote), 757
- Molykote Great Britain Ltd., formation of, 757; solid lubricants of molybdenum disulphide, 757
- Molyslip G lubricant, 672
- Moment distribution: rapid method of analysis for rigid-jointed structures, by E. Lightfoot (review), 22
- Mona-Hobson form grinding machine (H. M. Hobson Ltd.), 111
- Monaghan, J., on development and application of titanium, 676-678
- Monitoring, remote system for industry (EMI Electronics Ltd.), 325
- Monk, A., & Co., landscaping M5 Motorway, 107
- Monobox overhead travelling crane (J. H. Carruthers & Co. Ltd.), 261
- Monotube boiler, Sulzer, for Drakelow C power station (International Combustion Ltd.), 2-4
- Monsanto Chemicals Ltd., tests with motor car windscreens, 601
- Mont Blanc tunnel, progress on, 173
- Montgomerie Reid Engineering Co. Ltd., stillage truck, 47; record turnover, 177; D. F. Wright appointed sales director, 177; F. D. Weston appointed to board, 177; V. H. Adamson appointed managing director, 177
- Montgomery, G. W. G., on value of apprentice training, 316
- Montreal Locomotive Works, subway cars for Toronto Transit Commission, 398
- Moon, P., on Scientific Basis of Illuminating Engineering (book), 482
- Moon project (Bell Aerosystems Co.), 293
- Moonman, E., review of Introduction to Industrial Administration, 727; review of Factory Management, 727; biographical note, 728
- Moore, D. J., group apprenticeship, 243
- Moore, R. V., on atomic reactors, 696
- Moore, W. G., on skids are unexpected, 40
- Moore, W. K., review of Control of Airborne Dust, 287; biographical note, 288
- Moore's Plant Ltd., position and prospects, 549
- Moorhouse, Prof. C. E., on energy resources, 604
- Mooring ropes, nylon (British Nylon Spinners Ltd.), 217
- Morava aircraft, 425
- Morfax Ltd., dynamic test rig for car seat belts for British Standards Institution, 501
- Morgan, I. G., on basic principles of air gauging, 576

- Morgan, P., on *Plastics Progress 1961* (book), 88
- Morgan Plus Four coupé motor car, 664
- Morganite Research & Development Ltd., Metamic metal/ceramic material, 18-19
- Mornement, P. C., review of *Analysis of Statically-Indeterminate Frameworks*, 22; review of *Frame Analysis*, 22; review of *Moment Distribution: A Rapid Method of Analysis for Rigid-Jointed Structures*, 22; biographical note, 24
- Morris, B. O., Ltd., rotary wire brushes, 817
- Morris, B. P., on *Laboratory Manual for Engineering Science* (book), 656
- Morris, C. F., on side-wall hovercraft, 525; on Denny's second side-wall Hovercraft, 566
- Morris, C. J. E., on responsibility for neglect, 334-335
- Morris, Herbert, Ltd., mechanical handling (trade publication), 856
- Morris, J. N., on *Society: Problems and Methods of Study* (book), 656
- Morris 1100 motor car, details of (BMC), 194-195
- Morrison, E., on Charles Babbage and his *Calculating Machines* (book), 288
- Morrison, J., on austenitic iron in automotive, aeronautical, agricultural, civil and general engineering industries, 620; on some applications of austenitic cast irons, 814-815
- Morrison, P., on Charles Babbage and his *Calculating Machines* (book), 288
- Mortar additive, Fluol (C. T. (London) Ltd.), 621
- Moseley, David, & Sons Ltd., hose (trade publication), 324
- Moseley, F. H., on street lighting columns, 834
- Mothercat (Great Britain) Ltd., Belfast refinery for BP Co., 73
- Motion, mechanization of, by L. Harris-Berger (review), 455
- Moto Plastics Ltd., filtration plant for River Coquet, 138
- Motocone road obstruction marker cones (Central Manufacturing & Trading Co. (Dudley) Ltd.), 708
- Motor cars, accelerometer tests on, 832
- ASA Mille Coupé Bertone, fitted with Dunlop disc brakes, 740
- Austin Healey, convertible body for, 263
- Bentley, four headlights for, 468
- Bluebird, first public appearance of, 101
- Body, convertible, for Austin Healey, 263
- Body, joints caulking with Neoprene, 357
- Bond 250G 3-wheeler, road test on, 669
- Bonnet Djet, 498
- BRM, by B. Lister, 833
- Chassis frames (J. Thompson), 597
- Chevrolet Corvette, 499
- Current contrasts in design, by G. Wilkins, 466
- DAF Variomatic (van Doorne's Automobielabriek NV.), 229
- Daimler, 468
- Diesel, standard range of (BMC), 669
- Electrical equipment, by A. P. Young and L. Griffiths (book), 482
- Engine, Chrysler V8, for Jensen motor car, 468
- Engines, Ford, 263
- Engine, Ford Consul Capri, 433
- Engine, Lotus-Ford, 13
- Engine, Motorscope test equipment for (Crypton), 39
- Engine, Scopemaster test equipment for (Crypton), 39
- Engine/transmission unit, Saab, 72
- Engine. See also *Engines, petrol*
- Exports, 529
- Ferrari, 13
- Fiat, 529
- Fiat 600D, road tests on, 769
- Five bearing crank in four-cylinder, 570
- Ford Consul Capri, road test of, 263
- Ford Consul Cortina, details of, by G. Wilkins, 369
- Ford Taunus 12M, details of, by G. Wilkins, 368
- Hillman Super Minx, 13; road test of (Rootes Group), 165
- Humber Hawk, improvements to, 333
- Humber Super Snipe, improvements to, 333
- Iso Rivolta GT coupe motor car fitted with Dunlop disc brakes, 740
- Jensen, with Chrysler V8 engine, 468
- Learning to drive high-performance, 40
- Lotus, by B. Lister, 833
- Lotus Elan, 467
- MG Midget GT coupé, 39
- Mini, 500,000th (BMC), 836
- Mini-Cooper, improved performance (BMC), 836
- Morgan Plus Four coupé, 664
- Morris 1100, details of (BMC), 194-195
- Panhard, CD, production to commence soon, 133
- Panhard PL17 Tigre, road testing report, 101
- Paris Salon, new site and new models for, by G. Wilkins, 498
- Porsche Super 75, details of, 569, 664
- Production, research applied to, 670-671
- Reduction of purchase tax on, 597
- Regal, 3-wheeler (Reliant Engineering Ltd.), 601
- Rolls-Royce, four headlights for, 468
- Rover, new designs attract younger driver, 500
- Saab, UK sales of (Swedish Aircraft Co.), 169
- Saab—96, 72
- Sabre (Reliant Engineering Ltd.), 297
- Scirocco-Powell, 769
- Seat belt, Britax, 433
- Seat belts, DSIR report on, 769
- Sideslip in, by H. Darwin and C. V. Burton, 832
- Simca 1000, road test of, 39
- Skids, learning to combat, 165
- Skoda Octavia, 423
- Spitfire 4, Triumph, 499
- Studebaker Avanti, 498
- Motor cars suspension unit, Hydrolastic, 194
- Transmission research, 627
- Turbine driven, demonstration of (Chrysler International), 499
- Vauxhall Cresta, rebodied, 467
- Vauxhall Velox, rebodied, 467
- Vauxhall VX490, road test report, 133
- Volvo 122S, road test of, 333
- See also *Motor vehicles*
- Carriage, railway.—See *Railcar*
- Electric (trade publication), 56
- Air-over-frame ventilation of (GEC (US) and International General Electric), 191
- Control gear for (Belmos Co. Ltd.), 508
- (English Electric Co. Ltd.), 48
- Flameproof (English Electric Co. Ltd.), 610
- Linear, 95
- Linear, as drive for fan unit (Matthews & Yates Ltd.), 463
- Linear induction, development of, 97
- Linear induction, development of for rail traction, 731
- Recovery of slip-power from, 38
- Synchronous, brushless (AEI Ltd.), 799
- Traction, for lawn mower (Lucas), 187
- Hydraulic, Orbit gear (Danfoss A/S), 463
- Internal-combustion. See *Aircraft engine; Engine; Motor-car engine; Tractor*
- Launch. See *Boat*
- Lorries. See *Motor vehicles*
- Marine, inboard (Rootes Marine Ltd.), 836
- Outboard (Rootes Marine Ltd.), 836
- Transom drive (Rootes Marine Ltd.), 836
- Petrol. See *Engine, petrol; Boat; Motor car; Tractor*
- Shop window, Britain's, 401
- Show, 525, 528, 529
- International, 401
- Units, inboard/outboard (Kiekhaefer Corp.), 529
- Vehicles, air suspension for (trade publication), 482
- Air suspension for (AEC Ltd.), 401
- Body, aluminium sheet for building of (James Booth Aluminium Ltd.), 389
- Commercial, BMC, Dunlop Pneuride suspension for, 333
- Dump truck, Constructor (Scammell Lorries Ltd.), 578
- Exhibition, for Mobile Exhibitions Ltd. (Normanton Engineering Ltd.), 12
- Large, tilt testing of (Airtech Ltd.), 100
- Lorries, larger, for British roads, 829
- Lorry, maximum dimensions for, 829
- Mobile exhibition, for British Aluminium Co. Ltd., 404
- Parking of, by J. Brierley (book), 692
- Roadside checks on, 225
- Rover 4 x 4, 401
- and skidding, 832
- Spacemaker reach truck (Lansing Bagnall Co. Ltd.), 582-584
- Stalwart (Alvis Ltd.), 296
- Tanker, for hot paraffin wax, 367
- Tanker, with plastic tank (W. P. Butterfield (Engineers) Ltd.), 452
- Textbook for students, draughtsmen and owner-drivers, by K. Newton and W. Steeds (book), 124
- Truck, rear dump, hauler (Shawnee Poole, Ltd.), 143
- Motorscope motor car engine test equipment (Crypton), 39
- Motorways, committee on traffic signs for, final report, 705
- Costs of, 429
- Darfen Arrester Safety Barrier for (British Ropes Ltd.), 433
- Early warning system for, 705
- Hazards of, 765
- Links, Midland, routes fixed for, 232
- London/South Wales, 775
- M1, extension to, 201
- M5, landscaping of (A. Monk & Co. Ltd.), 107
- M6, trunk road to join with A34, 201
- Mott, Hay and Anderson, repairs to Tower Bridge, 357; Severn Bridge, 695. See *Correction*, 747; River Severn suspension bridge, 789
- Mould design for plastics, by R. H. Bebb (book), 220
- Moulding, fan (T. H. & J. Daniels Ltd.), 52
- Machine, Bipel (BIP Engineering Co. Ltd.), 541
- Injection (trade publication), 422
- Press, compression, Bipel, 558
- in ptf (Crane Packing Ltd.), 789
- Units (Badisch Maschinenfabrik AG), 52
- See also *Foundry*
- Moulinex vacuum cleaners (Andrews Housewares Manufacturers Ltd.), 32
- Moulton, A., new bicycle design, 598-599; rubber motor car suspension, 598; formation of Moulton Bicycles Ltd., 599; on Moulton bicycle, 706, 770
- Moulton bicycle, 598. See *LETTERS*, 635, 706, 770, 802
- Moulton Bicycles Ltd., formation of, 599
- Moulton Developments Ltd., new bicycle design, 598-599; formation of Moulton Bicycles Ltd., 599
- Mount Lyell Investments Ltd., shareholding in Metal Manufacturers Ltd. acquired by British Insulated Callender's Cables Ltd., 645
- Mountain, R. W., on power resources, 638
- Movotron animator (T. D. Animation Ltd.), 12
- Mower, lawn. See *Lawn mower*
- Mowlem, John, & Co. Ltd., contract for further development at Stevenage, 169; new factory at Zagreb for Rade-Koncar, 740
- MST, application of, 417
- Development of (Personnel Administration Ltd.), 416
- Fundamental principles of, 417
- Right time for, 417
- Muffles, pipe heating (Cooper Electroheat Ltd.), 378
- Mullard Educational Service, cinema film on gas filled diode, 649; cinema film on thyatron, 649; cinema film Ignitron, 649
- Mullard Equipment Ltd., telecommunications equipment (trade publication), 392; transmitter/receiver (trade publication), 817
- Mullard Ltd., vacuum pumping system, 270; electronic experiments (trade publication), 624; production of fast response photo-detector of submillimeter radiation, 699-700
- Mullard Research Laboratories, open days at, 95
- Mullens, H. H., on industry, 741
- Muller, E., on Hydraulic Extrusion Presses (review), 390
- Muller sheet pile driver (British Spares Corp. Ltd.), 776
- Muller 360° X-ray equipment (Research and Control Instruments Ltd.), 703
- Multiforge forging machine (David Etchells (Machinery) Ltd.), 542
- Multimeter (Taylor Electrical Instruments Ltd.), 170
- Multipac packaged boiler (John Thompson (Wilson Boilers) Ltd.), 379
- Multiplex equipment, error correcting (trade publication), 24
- Multiscoop powered scoop (E. V. Twose (Manufacturing) Ltd.), 675
- Multitone Electric Co. Ltd., miniature battery charger, 732
- Munck chain hoists (Crane & Hoist Supplies), 170
- Munck Engineering, stacker crane, 413
- Municipal services and public works exhibition, 674
- Murphy Radio, merger with Bush Radio, 845
- Murray, Sir Keith, on university status, 753
- Music, acoustics and architecture, by L. L. Beranek (book), 856
- Myton Ltd., formation of Taylor-Woodrow-Anglian Ltd., 74

N

- NAGARD Ltd., share capital acquired by Advance Components Ltd., 645; E. G. Wakeling appointed managing director, 645
- Names, Plain words on, 402
- Napier Aero Engines Ltd., use of Metamic metal/ceramic material, 19
- Napier, D., formation of D. Napier & Son Ltd., 91
- Napier, D., & Son Ltd., historical note, 91; Spraymat aircraft ice protection system, 90-92; use of austenitic iron castings, 620
- Narda Microwave Corp., signal generator, 142
- Narvada Appliances Ltd., Ansar canopy, 564
- Naslin, P., on *Progress in Control Engineering* (book), 856
- National Aeronautics and Space Administration, Syncom satellite, 97; Minitrac stations, 221; Sunflower space power system, 521
- Association of Colliery Overmen, Deputies and Shotfired, statement on strike at Maltby Main Colliery, 25
- Certificate, Ordinary, new, technical colleges to have more say on, 316
- National Coal Board, strike at Maltby Main Colliery, 25; use of Roydalox ceramic for hydrocyclone nozzles, 146; sales loss of gas making coal due to methane, 257; cable car control equipment from BICC, 277; expansion of coal byproducts, 397; setting up Coal Products Division, 397; solid fuel design data (trade publication), 514; University scholarships, 687; experimental solid fuel for cheaper steelmaking, 762; research on injecting fluid coal into blast furnaces, 788; "Housewarming Plan," 796
- College for Heating, Ventilating, Refrigeration and Fan Engineering, admission of girl student, 555
- Council for Technological Awards, annual report, 212
- Economic Development Council, economic growth rate, 65
- Engineering Laboratory, hydrostatic extrusion of metals, 191; air bearings for machine tools, 253; single-flank gear tester, 490; instrument for quick measurement of grain size, 626; flow measurement in fan testing, 626; survey on heat exchangers, 659; special purpose computer, 844
- Federation of Building Trades Operatives, shorter apprenticeships confirmed, 211
- Incomes Commission, proposal for, 437
- Industrial Fuel Efficiency Service, service to industry, 493
- Institute of Industrial Psychology, Vernon Prize awarded to Dr. H. Kay, 89; *Occupational Psychology*, 280, 316
- Joint Advisory Council, meeting with Minister of Labour, 242; school leaver statistics, 242
- Lending Library for Science and Technology, opened by Lord Hailsham, 597
- Physical Laboratory, circulating water channel for ship research, 290
- Productivity Year, 329, 661; to start in November, 135; lectures, 448; togetherness and training in, 722
- Research Council of Canada, perforated breakwater, 775
- National Research Development Corp., prototype automatic laundering machine, 100; development of Perbury continuously variable ratio gear, 223
- National Smelting Co. Ltd., use of Pentaphane plastic tank lining, 589
- National Steel Foundry (1914) Ltd., position and prospects, 549
- Union of Teachers, *University and College Entrance—the Basic Facts*, 515
- Youth Employment Council, *Work of the Youth Employment Service*, 212
- Nature conservancy, annual report, 797
- Nau, R. H., on *Alternating Currents and Network Analysis* (book), 184
- Navigation of high speed power boats, 227
- Navy, Royal. See *Royal Navy*
- Naylor Bros. (Clayware) Ltd., push-home joint, 557
- Naylor, H., on *Some Physical Properties of Hydraulic Fluids*, 459-460
- NCK-Rapier Ltd., NCK-RapieR 555 truck mounted Sprawler crane, 641
- Neale, F. J., film on work sampling, 686
- Neave, D. P. C., appointed chairman of Wolverhampton Metal Co. Ltd., 145
- Neglect, responsibility for, 334
- Negretti & Zambra Ltd., glass thermometers (trade publication), 24
- Neill, James, & Co. (Sheffield) Ltd., Eclipse pot magnets, 580; Alcomax magnets, 580
- Neill, William, & Sons, level and temperature indicators for Petrofina oil facility at Wearside, 809
- Neldco Processes Ltd., diesel electric locomotives (trade publication), 624
- Nelson High Power Laboratories, terminal boxes for (Lancashire Dynamo & Crypto Ltd.), 589
- NEOP air powered press (Arnott & Harrison (Toolmakers) Ltd.), 810
- Neoprene to caulk car body joints, 357
- Coating, Limpetite, for power station condenser, 757
- (Du Pont Co. (UK)), 147
- Roadside markers (Bank Bridge Rubber Co. Ltd.), 147
- Synthetic rubber, (Du Pont Co. (UK) Ltd.), 557
- Nepal, multiple-purpose river basin development: water resources development in (UN Survey), 266
- Nesag-Spraytron electrostatic paint spraying equipment (Electrostat Ltd.), 206
- Net, safety, for Midway Bridge (London Spinning Co.), 203
- Netherlands Engineering Consultants, Escravos Bar Moles, 138
- Nuclear Reactor Centre, use of overhead crane on circular track, 800
- See also *Royal Netherlands Navy*
- Netherton, W. R., suggestion for sealing tantalum capacitors, 649
- Nettleton, T., research on transmission systems, 627
- Network analysis and alternating currents, by R. H. Nau (book), 184
- New Insulation Co. Ltd., formation of, 49
- New Look light beam units (Photronic Controls Ltd.), 48
- New Metals & Chemicals Ltd., Ferroglass ferro-magnetic glass, 626
- New Orbits Group, *Adult Education in a Free Society*, 280
- New Zealand, cable link with Fiji (Standard Telephones & Cables Ltd.), 772
- Post Office, COMPAC cable system, 772
- Wairakei geothermal power station, 663
- Newall Engineering Co. Ltd., contracts from Stankolimport, 336
- Newall Group Sales Ltd., contract from Bulgarian Trade Mission, 44
- Newalls Insulation Co. Ltd., insulation at Spencer Steel Works, 652; Newtherm calcium silicate insulation, 652; 85 per cent Magnesia insulation, 652
- Newbold & Bulford Ltd., projector, 342
- Newman Fluidal valve (Newman Hender & Co. Ltd.), 132
- Newman Hender & Co. Ltd., licence from Bendix Corp., 132; Newman Fluidal Valve, 132; position and prospects, 177; profits, 177
- Newman, N. P., on Newman Hender & Co. Ltd., 177
- Newport By-Pass, contracts for, 136
- Newtherm calcium silicate insulation (Newalls Insulation Co. Ltd.), 652
- Newton, Chambers & Co. Ltd., proposal to acquire Kent Floor Machine Co. Ltd., 241; fabrication work for Humphreys & Glasgow Ltd., 572
- Newton, K., on *Motor Vehicle: Textbook for Students, Draughtsmen and Owner-Drivers* (book), 124
- Ni-Resist for low temperature use, by A. J. Rickard, 620
- Nicholas, A. J., on South Wales Switchgear Ltd., 381
- Nickel plating, three layer, Tri-Ni (Electro Chemical Engineering Co. Ltd.), 853
- Nicol, R. D., & Co. Ltd., Kold-Lube cold working lubricant, 83
- Nicoll, J. H., on data processing in power industries, 818-820
- Nife Batteries Ltd., emergency starter unit, 856
- Nigeria, Warri dockyard opened, 305
- Nigerian Government, Escravos Bar Moles, 138; agreement with BP-Shell Petroleum Refining Co. for oil refinery at Alesa-Eleme, 173
- Nilsson, T., Portage Mountain Dam, 641
- Nimbus shaft turbine engine (Bristol-Siddeley), 201
- Nimrod proton-synchrotron, nearing completion, 248
- Niobium-zirconium alloy, superconducting solenoid from (C. A. Parsons & Co. Ltd.), 659
- Production (AEI Ltd.), 31
- Niplas cable, heat resistant (Greengate & Irwell Rubber Co. Ltd.), 452
- Nock, O. S., on *Fifty Years of Railway Signalling* (book), 656
- Noise and acoustics, by W. Furrer (review), 790
- Measurement (Associated Engineering Ltd.), 671
- Courses on techniques of, 280
- of supersonic transport aircraft, 363
- Survey, London, 158
- Tool, measurement of, 609
- Nomag non-magnetic cast iron (Ferranti Ltd.), 114
- Nomogram for pressure vessel nozzles, 66-67. See *LETTER*, 496
- Nomographic computation of complicated and highly saturated magnetic circuits, by O. Benedikt (book), 156
- Nomography and empirical equations, by D. S. Davis (book), 856

- Non-destructive testing, principles and practice of, by J. H. Lambie (book), 817
- Testing, progress in, by E. G. Stanford and J. H. Fearon (review), 322
 - Testing, symposium on standardization of, 6
- Non-metallic materials, 276
- Nonequilibrium thermodynamics: phenomenological theory of irreversible processes in fluid systems, by D. D. Fitts (book), 24
- Noralbryte chemical dip for smoothing aluminium (Walterisation Co. Ltd.), 589
- Noralock aluminium planks (Alcan Industries Ltd.), 19
- Norcross Ltd., position and prospects, 509
- Normanton Engineering Ltd., exhibition vehicles for Mobile Exhibitions Ltd., 12
- Norris, Henty & Gardners Ltd., name changed to Gardner Engines (Sales) Ltd., 241
- Norsaga racing yacht, 217
- North Atlantic Treaty Organisation, contract to BWRA to investigate projection welding, 31
- North British Steel Foundry Ltd., use of casting specifications, 557
- Sea, seismic survey of, 573
 - Thames Gas Board, use of anti-corrosion fluids, 346; use of gasket clamps, 735
- Northern Star liner (Shaw Savill), 34
- Northey Rotary Compressors Ltd., compressor/vacuum pump, 777
- Norway, "Gateway to Britain Week," 404
- Modifications to Halden atomic reactor, 222
 - Notches, cracking at, in transverse shear, by J. C. Walter, 326-327
- Nozzle for hydrocyclones from Roydalox alumina ceramic, 146
- Pressure vessels, nomogram for, 66-67. See LETTER, 496
 - Spray, self-clearing (GEC (Engineering) Ltd.), 735
- NSU/Wankel rotary engine fitted to boats, 567
- NTSC transmitting system, 1
- Nu-Lip glandless sealing rings, Pioneer, 307
- Nuclear battle: graphite versus water, by J. H. M. Sykes, 696-697
- Energy, catalogue of courses on, 384
 - Education in, 448
- Nuclear Energy in Britain, 225
- Nuclear power and district heating plant
- Agesta, test operation in Stockholm, 626
 - Development, boiling water atomic reactor power project with USAEC, 31
- Nuclear Power Group, Oldbury atomic power station, 138; Dungeness atomic power station, 233; Latina atomic power station, 793
- Station. See Atomic power station
 - Systems, space demands, by B. C. Lindley, 457-458
 - See also Power; Atomic
- Nuts, self-locking, Centrelock (Whitehouse Industries Ltd.), 208
- Self-locking, Griplock (Whitehouse Industries Ltd.), 208
 - Self-locking, Toplock (Whitehouse Industries Ltd.), 208
- Nylatron GS material, nylon (Polypenco Ltd.), 557
- Nylon coating on control pulleys, 82
- Compound, glass-filled, Maranyl A190 (ICI Ltd.), 621
 - Maranyl A190, demonstration caravan (ICI Ltd.), 637
 - Material, Nylatron GS (Polypenco Ltd.), 557
 - Mooring ropes (British Nylon Spinners Ltd.), 217
 - Products (Trade publication), 817
- ## O
- OCCUPATIONAL psychology (National Institute of Industrial Psychology publication), 280, 316
- Ocean waves. See Waves
- Octavia motor car, Skoda, 423
- Odell, J., formation of Lesney Products & Co. Ltd., 718
- OECD. See Organization for Economic Cooperation and Development
- Office, home, Heco Mini-Office (Heco Industries Ltd.), 628
- Miniature, Badenia, 628
 - Shops and Railway Premises Bill, 701
 - Unit, home, Perfecta (Heco Industries Ltd.), 628
- Offshore Power Boat Race, *Daily Express*, 329
- Ogden, O., on metallurgy and application of non-magnetic irons in electrical industry, 621
- Ogorkiewicz, R. M., on impasse in tank design, 630-631
- Ohio Drilling Co., use of stainless steel water well filters, 51
- Oil, bulk handling, 301
- Change intervals under review, 748
 - Cutting (trade publication), 792
 - Requirements in, 805
 - Soluble, high performance, by R. F. Middleton, 805
 - Theory of, 805
 - Engine lubricating, comparison rates of deterioration, 748
 - See Engine, diesel
 - Facilities, new, at Wearside, 809
 - Film studies, Leeds University, 223
 - Firing for steam boilers (trade publication), 656
 - Fuel, increase in use of, 701
 - Hydraulic, Dasco (D. A. Stuart Oil Co. (Great Britain) Ltd.), 147
 - Hydraulics, course on, 352
 - Macron, multi-purpose machine tool (Shellmex & BP Ltd.), 147
 - Mineral, viscosity requirements of for hydraulic systems, by T. L. Jackson, 459-460
- Oil-Operated Gears & Transmissions Ltd., Hindmarch/MWD marine reverse reduction gear, 846-848
- Oil refinery. See Refinery
- Selection of, 459
 - Storage installation at Purfleet opened, 605
 - Tanks. See Tanks
 - Tankers. See Tankers
 - See also Lubrication; Petroleum
- Oilfield, Zeltan, 695
- Old people, designing for (HMSO publication), 660
- Grouped flatlets for (HMSO publication), 660
- Oldbury atomic power station, tidal reservoir for, 138; 305
- Oldfield, C., address to members of British Association of Machine Tool Merchants, 701
- Oldham, J., on Common Market, 57; on British workmanship, 57; on Oldham & Sons Ltd., 57, 349
- Oldham & Sons Ltd., annual staff outing, 57; position and prospects, 349; diversification of activities, 349; Little Giant attachments for mechanical handling vehicles, 349
- Olding, Jack, & Co. Ltd., Michigan tractor shovels, 675
- Olympus turbojet engine (Bristol Siddeley Engines Ltd.), 245-247
- Omic Ltd., Paliton Bantam pallet truck, 642
- Omni (GB) Ltd., injection moulding machine (trade publication), 422
- Omniflasher beacon flasher (Stone-Chance Ltd.), 714
- Onan Corp., mobile alternator, 406
- Onan generating plant (G. M. Power Plant Co. Ltd.), 271
- Onan & Sons, generating plants, 271
- One-Eleven aircraft for Central African Airways, 469
- Aircraft for Kuwait Airways, 201
 - Aircraft on order, 136
- Open-hearth furnace. See Furnace
- Operational research, 493. See LETTER, 635
- Guide to, by W. E. Duckworth (review), 250
- Opportunities, Directory of, 753
- Oprim egg boiler (Improved Appliances & General Engineering Co. Ltd.), 128
- Optical gauging system (Associated Engineering Ltd.), 671
- Gratings and machine tools, cinema film, 374
 - Maser amplifier (Bell), 290
- Optical Measuring Tools Ltd., electro-pneumatic gauge control, 336; roundness measuring machine with air bearings, 348
- Probe for medical research (Armour Research Foundation), 30
 - Range finders for tanks, 631
 - Tooling for precise manufacture and alignment, by P. Kissam (book), 624
- Optimization techniques: with applications to aerospace systems, by G. Leitmann (book), 856
- Orange Free State, gold survey, 713
- Orbit gear hydraulic motor (Danfoss A/S), 463
- Orbital flight, design guide to, by J. Jenson, G. Townsend, J. Kark and D. Kraft (review), 286
- Orchard, D. F., on Concrete Technology (book), 24; (review), 550
- Ord, H., on Engineering Drawing for G1 and G2 Courses (book), 692
- Ordinary National Certificate, new, technical colleges to have more say on, 316
- Ordman, N. N. B., review of Concrete Properties and Manufacture, 391; biographical note, 392
- Ore crushing, 743
- Grinding, 743
 - Iron (trade publication), 156
- Organization, Automation and Society, by R. A. Brady (review), 480
- for Economic Cooperation and Development, financial support for report on education and training of professional engineers, 25; rational use of scientific resources, 159; report on increasing consumption of electricity in Europe, 225,
 - Man, Plain Words on, 434. See LETTER 496
 - and management, industrial, by L. L. Bethel, F. A. Atwater, G. H. E. Smith and H. A. Stackman (review), 759
- Orr, J., on joint council of engineering bodies, 515
- Orr, J. G., on recognition of professional qualifications, 765
- Osaka Machine Tool Fair, 673, 733
- Osaka-Tokyo railway, 225
- Osborne, H. F., build-up of Vokes Group Ltd., 313
- Oscillator, audio sweep (trade publication), 856
- Test (Lede Ltd.), 142
- Oscillators, 683
- Oscilloscope, measuring (Marconi Instruments Ltd.), 744
- (Tequipment Ltd.), 47, 79
- Osili, I., on soil-cement stabilization, 746
- Oswalds & Ridgway Ltd., piston pumps (trade publication), 156
- Oswell, Lt.-Cdr., H. design of Aquamobile, 600
- Other Fellow, *The*, cinema film, 769
- Ouse, River, pipe pushing under, 473
- Oven, bottle sealing, Darex (W. R. Grace Ltd.), 53
- Propane fired, for tin printing (Controlled Heat & Air Ltd.), 108
 - Stoving, installation at Mather & Platt Ltd., 268
 - Vacuum (Barlow-Whitney Ltd.), 541
- Ovenette, Dico (R. S. Stokvis & Sons Ltd.), 128
- Overseas Marketing, 336
- Overseas Tele-Communications Commission (Australia), COMPAC cable system, 772
- Overtime, 167
- Ovsyankin, Prof. V. I., on precast concrete building, 444
- Oxidation, carbon, in weld pool during metal-arc welding of plain carbon steels, by A. Apold (book), 624
- Oxide magnetic materials, by K. J. Standley (review), 360
- Oxygen, liquid, aluminium tanks for (BOC Ltd.), 83
- Plant for Colvilles Group (BOC Ltd.), 338
 - Steelmaking furnace. See Furnace
- ## P
- P1127 VTOL aircraft, Hawker, 259
- Package Heater Co. Ltd., Pak-a-Way air heater 112
- Packaging equipment, wire, Draw-Pak (Reliance Gear Co. Ltd.), 306
- Material, shrinkable, 311
- Packing compound, Plastiloy (Grant & West Ltd.), 789
- Packset communication equipment (Ultra Electronics Ltd.), 476
- Paint, Camrex, 479
- Drying by gas fired infra-red radiation, by F. J. Brewer, 780
 - Gun mover, electrostatic (Automatic Equipment Ltd.), 239
 - Polyurethane, Cellon-Docker, 557
 - Primer. See Primer
 - Radiation sensitive (UKAEA), 730
 - Spray equipment, Kismatic (Kismet Ltd.), 479
 - Spraying equipment, electrostatic, Nesag-Spraytron (Electrostat Ltd.), 206
 - Stoving (International Paints Ltd.), 319
 - Zinc-rich (Allweather Paints Ltd.), 51
 - Zinc-rich (Drynamels Ltd.), 51
- Painter Bros. of Hereford, television aerial tower for ITA at Cropton, 773
- Painter Bros. Ltd., towers for overhead electric line crossing of River Forth, 605. See Correction, 713
- Painting, industrial; the engineered approach, by C. R. Martinson and C. W. Sisiler (review), 421
- Spray, airless unit, Titan (Alfred Bullows & Sons Ltd.), 841
 - Plant Binks-Bullows Compact (Alfred Bullows & Sons Ltd.), 112
- Pak-a-Way air heaters (Package Heater Co. Ltd.), 112
- Pakistan, cement plant for, 75
- Eastern Railways, order placed with Metropolitan-Cammell Carriage & Wagon Co. Ltd., 772
 - Peshawar University, 210
 - Paliton Bantam pallet truck (Omic Ltd.), 642
 - Pallet truck, Coolie (Polymathic Engineering Co. Ltd.), 342
 - Paliton Bantam, 642
- Palm, Y., on optimum positioning of pylons by computer, 698
- Palmer Aero Product Ltd., to be integrated with Microcell Ltd., 613; filters for Massey-Ferguson, 673
- Palmers Hebburn dry dock, use of rotating fenders, 462
- Shipyard, Vickers-Armstrongs new dry dock, 442-443
- Palmour, H., on Mechanical Properties of Engineering Ceramics (book), 184
- Panel, ceiling, translucent, Series 60 (Isora Illuminating Ceilings Ltd.), 173
- Control, for sinter plant (Contropanel Ltd.), 176
 - Steel partition (Aerograph-DeVilbiss Co. Ltd.), 579
- Pangard thermostatic cooker control, 860
- Panhard CD motor car, production to commence soon, 133
- Panhard PL17 Tigre motor car, road test report, 101
- Pannell, J. P. M., on Marchwood Power Station, 605
- Paper industry, plastic coatings in, 453
- Making machine. Fourdrinier, 343; Inverform modification to, 344
 - Machinery, innovations in, by Dr. A. B. Truman, 343-344
 - Manufacture, automatic control in, by L. A. Kirk, 438-439
 - (Albert E. Reed & Co. Ltd.), 756
 - Production, steam and power for, 842-843
 - Research (Albert E. Reed & Co. Ltd.), 756
- Papoulis, A., on Fourier Integral and Its Applications (book), 552
- Pappas, F. G., on Practical Work Standards (book), 482
- Par-A-Matic air tools (Broom & Wade Ltd.), 611
- Paraboloid roof for Smithfield Poultry Market, 640
- Paramatic Development Ltd., digital follower for monitoring machining process, 67
- Paramount edge-punched cards, 545
- Parc Mine, automated control of mineral treatment at, 742-743
- Paris Salon, new site and new models for, by G. Wilkins, 498
- Park Gate Iron & Steel Co. Ltd., development projects, 232
- Park Royal Vehicles Ltd., bodies for Routemaster buses, 385
- Parker, Elizabeth, Safety Cup, awarded to Stuart Street Training Centre, 211
- Parker, Frederick, Ltd., multi-bin feed unit, 271
- Parker, R. J., on fatigue data for titanium alloys. See Correction, 64
- Parker, Dr. T. W., on building industry, 329
- Parkin, F. M. (Sheffield) Ltd., coreless induction melting plant installed (GWB Furnaces Ltd.), 374
- Parking of motor vehicles, by J. Brierley (book), 692
- Parkinson Cowan Industrial Products Ltd., gas fired infra-red radiation units, 780
- Parkinson Cowan International Ltd., orders from British Trade Fair at Bucharest, 772
- Parkinson-Cowan Prince cooker, 596
- Parkinson, Sir Lindsay, & Co. Ltd., tidal reservoir for Oldbury atomic power station, 138
- Parkray 66 closed stove with back boiler (Radiation Group), 796
- Parler Korder pocket dictating machine (Miniaturized Office Machines Ltd.), 772
- Parliament, Plain Words on, 464
- Parmiter, Hope & Sugden Ltd., position and prospects, 145
- Parnell, R. W., on Behaviour and Physique, 264
- Parolle Electrical Plant Co. Ltd., insulation at Spencer Steelworks, 652
- Parsons, C. A., & Co. Ltd., flow diagram for magnetoplasmadynamic power generation, 254; generating plant for Fawley power station, 404; blast furnace blowers for Spencer Steel Works, 534; superconducting solenoid made from niobium/zirconium alloy, 659
- Parsons Marine Turbine Co. Ltd., turbine for Northern Star liner, 34
- Parsons Powergas Ltd., Belfast refinery for BP Co., 73
- Parsons, Ralph M., & Co., joint venture with Parson-Gas Corp., 349
- Pascoe, Sir John, on South Wales Switchgear, Ltd., 381
- Pask, C., on teaching machines, 723; chairman of Cybernetics Development Ltd., 723
- Pasley-Tyler, Cmdr. H., appointed to board of Elliott-Automation Ltd., 717
- Pattern of research in British industry, conference on, 77
- Paul, Derek, Co., Polispin powered polisher, 828
- Paul, R. & W., Ltd., malt and barley silo (Holst & Co. Ltd.), 713
- Paver finisher (Blaw Knox Ltd.), 674
- Paxton, H. W., on Alloy Elements in Steel (book), 220
- Pay policy, 57
- Rises, 57
 - and social distinctions, 57
 - for supervisors, a method of fairer, by J. J. Henderson, 437
- Payment, equitable, by Dr. E. Jaques (book), 754
- Payne Products International Ltd., Lapmaster lapping machine, 271
- Payter, E. C., & Co. Ltd., new rolling mill for James Booth Aluminium Ltd., 132
- PB aligning press (Peter Brasshouse Ltd.), 441
- PD8 chemical preparation (Albright & Wilson Ltd.), 132
- Peace River, tenders invited for Portage Mountain Dam, 641
- Pearson, J. D., award of Doctorate of Engineering from Brunswick University, 851
- Pearson-Page-Tewsbury Co. Ltd., use of Trisec process, 320
- Pearson & Round Ltd., production problems, 17
- Peck, R. F. J., review of Vibration Mills and Vibration Milling, 22; biographical note, 24
- Pedal control (J. Broughton & Son (Engineers) Ltd.), 411
- Peddinghaus, Paul Ferd., flame-hardening equipment, 470
- Peebles, Bruce, Ltd., Cockenzie power station, 713
- Peingeon Ideal tower cranes, 138
- Penetrometer, concrete testing (Clockhouse Engineering Ltd.), 377
- Pocket, scil testing (Clockhouse Engineering Ltd.), 377
- Penfield, P., on Varactor Applications (book), 514
- Penn, D. W., development of strip shearing machine, 57
- Penn, W. S., on Pvc Technology (book), 692
- Penstock, Ffestiniog, bent to fit, 641
- Pentaphane plastic tank lining (British Cellophane Ltd.), 589
- Peppers of Woking Ltd., cable glands (trade publication), 252
- Perac River Hydro-Electric Power Co. Ltd., Malim Nawar power station, 232
- Perbury Engineering Ltd., continuously variable ratio gear, 223
- Perfecta home office unit (Heco Industries Ltd.), 628
- Perkins Dyers & Cleaners Ltd., use of aluminium-clad chimney, 216
- Perkins, F., Ltd., portable pumping set trials by Durham Fire Brigade, 145; diesel engines for export, 336; expansion since joining Massey-Ferguson Group, 336; use of Loctite sealant resin, 388; diesel generators for Arctic use, 658; marine diesel engine, 745
- Perkins Group, portable pumping set, 145; Mars gas turbine water pumping set, 145; Z-drive transom drive for boats, 572
- Permal Ltd., products of, 49; position and prospects, 49; historical note 49, associated companies, 49
- Permal, S. A., position and prospects, 49
- Permal Veneers Ltd., formation of, 49
- Perman chucks and mandrels (Europa Engineering Co. Ltd.), 341
- Permanent magnet. See Magnets
- Permutit Co. Ltd., chemical pump, 306; design of effluent and sewage treatment plant, 807; water treatment plant for Reed Paper Group's new extension, 842
- Perowne, L. E. C. M., on contribution of operational research, 635
- Perquists, 168
- Perry, C. C., on Strain Gauge Primer (book), 792
- Perry, P. J. C., on White Paper on apprenticeship training, 825
- Persona of CAT's and Universities, 446
- Personnel Administration Ltd., development of MST, 416
- Selection, 193. See LETTER, 264
- Perspective Engineering Ltd., formation of, 313; aims of, 313
- Perspex submarine, Aquamobile (Submarine Products Ltd.), 600
- Peshawar University, Pakistan, 210
- Peterborough Technical College, practical machine work for girl students, 619
- Peters, Prof. J., on stability chart of machine tools, 505
- Petivac vacuum cleaner (Andrews Housewares Manufacturers Ltd.), 32
- Petrofina (Great Britain), Ltd., new oil facilities at Wearside, 809
- Petrol motor. See Aircraft engine; Boat; Engine; Motor car; Tractor
- Petroleum, austenitic cast iron resistance to, 815
- and Explosives Act, 629
 - Gas from (ICI Ltd.), 269

- Petroleum, industries (trade publication), 184
 — Austenitic iron in, by G. L. Swales, 620
 — See also *Oil; Refinery*
 Peters Ltd., multi-purpose diesel engines, 110
 Pfeil patrol boat for Federal German Navy (Vosper Ltd.), 637
 Phase attachment, variable (Servomex Controls Ltd.), 171
 — Integral methods, introduction to, by J. Heading (book), 392
 Philips Electrical Industries Ltd., formation of Intertherm Ltd., 17
 Philips Electrical Ltd., table lamps, 428
 Philips of Holland, centrifugal separator, 240
 Phillips, A. L., on Welding Handbook (book), 456
 Phillips Bros. & Ellis Ltd., marking machine for plastics, 643
 Phillips, J., build up of Vokes Group Ltd., 313
 Photo and thermoelectric effects in semiconductors, by J. Tauc (book), 124
 Photo-detectors, sub-millimeter radiation, fast response, production of (Mullard Ltd.) 699-700
 Photo-electric control, Eaglet (Elcontrol Ltd.), 341
 — Light source (Elcontrol Ltd.), 111
 Photographic observation of engine deposits (Shell), 160
 — Shutter. See *Shutter*
 Photographing rapid changes (Bell), 659
 Photography, high speed, conference on, 659
 — Speed, congress of, 166
 Photomechanical reproduction (Pictograph Ltd.), 175
 Photomicrography, colour, with a 35 mm camera, by C. H. S. Tupholm (review), 590
 Photomultiplier (EMI Electronics Ltd.), 732
 — Tube (AEI Ltd.), 206
 — (Allen B. DuMont Laboratories), 393
 Photronic Controls Ltd., New Look light beam units, 48
 Phuracite smokeless fuels, 397
 Physical chemistry and metallurgical processes, by A. K. Biswas and G. R. Bashforth (book), 184
 — Metallurgy for engineers, by A. G. Guy (book), 324
 Physics, cement, for civil engineers, by W. Czernin (book), 656
 — and chemistry, shock waves in, by J. N. Bradley (book), 220
 — of failure in electronics, symposium on, 192
 — Foundry, drawing and calculations, by J. E. Garside (book), 514
 — Instrumentation in evolution of, by Dr. F. A. White, 553
 — Modern, logic of, by P. W. Bridgman, 754
 — Shock waves in, by J. N. Bradley (review), 655-656
 Physique, behaviour and, by R. W. Parnell, 264
 Phytotron plant laboratory opened in Australia, 395
 P.I. Castings (Altrincham) Ltd., new alloys as investment castings, 653
 Picard, Henri, and Frere, Ltd., Sormel 62 work bench, 207
 Pickling and degreasing solutions (Walterisation Co. Ltd.), 217
 Pictograph Ltd., photomechanical reproduction, 175
 Piecework abandoned: effect of wage incentive systems on managerial authority, by W. Brown (review), 655
 Piezo-resistance effect, 522
 Pile driver, sheet, Muller (British Spares Corp. Ltd.), 776
 — Loading tests, 100 ton load cell for, by T. Whitaker and R. W. Cooke, 683-695
 Piling & Construction Ltd., foundations for 17 Jackblock built flats, 711
 — Sheet, and deep foundations, introduction to, by D. H. Lee (review), 182
 — Steel, corrosion study on, 453
 Pilkington Committee, report on television, 1; report on broadcasting, 1
 Pilkington, L. H. A., on manufacture of flat glass at Pilkingtons, 308-310
 Pilling, W. H. C., on Calder Hall type atomic reactor, 696
 Pingon tower cranes (George Cohen Sons & Co. Ltd.), 43, 171
 Pinhole detector, Elco (East Lancashire Chemical Co. Ltd.), 171
 Pioneer Nu-Lip glandless sealing rings, 307
 Pipe, aluminium, made by helical welding process, 409
 — Cleaning "ferret" with magnetic transmitter (Water Research Association), 305
 — Couplings, flareless, 50
 — Exhaust, ceramic coated (Rustless Iron Co.), 115
 — Fittings, stainless (trade publication), 482
 — Joints. See *Joints*
 — Plastic, flanges for (Durapipe & Fittings Ltd.), 389
 — Protection, Pitchkote tarred tape for (Metal & Pipeline Endurance Ltd.), 389
 — Pushing under River Ouse, 473
 — System, Seer-Thrust, 473
 — Saran-lined (J. & T. Lawrie Ltd.), 853
 — Steel, for Fawley to London pipeline (Stewarts & Lloyds Ltd.), 202
 — Vitrified clay (trade publication), 856
 — Welded steel (trade publication), 324
 — See also *Tube*
 Pipeline, Esso, under Southampton Water, 202
 — Gas, specifications for, 321
 Pipelines Act (1962), 774
 — Royal Assent for, 161
 Pipeweld Ltd., Purfleet oil storage installation, 605
 Pipework for refinery plastic coated, 82
 Pirani, M., on Principles of Vacuum Engineering (review), 86
 Pirelli General Cable Works Ltd., cable for CEBG, 673
 Piston performance (Associated Engineering Ltd.), 671
 — Ring carriers of austenitic cast iron, 814
 — Pressure measurements (Associated Engineering Ltd.), 670
 Pitan-Corroless steel primer paint (Allweather Paints Ltd.), 853
 Pitchford, J. H., presidential address to Institution of Mechanical Engineers, 565; on Sir Harry Ricardo, 565; on Ricardo & Co., Engineers (1927) Ltd., 845
 Pitchkote tarred tape for pipe protection (Metal & Pipeline Endurance Ltd.), 389
 Pitt-Scott (Johnson type) winches for Palmers Hebburn dry dock (Laurence, Scott & Electromotors Ltd.), 747
 Pittman, Dr. F. K., on water moderated atomic reactors, 696
 Plane, power (Arcoy), 396
 Planer, G. V., Ltd., use of Metamic metal/ceramic material, 18; controlling rate-meter, 744; remote cooling unit, 840
 Planet Corp. Inc., working agreement with Brown Lennox & Co., Ltd., 109
 Planing machine, openside (Scottish Machine Tool Corp. Ltd.), 240
 Plank, aluminium, Noralock (Alcan Industries Ltd.), 19
 Plank, R., on Handbook of Refrigeration Technique (review), 55
 Plant growth, environmental control of, conference on, 395
 — Laboratory, Phytotron, opened in Australia, 394
 — Layout and materials handling, course on, 315
 Plasma, caesium, Stanford University, 256
 — Microwave propagation through (GEC Ltd.), 159
 — Spraying equipment (Associated Engineering Ltd.), 670
 Plastic barrel (Andrews Bros. Ltd.), 147
 — Coated articles, comments on, 82
 — Pipework for refinery, 82
 — Plugs for ball valves, 82
 — Coating for car assembly trolley, 82
 — for concrete bridge (E. Earnshaw & Co. Ltd.), 75
 — in paper industry, 453
 Plastic Coatings Ltd., plastic coated articles, 82; plastic coatings for the paper industry, 453
 — Exciter covers (J. J. Harvey & Pressurecast Ltd.), 147
 — Flange shields (IMPA Ltd.), 367
 — Geodesic building, 339
 — Machine guards (Short Bros. & Harland Ltd.), 51
 — Tank for road tanker, 452
 — Lining, Pentaphane (British Cellophane Ltd.), 589
 Plasticity for mechanical engineers, by W. Johnson and P. B. Mellor (book), 88; (review), 758
 Plastics, Centenary of, 434
 — Congress, 41
 — Fabricating to close tolerances, 248
 — Glass, reinforced, building with, by C. Hayes, 339-340
 — Institute, Centenary of Plastics, 434
 — Marking machine for (Phillips Bros. & Ellis Ltd.), 643
 — Mould design, by R. H. Bebb (book), 220
 — Progress, 1961, by P. Morgan (book), 88
 Plastiloy packing compound (Grant & West Ltd.), 789
 Plastisol seals (Silvertown Rubber Co. Ltd.), 673
 Plate and beam, combined, manual of properties of (US Dept. of Commerce) (book), 156
 — Handling equipment, Collocator, 237
 — Steel, lifting equipment, Vac-U-Lift, 577
 — Tube, welding tubes to, conference on, 197
 Platens, typewriter, of aluminium tubing (Elm Engineering Ltd.), 249
 Platform, floating, instrument, FLIP, for under-water research, 289
 Plating developments (trade publication), 422
 — Process, Kanigen (Fescol Ltd.), 479
 — See also *Electroplating*
 Platt, J. W., on issues in management training, 447
 Platt, K. H., on "chartered engineer," 461; as secretary of Engineering Institutions Joint Council, 493; on recognition of professional qualifications, 765
 Plenty & Sons Ltd., pumps for blending (trade publication), 288
 Plessey Co. Ltd., cabinets, 15; formation of Plessey Co. (UK) Ltd., 17; formation of Plessey Group Management Ltd., 17; subsidiaries of, 17; position and prospects, 17; Earl of Kilmuir to become chairman, 781; formation of Plessey Co. (UK) Ltd., 781; formation of Plessey Group Management Ltd., 781; death of Sir Allen Clark, 781; Sir Harold A. Wernher appointed caretaker chairman, 781; position and prospects, 781; acquisition of Automatic Telephone & Electric Co. Ltd., 781; acquisition of Ericsson Telephones Ltd., 781
 Plessey Co. (UK) Ltd., formation of, 17; activities of, 17; new factory at Titchfield, 445; machine development unit, 445; formation of, 781; static inverter, 810
 Plessey Group Management Ltd., formation of, 17; activities of, 17; formation of, 781
 Plessey International Ltd., position and prospects, 17
 Pliers, pneumatic, Air Nip (Consolidated Pneumatic Tool Co. Ltd.), 78
 Plint & Partners Ltd., test rig for Perbury variable ratio gear unit, 223
 Plowman, A., review of Glass in Architecture and Decoration, 123; biographical note 124
 Plowright Bros. Ltd., goodwill sold to W. J. Jenkins & Co. Ltd., 581; name changed to Braman Investments Ltd., 581
 Plowshare Programme of USAEC, 396
 Plug gauge. See *Gauge*
 Plumb, H. H., development of low temperature ultrasonic thermometer, 730
 Plumpton, C., on Introduction to Magneto-Fluid Mechanics (review), 654
 Plurovane pump 399
 Plus Four coupé car, Morgan, 664
 Plus Gas Co. Ltd., dismantling and anti-corrosion fluids, 356
 Plus Products Ltd., neoprene for caulking car body joints, 357
 Pneumatic bag. See *Bag, air lifting*
 — Circuit analysis (trade publication), 124
 — Controls, Satchwell (Robertshaw-Fulton Controls Co. and Rheostatic Co. Ltd.), 206
 — Drill. See *Drill*
 — See also *Compressor*
 Pneuride air suspension for commercial vehicles (Dunlop Rubber Co. Ltd.), 333
 Pode, Sir Julian, on selling steel, 540; on load factor for electricity supply, 741
 Podmore-Boulton Vibro Energy Mill (W. Podmore & Sons and William Boulton Ltd.), 83
 Podmore, W., & Sons, Hi-den zircon grinding medium, 83; Podmore-Boulton Vibro Energy Mill, 83
 Poets, Plain Words on, 298
 Points, railway, heater for (James Mills Ltd.), 797
 POL collapsible fuel tank (Flight Refuelling Ltd.), 367
 Poland, floating dock for (Furness Shipbuilding Co. Ltd.), 469
 Polarization, electrochemical, study of corrosion by (National Bureau of Standards), 491
 Polarized light, production and use, by W. A. Shurcliff (book), 252
 Polarograph, Mervyn Harwell (Mervyn Instruments Ltd.), 642
 Polarography, cathode ray (trade publication), 514
 Polaroid Corp., industrial Polaroid camera, 164
 Police Acts, 225
 — Radio/telephone units for (Cossor Communications Co. Ltd.), 469
 Polisher, powered, Polispin (Derek Paul Co.), 828
 Polishing and shampooing machine (Hoover Ltd.), 32
 — Tools, Bicycle (Consolidated Pneumatic Tool Co. Ltd.), 357
 Polispin powered polisher (Derek Paul Co.), 828
 Political and Economic Planning, *Trade Unions in a Changing Society*, 661
 Pollard Ball & Roller Bearing Co. Ltd., sealed ball-bearings, 663
 Pollard, W. M., Ltd., Fairlon universal joints, 341
 Pollution, river. See *River*
 Polychromator, Polyprint (Hilger & Watts Ltd.), 492
 Polyethylene containers, fibreboard-clad (Reed Plastic Packaging Ltd.), 188-189
 — Tubing, Hi-Den (Sterling Cables Ltd.), 757
 Polymath Engineering Co. Ltd., Coolie Cub lift truck, 14; Coolie pallet truck, 342
 Polymers improved by radiation, 311
 — Insensitive to radiation, 311
 Polypenco Ltd., Nylatron GS nylon material, 557
 Polyprint polychromator (Hilger & Watts Ltd.), 492
 Polyshrink heat shrinkable pvc sleeving (Hayward Turbine Plastics Ltd.), 589
 Polysius Ltd., cement conveyor, 738
 Polyurethane foam for cavity filling (Baxenden Chemical Co. Ltd.), 479
 — Scott (Declon Foam Plastics Ltd.), 853
 — Spandofam (Baxenden Chemical Co. Ltd.), 357
 — Paint, Cellon-Docker, 557
 Polyvac spectrographic laboratory for Spartan Steel & Alloys Ltd. (Hilger & Watts Ltd.), 338
 Polyvinyl chloride cable ducting, Duct-Plast (Shawford Control Gear Co. Ltd.), 321
 — Slewing, heat shrinkable, Polyshrink (Hayward Turbine Plastics Ltd.), 589
 — Technology, by W. S. Penn (book), 692
 Ponte, Dr., on Compagnie Generale de Telegraphie Sans Fil, 781
 Pontius, P. E., on mass measurement, 292
 Pontoons, marine, fuelling (Esso), 136
 Pooley, Henry, cement plants for Pakistan and Saudi Arabia, 75
 Popov, E. P., on Dynamics of Automatic Control Systems (review), 759
 Porous surfaces, Garrard-Levering preheating process for, 844
 Porsche-Diesel tractors, 436
 Porsche, Dr. F., motor car design, 569
 Porsche Super 75 motor car, 569, 664
 Port of Bombay, improvement scheme, 136
 — Brega, prefabricated oil refinery for, 695
 — Development, Rochdale Committee report on, 429
 — and marine structures, design and construction of, by A. De F. Quinn (review), 591
 — of Spain "B" power station contracts, 73
 Portable Welders Ltd., spot welding gun, 578
 Portals, timber, laminated, 839
 Porter, H. K., Co. (Great Britain) Ltd., aircraft freight lashing, 296
 Porter, S. E., & Sons (Wales) Ltd., development of Garrard-Levering preheating process for porous surfaces, 844
 Portishead A power station, Limpetite neoprene coating for condenser, 757
 Posford Pavry & Partners, water tower for Ford's Liverpool factory, 713
 Position and heading indication, inertial, mechanics of, by W. R. Markey and J. Hovorka (review), 359
 Postal machines (Elliott Bros.), 73
 — Services, mechanization of, 73
 Postgraduate courses, importance of, 40
 Potterton Diplomat boiler, 596
 Pounder, C. C., on marine diesel engines, 525
 Powder conveyor, Air-Float, 662. See *LETTERS*, 738, 770
 — Handling, Auto-Airflow system, 738
 — Technology, course on, 315
 Powell Duffryn Engineering Co. Ltd., use of Ferodo brake blocks for rail tank wagons, 432; Purfleet oil storage installation, 605
 Powell Duffryn Group, offer to shareholders of Hamworthy Engineering accepted, 477
 Powell, H., Scirocco-Powell motor car, 769
 Power conversion, thermo-electric, 254
 — Demands, home, 96
 Power Flexible Tubing Co. Ltd., flexible tubing, 704
 Power-Flo spraying equipment, Graco (F. W. Berk & Co. Ltd.), 689
 Power from gas-turbine unit (Centrax Ltd.), 704
 Power-Gas Corp. Ltd., plant to produce gas from petroleum by ICI process, 269; position and prospects, 349; joint venture with Ralph M. Parsons & Co., 349
 — Generation, magnetoplasmadynamic, flow diagram for, 254
 — Geothermal, 638
 — Increased, productivity through, 741
 — Industries, data processing in, by J. H. Nicoll, 818-820
 — Line fault locator (Ferranti Ltd.), 793
 — Ministry of, application for power station at Aberthaw, 173
 — Pack (Rolls-Royce Ltd.), 642
 — Self-propelled (Powertrac Co. Ltd.)
 — for paper production, 842-843
 — Peak problem, shedding, 597
 Power Petroleum Co. Ltd., oil firing for steam boilers (trade publication), 656
 — Plant, boiling water atomic reactor, USAEC project, 31
 — See also *Hydro-electric; Power station; Atomic power station*
 — Resources, world, drain on, by J. H. M. Sykes, 604
 — Sources, traditional, limits of, by J. H. M. Sykes, 638-639. See *LETTER*, 706
 — Station, Aberthaw, application made to Ministry of Power, 173
 — Atomic. See *Atomic*
 — and boiler house chemistry, by W. Francis (book), 422
 — Cocksie, contracts placed, 713
 — in cooling tower, 706
 — Culligran, Deriaz turbines for (English Electric), 191
 — Drakelow C. supercritical boiler for (International Combustion Ltd.), 2-4
 — Fawley, 372, 404
 — Gas turbine (trade publication), 156
 — Geothermal, Wairakei, New Zealand, 663
 — High Marnham, details of, 474, 501
 — Ironbridge B, proposals for, 104
 — Komati (Mitchell Engineering Ltd.), 268
 — Malim Nawar, 232
 — Marchwood, 605
 — Nuclear. See *Atomic*
 — Port of Spain "B," contracts for, 73
 — Pwllcrochan, investigations by CEBG 173
 — Rodenhuize, ash and dust handling plant for (John Thompson Group of Companies), 269
 — Surat, 425
 — Tilbury B, 104
 — West Burton, four Avon generating units for, 262
 — See also *Power plant*
 — Supply, regulated (Brandenburg Ltd.), 79
 — System engineering, by F. de la C. Chard (review), 480
 — Integrated, 458
 — Space, Sunflower, 521
 — Take-offs (W. R. Anderton & Co. Ltd.), 143
 — Transmission (trade publication), 552
 — Line, 750 kV, in Russia, 658
 — Research, mechanical, by Prof. R. H. Macmillan, 627-628
 — See also *Gearing; Drives; Transmission*
 — Water. See *Hydraulic; Hydro-electric; Power plant*
 — World, conference, 41, 464, 604, 638-639, 696-697, 716,
 — See also *Electric power; Electricity*
 Powerseal ball valves, Lincoln (Mashed Design Studies Ltd.), 737
 Powertrac Co. Ltd., self-propelled power pack, 675
 Prague University, award of plaque to B. Barker, 585
 Pratt & Whitney Aircraft Co., MHD generator, 256
 Precast housing, comparing the cost, 502
 Precipitation, electrical (trade publication), 656
 Precise Torque Ltd., Torquemaster dial reading torque wrenches, 611
 Preheater, air (trade publication), 24
 — Boiler, glass tubes for, report on (QVF Ltd.), 115
 Preheating process for porous surfaces, Gerrard-Levering, 844
 Premier Colloid Mills Ltd., Guittard z-blade mixers, 715
 Prentis, J. M., review of Mechanization of Motion, 455; biographical note, 456
 Prepackaging machine, Flowpak (Forgrove Machinery Co. Ltd.), 26-28
 Prescott, J., on Applied Elasticity (book), 482
 Press(es) (trade publication), 184, 288
 — Air powered, NEOP (Arnott & Harrison (Toolmakers) Ltd.), 810
 — Aligning, PB (Peter Brasshouse Ltd.), 441
 — Automatic, Bipel (BIP Engineering Ltd.), 471
 — Compression moulding, Bipel (BIP Engineering Ltd.), 558
 — Curing, hydraulic (Redman Tools Ltd.), 841
 — Die tryout, Alpha (Rockwell Machine Tool Co. Ltd.), 410
 — Edge bending, for Czechoslovakia (Bronx Engineering Co. Ltd.), 672
 Press Equipment Ltd., twin cone decoilers, 144
 — Extrusion (Loewy Engineering Co. Ltd.), 44
 — Forging technique, new (Armour Research Foundation), 626
 — High speed, for sintered components (F. J. Stokes Corp.), 269
 — Hydraulic (Weldall-Grigg Ltd.), 31
 — Extrusion, by E. Muller (review), 390
 — Losca (London & Scandinavian Metallurgical Co. Ltd.), 440
 — Mechanical, new range of (Weldall-Grigg Ltd.), 430-431
 — Moulding (Fawcett Preston & Co. Ltd.), 507
 — (N. Saunders (Metal Products) Ltd.), 270
 — Notching (Taylor & Challen Ltd.), 410
 — Platen (Automatic Equipment Ltd.), 542

- Press(es), pneumatic, Braunstone (A. A. Jones & Shipman Ltd.), 142
 — Power, gauge and tool, exhibition, 410, 440
 — Straightening, for marine propellers (Scottish Machine Tool Corp. Ltd.), 338
 — (Joseph Rhodes & Sons Ltd.), 111, 411
 Press, William, & Son Ltd., Fawley to London pipeline, 202
 Pressed Steel Co. Ltd., formation of Gardiner Prestcold Holdings Ltd., 49; new car body plant, 544
 Pressure gauge, differential, Arkon (Walker Crossweller & Co. Ltd.), 47
 — Precision (trade publication), 514
 — Vessels, nomogram for nozzles of, 66-67. See LETTER, 496
 — Strip-wound, uses of, 556
 — Working party on, by S. Schwaigerer (review), 550
 Prestressed concrete. See *Concrete, prestressed*
 Prestressing of wire and strand (trade publication), 360
 Prestwick airport, use of Ferranti Apollo computer, 273
 Price stability in ferrous scrap industry, 733
 Prickett, C. N., on water in agriculture, 607
 Priest Furnaces Ltd., insulation at Spencer Steel Works, 652
 Priest, H., on Walter Spencer & Co. Ltd., 717
 Primers, aqueous latex (ICI Ltd.), 234
 — Pitan-Corroless (Allweather Paints Ltd.), 853
 — Rust converting (Allweather Paints Ltd.), 192
 — Wax, for pitted steel (Drynamels Ltd.), 321
 Prince cooker, Parkinson-Cowan, 596
 Printing machine, remote control, Ambassador (R. W. Crabtree & Son Ltd.), 577
 — Machinery and Allied Trades Exhibition, 166
 — Tin, propane fired oven for (Controlled Heat & Air Ltd.), 108
 Printometer castings (Ferranti Ltd.), 114
 Pritchard, A. B., on information on liquid fuels, 716
 Probe, magnetic-field, microscopic (National Bureau of Standards), 490
 — Optical, for medical research (Armour Research Foundation), 30
 — Space. See *Space probe*
 Process control, automatic: an introduction, by W. F. Coxon (review), 219
 — System, Arch, for Steel Co. of Wales (Elliott-Automation Ltd.), 779
 — Random, by M. Rosenblatt (book), 422
 Processing equipment (W. J. Jenkins & Co. Ltd. and Standard Steel Corp.), 306
 Production, automatic, in electric and electronic engineering, symposium on, 335
 — Census of, 329
 Production-Engineering Ltd., mass production factory for Alfa Romeo, 633
 — Materials for, by P. S. Houghton (book), 324
 — Research Association, soundproof room, 609; symposium on Production, Management and the Common Market, 612; abrasive belt "skiving" machine with air bearings, 710
 — Line, building site, Sectra system (John Laing & Son Ltd. and L. Quentin), 267
 — Management and the Common Market, symposium on, 612
 — Planning and control, elements of, by S. Eilon (book), 220; (review), 690
 Production Sales & Service Ltd., automatic weighing unit, 432
 — Technology: some recent developments, by D. E. Greene (book), 24; (review), 551
 Productivity, electricity for, conference on, 733, 741
 — Through increased power, 741
 — Out of managerial skills, by A. J. Speakman, 812
 — and wages, 812
 — Year, National. See *National*
 Professors, University, conference of, 279
 Profiling and boring head, Seleromat (Solar Weld Languelin Ltd.), 270
 — Units for grinding wheels, Diaform (Toolmasters Ltd.), 411
 Programming, mathematical, by S. Vajda (review), 454
 — Readings in, by S. Vajda (book), 728
 — Systems for electronic computers, by D. N. Chorafas (book), 288
 — Fortran (IBM), 100
 Project Chariot atomic excavation experiment (USAEC), 396
 — "Mariner," 193
 — Sky High, probable cancellation, 365
 — "Surveyor," 193
 Projector (Newbold & Bulford Ltd.), 342
 — Overhead (AEI Ltd.), 384
 — Shadomaster (Watson, Manasty & Co. Ltd.), 441
 — Stereoscope (Vision Engineering Ltd.), 14
 Propane fired oven for tin printing (Controlled Heat & Air Ltd.), 108
 — Gas, cinema film on (BOC Ltd.), 73
 — Liquid, generating set fuelled by (E. P. Allam Ltd.), 406
 Propeller, controllable pitch, Hindmarch/Berg (T. Hindmarch & Co. Ltd. and J. W. Berg & Co. Ltd.), 848
 — Marine, straightening press for (Scottish Machine Tool Corp. Ltd.), 338
 Proprietors of Hay's Wharf Ltd., design of hydraulic dredger, 431; formation of Hymatic Dredges Ltd., 549
 Propulsion of high speed power boat, 227
 — of ships. See *Atomic propulsion; Turbine; Propeller*
 Prospect index of construction activity, 808
 Protection panel (Smith's Industrial Division), 610
 — System, steel, Ferrodor (Griffiths Bros. & Co. London Ltd.), 217
 Protective clothing and devices, by N. T. Freeman (review), 421
 Protective Rubber Coatings (Bristol) Ltd., Limpetite neoprene coating for Portishead A power station condenser, 757
 Proton-synchrotron, Nimrod, nearing completion, 248
 Prudential Assurance Co. Ltd., new office block at Reading, 804
 Pryke, J. F. S., on what are older graduates' views?, 134. See LETTERS, 196, 402
 Pryor, Edward, & Son Ltd., marking machines, 411
 Psychology, occupational (National Institute of Industrial Psychology publication), 280, 316
 — of technical drawing, approach to early art from, by Dr. R. E. Heymann, 553
 Ptf electrical sleeving, Tygaflor (Tygadure Ltd.), 389
 — Lubricant, Fluoro-Glide (Systems Engineering Services Ltd.), 147
 — Mouldings (Crane Packing Ltd.), 789
 — Ribbon bearing sleeves (Crane Packing Ltd.), 389
 Public address equipment (Westrex Co. Ltd.), 144
 — Buildings and Works, Ministry of, duties of director of research and development, 629; Sir Donald Gibson appointed director of research and development, 629; statistics on building, 808
 — Health Acts, 225
 — Relations, Plain Words on, 6
 — Works and Municipal Services Exhibition, 529, 674
 — Works Exhibition, 529
 Puckey, Sir Walter, on professional engineers and the Common Market, 33, 785
 Puget, General, on Concord supersonic airliner, 734
 Pugh, N., on water supply, 606
 Pulleys, control, nylon coating on, 82
 Pullin, R. B., & Co. Ltd., underfloor heating for flats, 106
 Pulling machines (Tirfor Ltd.), 80
 Pullpactor soil compactor (Armstrong Whitworth), 674
 Puls-O-Rev pulse generator (Jiskoot Auto-control Ltd.), 811
 Puls-O-Rev unit, Jiskoot (Jiskoot Auto-control Ltd.), 562
 Pulse generator. See *Generator*
 Pump, automatic (Royles Ltd.), 810
 — for blending (trade publication), 288
 — Centrifugal, by H. H. Anderson (Book), 88
 — Linatex (Wilkinson Rubber Linatex Ltd.), 675
 — (Millars' Machinery Co. Ltd.), 239
 — Chemical, of alumina ceramic, 146
 — Gush (Appleton & Howard Ltd.), 703
 — (Permutit Co. Ltd.), 306
 — Compressor/vacuum (Northey Rotary Compressors Ltd.), 777
 — Contractors (Kelston Engineering Co. Ltd.), 745
 — Diaphragm, Layton (Henry Sykes Ltd.), 14
 — Gas bearing (Bristol Siddeley Ltd.), 345
 — High pressure (Lee, Howl & Co. Ltd.), 776
 — Vacuum (Ferranti Ltd.), 563
 — Hydraulic (Towler Bros. (Patents) Ltd.), 338
 — Vane type, mechanical aspects of operation of, by H. Heckmatt and R. Irving, 459-460
 — Weatherhead (Fairey Engineering Ltd.), 580
 — Mud (C. H. Johnson (Machinery) Ltd.), 78
 — Plurovane, 399
 — Stainless steel (Stainless Steel Pumps Ltd.), 378
 — Submersible (Crown Pump Manufacturing Co. Ltd.), 506
 — Flygt Bibo (International Pumps Ltd.), 840
 — (Sumo Pumps Ltd.), 110
 — Titanium for (Imperial Metal Industries (Kynoch) Ltd.), 703
 — Trailer, Univac (Henry Sykes Ltd.), 579
 — Tubular diaphragm (Merrill Pumps Ltd.), 170
 — Unit, Air-Hydro (Charles S. Madan Ltd.), 653
 — Water, diaphragm (Saunders Valve Co. Ltd.), 294
 Pumped storage for electric power, 638
 — Schemes for electricity, 766
 Pumping set, gas turbine, Mars, Perkins, 145
 — Portable, Perkins, trial by Durham Fire Brigade, 145
 — Station equipment and design, by L. B. Escritt (book), 592
 — System, vacuum (Mullard Ltd.), 270
 — Unit, turbine, mobile, for Iranian Oil Exploration and Producing Co. (Ruston & Hornsby Ltd.), 399
 Punched cards, Paramount, 545
 Purchase tax. See *Tax*
 Purdie, W. H., oil engine development, 215
 Purdy Machinery Co. Ltd., universal labelling machine, 844
 Purfleet oil storage installation opened, 605
 Puripher oil burners (Gothic Engineering Co. Ltd.), 379
 Push-Home joint (Naylor Bros. (Clayware) Ltd.), 557
 Putney Hospital, use of aluminium-clad chimney, 216
 P & V (Mining and Engineering) Ltd., rock bits, drill rods and concrete breaker accessories (trade publication), 324
 PVC. See *Polyvinyl chloride*
 Pwllcrochan power station, investigations by CEBG, 173
 Pye Ltd., linear actuator, 800
 Pye TVT Ltd., closed circuit television for Latina atomic power station, 793
 Pylon, optimum positioning by Facit EDB computer, 698
 Pyrometer, model 49, for use on fast moving surfaces (Cambridge Instrument Co. Ltd.), 768
- Q**
- QUALCAST Ltd., chairman's letter to employees and shareholders, 145; position and prospects, 145
 Quality control, statistical, and acceptance sampling, course on, 244
 — Total: engineering and management, by A. V. Feigenbaum (review), 219
 Qualter, Hall & Co. Ltd., shuttle car, 144; NV Staalconstructie Montagebouw DEMY appointed ad representatives, 349
 Quantity, bill of, prepared by computer, 272
 Quartz iodine lamp (GEC Ltd.), 253
 Quenchweld method of welding heavy iron castings (Eutectic), 478-9
 Quentin, L., Sectra system building site production line, 267
 Quickstruct shelving (Rubery Owen & Co. Ltd.), 80
 Quinn, A. De. F., on Design and Construction of Ports and Marine Structures, 591
 QVF Ltd., report on glass tubes for boiler air preheaters, 115
- R**
- RABONE, Petersen & Co. Ltd., formation of E. J. Heath & Co. Ltd., 73
 Rack, storage, for sheet metal, Talisman (Williams & Dickenson (London) Ltd.), 238
 Racking, Beamlock (Steel Equipment Co. Ltd.), 208
 Radar, Argus (Marconi), 568
 Radar, developments in, 93
 — Establishment, Royal. See *Royal Radar Establishment*
 — Marine (Decca Radar Ltd.), 578
 — Research laboratories of A.C. Cossor Ltd., 93
 — "True Motion," for ships (Decca Radar Ltd.), 201
 Rade-Koncar, new factory at Zagreb (John Mowlem & Co. Ltd. and Associated British Machine Tool Makers Ltd.), 740
 Radiation damage, criteria for, 311
 — Effect on metals (ASTM), 492
 — Gas fired infra-red, drying paint by, by F. J. Brewer, 780
 Radiation Group, Parkray 66 closed stove with back boiler, 796
 Radiation, to improve materials, by Dr. R. Roberts, 311-312
 — Infra-red, electricity to, converter for (MIT), 292
 — Polymers improved by, 311
 — Insensitive to, 311
 — Sensitive paint (UKAEA), 730
 — Shield, beta-ray (Spemby Ltd.), 128
 — Solar, problems in buildings (DSIR report), 1
 — Units, infra-red, gas fired (Parkinson Cowan), 780
 — Vulcanized rubbers, 312
 — See also *Irradiation*
 Radiators, steel panel (trade publication), 360
 Radio altimeter, 736
 — Broadcasts, trial, of 1922, recalling, by B. N. MacLarty, 729
 — and Electronic Component Manufacturers Federation, formation of Electronic Industries Supply Board, 413
 — Heliograph for Australia, 61
 — Relay satellite, Telstar, 45
 — Surface waves, by H. M. Barlow and J. Brown (review), 218
 Radio/telephone units for police (Cossor Communications Co. Ltd.), 469
 Radio telescope, for Jodrell Bank (Husband & Co.), 491
 — Large fixed, for Illinois University, 395
 — for Manchester University, 436
 Radioactive waste disposal (trade publication), 124
 Radiochemistry of uranium, by J. E. Grindler (book), 218
 Radiographs, weld, interpretation of, course on, 787
 Radiovisor Parent Ltd., gas burner control (trade publication), 124; automatic burner control (trade publication), 856
 Rafuse, R. P., on Varactor Applications (book), 514
 Ragozin, N. A., on Jet Propulsion Fuels (review), 358
 Rail tank wagons, use of Ferodo brake blocks on, 432
 — Transport, high speed, 97
 — Traction system of the future, 731
 Railcar, diesel, insulation for (Chancery Insulation Ltd.), 432
 Raily, J. W., on hydraulic analogue, 602
 Railways, basic causes of rough riding on, by Professor R. E. D. Bishop, 29-30
 — Bridge. See *Bridge*
 — British. See *British Railways*
 — Carriage. See *Railcar*
 — Comilog, Congo, 407
 — Conversion League, aims of, 503
 — Effect of snow and ice, 797
 — Investment in, 225
 — Lines, disused, disposal of, 503
 — Locomotive. See *Locomotive*
 — Progress in Australia, 169
 — Rolling stock. See *Locomotive; Railcar; Wagon*
 — Rough riding on, by Professor R. E. D. Bishop, 29. See LETTERS, 602, 706, 802
 — Signalling, fifty years of, by O. S. Nock (book), 656
 — Tokyo-Osaka, 225
 — Traditions, Plain Words on, 834
 — Train braking system, Westcode (Westinghouse Brake & Signal Co. Ltd.), 398
 — Remotely controlled, 462
 — Tube. See *Underground; London Transport Executive*
 — Underground. See *Underground; London Transport Executive*
 — Wagon. See *Wagon*
 — Wheels, rotation at different speeds. See LETTERS, 602, 706, 802
 — Workshops, prospects for, 397
 — World, by H. Sampson (book), 324
 Rain, driving, index of exposure to (Building Research Station publication), 340
 Ram, hydraulic, glandless (Black's Mining Equipment Ltd.), 367
 Ramo, S., on Handbook of Automation, Computation and Control (review), 286
 Randall, James H., & Son Ltd., Randalrak tool store for Bristol Siddeley Engines Ltd., 21
 Randalrak tool store (James H. Randall & Son Ltd.), 21
 Random processes, by M. Rosenblatt (book), 422
 Range finders, optical, for tanks, 631
 Rank-Bush-Murphy Ltd., formation of, 845; divisions comprising, 845
 Rank Cintel Ltd., high voltage surge tester, 578
 Rank Organization, course on penetrant inspection techniques, 787; Solus-Schall equipment, 787; training school for Solus-Schall equipment users, 787; course on Principles of magnetic particle inspection, 787; course on ultrasonic testing, 787
 Rank Precision Industries Ltd., use of Hyclud gasket material, 50
 Rankine cycle, 521
 Rannie, J., on shipping situation, 136; appointed deputy managing director of John Brown & Co. (Clydebank) Ltd., 613; biographical note, 613
 Ransome & Marles Bearing Co. Ltd., position and prospects, 685; Spheriseal ball bearing units, 811
 Ransomes & Rapier Ltd., walking draglines for Calgary Power Ltd., 67
 Ransomes Sims & Jefferies Ltd., lawn mowers, 298
 Raper, Dr. A. G., review of Open Hearth Furnace Design, 790; biographical note, 792
 Rapid Metal Developments Ltd. travelling wall shutter for concrete, 503
 Rasmussen tube gilling machines (Soag Machine Tools Ltd.), 507
 Ratcliff, on serving the Common Market, 612
 Ratcliffe, J. F., on Elements of Mathematical Statistics (book), 252
 Ratemeter, controlling (G. V. Planer Ltd.), 744
 Ratio indicator, Indicat (Ferranti Ltd.), 80
 Raw material, handling, 511
 Rawlinson, Sir Joseph, Hyde Park/Marble Arch road improvement scheme, 543
 Rawls, G. C., on computer equipment, 639
 Raymond-Costain-De Long, offshore tanker terminal at Fao, Iraq, 503
 Raymond International, Escravos Bar Moles, 138
 Raymont, Professor J. E. G., on Marchwood Power Station, 605
 Read, J., on Ford Motor Co. export record, 232
 Ready Mixed Concrete (United Kingdom) Ltd., share capital of South Coast Ready-Mixed Concrete Co. Ltd. acquired, 17
 Receiver/transmitter (trade publication), 817
 — Aircraft (Burned Ltd.), 294
 Record Electrical Co. Ltd., DC amplifier (trade publication), 760
 — Player, battery operated (Greencoat Industries Ltd.), 364
 — Tower crane, 138
 Recorder, miniature chart (Rustrak Instruments Ltd.), 48
 — Tape, miniature (Southern Instruments Ltd.), 295
 Rectification, electronic, by L. F. Spreadbury (book), 288
 Rectifiers (trade publication), 592
 — High power high voltage (International Rectifier Co. (Great Britain) Ltd.), 253
 — Silicon controlled (trade publication), 392
 Reddaway, W. B., presidential address to British Association Manchester meeting, 293
 Redfems Rubber Works Ltd., neoprene rubber mouldings, 557
 Redheugh Iron & Steel Co., bending of Ffestiniog penstock, 641
 Redifon Ltd., formation of Intertherm Ltd., 17; computing course, 370; Vickers VC 10 aircraft flight simulators for BOAC, 827
 Redman Tools Ltd., hydraulic curing press, 841
 Redpath Brown & Co. Ltd., insulation at Spencer Steelworks, 652; Cockenzie power station, 713
 Redshaw, Prof. S. C., research at Birmingham University, 851
 Reece, H. J., & Sons, position and prospects, 81; on Engineering Workshop Experiments (book), 817
 Reed, A. E., & Co. Ltd., automatic control in paper manufacture, 438-439; paper research, 756; paper and board manufacture, 756; "bread board" unit for paper research, 756
 Reed & Mallik Ltd., partnership with Braithwaite & Co. Engineers Ltd., 381
 Reed Paper Group, position and prospects, 685; new extensions to factory, 842-843; contractors for new extension, 842; details of new extension, 842-843
 Reed Plastic Packaging Ltd., fibreboard clad polyethylene containers, 188-189
 Reed, Walter, Army Institute of Research. See *Walter Reed Army Institute of Research*
 Reels, balance (Cordomatic Reels Ltd.), 144
 Rees, William, Ltd., pipe pushing under River Ouse, 473
 Reeves, Dr. M., on Women and Higher Education, 244, 447
 Refinery, Alesa-Elme, agreement between Nigerian Government and BP-Shell Petroleum Refining Co., 173
 — Gauhati, inauguration of, 169
 — Overhaul planned by Ferranti Mercury computer, 159
 — Plastic coated pipework for, 82
 — Prefabricated, 695
 — Schwedt on Oder, nears completion, 172
 Reflex water level gauge, 281
 Refrigeration and Air Control Handbook (book) (Refrigeration Press), 184
 — Equipment, austenitic cast iron for, 815
 — Technique, handbook of, by R. Plank (review), 55
 — Vacuum (trade publication), 24
 Refuse disposal (trade publication), 656

- Regal 3-wheeler motor car (Reliant Engineering Ltd.), 601
- Regalox ceramic material (Royal Worcester Industrial Ceramics Ltd.), 58-60
- Regent Oil Co. Ltd., to form joint company with Esso, Mobil, Shell-Mex & BP for pipeline construction, 774
- Regulators (Hattersley (Ormskirk) Ltd.), 307
- Reichmann, W. J., on Use and Abuse of Statistics (book), 56
- Reid, W. T., on fuel cells, 126
- Reinforced concrete. See *Concrete*
- Reinforcing bars (trade publication), 124
- Relay, measuring (trade publication), 624
- Plug-in (Westinghouse Brake & Signal Co. Ltd.), 110
- Power (Donovan Electrical Co. Ltd.), 777
- Satellite, 765
- Reliability principles and practices, by S. R. Calabro (review), 155
- Reliance Gear Co. Ltd., Draw-Pak wire packaging equipment, 306
- Reliant Engineering Ltd., Sabre motor car, 297; Regal 3-wheeler motor car, 601
- Remelting furnace. See *Furnace*
- Remploy Ltd., position and prospects, 749
- Rendel, Palmer & Tritton, offshore tanker terminal at Fao, Iraq, 503; realigning Waterloo Bridge approaches, 641
- Renderings, damp-proof, Actane (Cambridge Timberproofing Laboratories), 789
- Rendezvous (Bell Aerosystems Co. publication), 54
- Repeaters, transistor, for submarine cable, 325
- Reports, service, data retrieval from, by G. M. Boyd, 545-548
- Writing, technical: manual and source book, by H. Schultz and R. G. Webster (review), 154
- Republic Steel Corp., stainless steel water well filters, 51; vertical bright annealing line opened, 338
- Research in British industry, conference on, 65, 77, 103
- Civil, Government's role in, by Sir Harold Roxbee-Cox, 77
- Research & Control Instruments Ltd., formation of Intertherm Ltd., 17; Muller 360° X-ray equipment, 703
- Research & Engineering Controls Ltd., temperature standards, 307
- Research Engineers Ltd., periphery camera, 110
- Establishments, large, administration of, by Dr. J. V. Dunworth, 701
- How to decide on the right scale of, by Sir Norman Kipping, 103
- Industrial, and the undergraduate, 415
- Research for Industry 1961, 129
- Research, Operational. See *Operational*
- Ship, *Elettra III*, for Marconi International Marine Co. Ltd. (Fairmile Construction Co. Ltd.), 568
- Versus empiricism, 103
- Reservoir, Diddington (W. & C. French Ltd.), 572
- for Lee Valley Water Co. (Holst & Co.), 503
- Tidal, for Oldbury atomic power station, 138
- Residential Areas—Higher Densities Planning Bulletin No. 2 (Ministry of Housing publication), 774
- Resin, anion exchange, De-Acidite, 807
- Coating, Cercote (Stuart B. Dickens Ltd.), 189
- Epikote (Shell Chemical Co.), 284
- Epoxy (CIBA (ARL) Ltd.), 236
- Concrete-metal joint made with, 837
- Glass reinforced, for repair of metal tanks (Liquid Metal Applicators Ltd.), 284-285
- Manufacture and uses, 236
- for non-skid road surfaces, 203
- to repair tank leaks, 557
- Formulations (James Beard Ltd.), 284
- Sealant, Loctite (Douglas Kane Sealants Ltd.), 388
- Resistance to change, 812
- Resistivity, metal, under stress, 40, 70
- Resistor, standard, shielded (National Bureau of Standards), 127
- Resistron liquid level controller (Thomas Industrial Automation Ltd.), 714
- Resolvers, computing (trade publication), 88
- Resonance experiments, 858
- Resources, scientific, rational use of, 159
- Responsibility, measurement of, by Dr. E. Jaques (book), 754
- Retaining with sealant resins, 388
- Rexoplast tanks and containers (H. Erben Ltd.), 506
- Reynolds, O. W., on training everyone before the start-up (at Spencer Steel Works), 538
- Reynolds, C. E., on Basic Reinforced Concrete Design (book), 288
- Reynolds, L. A., development of Tangyes Hydralite heavy duty jack, 518
- RFD Co., founding of, 151; historical note, 151; RFD 21UL inflatable liferaft, 151-153; one-man dinghy, 151; air house, 153
- Rheostatic Co. Ltd., Satchwell pneumatic controls, 206; renamed Satchwell Controls Ltd., 813
- Rhind-Tutt, A. J., on priming structural steel at the mill, 234-235
- Rhodes, Joseph, & Sons Ltd., straightening press, 111; presses (trade publication), 184; straightening press, 411
- Riam, S. A., electric toothbrush, 128
- Ricardo & Co., Engineers (1927) Ltd., position and prospects, 845; formation of company, 845
- Ricardo, Sir Harry, formation of Ricardo & Co., Engineers (1927) Ltd., 845
- Richard Thomas & Baldwins Ltd., shunting locomotives ordered from Sentinel (Shrewsbury), Ltd., 169; Concast/Distinguon continuous casting machine commissioned, 710; tinned, terne coated and tin-terne steels, 724-725; see also *Spencer Steel Works*
- Richards, Prof. E. J., on lack of funds for yacht design, 629
- Richardsons, Westgarth & Co. Ltd., contract from US for research on water conversion, 1; association with G. & J. Weir Ltd., 1; formation of Weir, Westgarth Ltd., 381; flash evaporators (trade publication), 692
- Richmond tape controlled drilling machine (George Cohen 600 Group Ltd.), 608
- Richter, H., on Hydraulics Practical Handbook (book), 792
- Rickard, A. J., on development of special Ni-Resist for low temperature use, 620
- Ridley, G. K., on designing with a digital computer, 198-200
- Ridley, Viscount, on Consett Iron Co Ltd., 113
- Rifle conversion kit, 0-303 in to 7-62 mm (Royal Small Arms Factory, Enfield), 38
- Rihand hydro-electric project in India, 404
- Riley (IC) Products Ltd., oil burner, 379
- Riordan Enterprises Ltd., fork lift truck, 841
- Rippon, Rt. Hon. G., on construction industries, 225; Minister of Public Building, 597
- Risbridger, C. A., on effluent treatment, 607
- Ritchie, on properties of steels, 557
- Rivers, Afghanistan, table of catchment areas, 266
- Ayr, bridge over, 503
- Basins in Afghanistan, 266
- Development, multiple-purpose: water resources development in Afghanistan, Iran, Republic of Korea and Nepal (UN Survey), 266
- Coquet filtration plant (Moto Plastics Ltd.), 138
- Forth, electric overhead line crossing, 605. See *Correction*, 713
- Hackensack Bridge, 105
- Models for Tees Conservancy Commissioners, 75
- Ouse, pipe pushing under, 473
- Peace, tenders invited for Portage Mountain Dam, 641
- Pollution, 607
- by L. Klein (book), 624
- Prevention of Pollution Act (1961), 607
- Severn suspension bridge, steel cables for (Dorman Long (Steel) Ltd.), 789
- Tawe, clean water for, 774
- Technology and historical development, by Dr. R. Britain, 553
- Wye, clean water for, 774
- Riverdale, Lord, appointed chairman of Balfour & Darwins Ltd., 209; on Balfour & Darwins Ltd., 209
- Rivet, titanium, self plugging, blind (Advel Ltd.), 296
- Road accident statistics, 832
- See also *Accidents*
- Area traffic control, 681
- Bases, cement stabilized soil, 699
- Soil-cement, organic matter affects, 699
- Campaign Council, car parks, 129
- Construction in developing countries, 746
- Design for better vision. See *LETTERS*, 6, 196, 264
- Roads in England and Wales, 629
- Road Federation, International, fourth World Meeting, 746
- Haulage and traffic delays, 705
- Association, cooperation with British Road Services for quick turn round of lorries campaign, 493
- Ice detector, 705
- Improvement scheme, Hyde Park/Marble Arch (Cubitts-Fitzpatrick-Shand), 543-544
- Schemes in Scotland, 305
- Linked signals on, 679
- Minor widening of, 681
- Obstruction marker cones, Motocone (Central Manufacturing & Trading Co. (Dudley) Ltd.), 708
- Programme of Ministry of Transport, 201
- Road Research (1961), 129, 203
- Road Research Laboratory, research on earthworks, 11; *Road Research* 1961, 129, 203; making safety glass safer, 165; traffic engineering studies, 679-681; *Sample Survey of Roads and Traffic of Great Britain*, 701; road ice detector, 705.
- Resurfacing of, 680
- Roller, GC (Aveling-Barford Ltd.), 353-355
- Signals at roundabouts, 680
- Speed limits on, 679
- Surfaces, epoxy resins for non-skid surfaces, 203
- Wet and dry, relation between tyre force and deflection angle, 832
- Traffic. See *Traffic*
- and traffic of Great Britain, sample survey of (Road Research Laboratory publication), 701
- Transport, carriage of large and awkward loads by, 161
- in tropical and sub-tropical countries, by Dr. R. Millard, 746
- Trunk, to join M6 Motorway with A34, 201
- See also *By-pass*; *Highway*; *Motorway*
- Roadside checks on vehicles, 225
- Markers, Neoprene (Bank Bridge Rubber Co. Ltd.), 147
- Robb, A. C., design of aluminium/titanium mast, 217
- Robbins Committee Report, 25, 116-118. See *LETTERS*, 134, 402, 446
- Robbins, E. L. G., on group apprenticeship, 243
- Robbins, Lord, Robbins Committee on Higher Education, 116-118
- Robens, Lord, on National Coal Board, 461; on Mining Research Establishment, 493; on injecting fluid coal into blast furnaces, 788
- Roberts Electrical Co. Ltd., Activair heater unit, 292; Humex warm air heating system, 292
- Roberts, J. A., review of Spring Design and Application, 622; biographical note, 624
- Roberts, J. W., Ltd., insulation at Spencer Steelworks, 652
- Roberts, Dr. R., on use of radiation to improve materials, 311-312
- Robertshaw-Fulton Controls Co., Satchwell pneumatic controls, 206
- Robertshaw, M. F., Ltd., fire-fighting unit, 78; "341" camping trailer, 160
- Robertson, J. A., on lubricating Britain's new strip mills, 301
- Robertson, Sir James, on Challenge of the Underdeveloped Countries, 485
- Robertson, J. M., on British Transistors, Diodes and Semiconductor Devices Data Annual 1962-3 (book), 456
- Robertson, M. F., review of Piecework Abandoned: Effect of Wage Incentive Systems on Managerial Authority, 655; biographical note, 656
- Robertson Thain Ltd., air intake unit, 475
- Robertson, W. H. A., & Co. Ltd., *Guide to World Screw Threads*, 471; *Guide to World Screw Thread Series Symbols*, 471; Sendzimir rolling mill, 807
- Robinson, Thomas, & Son Ltd., handling equipment (trade publication), 482
- Rocard, Y., on Thermodynamics (review), 420
- Rochdale Committee report on port development, 429
- Rock bits (trade publication), 324
- Pressure in mines, by E. De St. Q. Isaacson (book), 656
- Rockefeller Foundation, financial aid for Cambridge University research, 193
- Rocket, Blue Streak, as satellite booster, 405
- Engines, by S. L. Bragg (review), 358
- Establishment, Spadeadam, 405
- Firing, 405
- Propulsion, solid-fuel, by J. E. Daboo (book), 624
- Thor-Able, 46
- Thor-Delta, 221
- Rockfill and earth dam engineering, by G. F. Sowers and H. L. Sally (book), 592
- Rockwell Machine Tool Co. Ltd., Alpha die tryout press, 410; exhibition, 464
- Rodenhuize power station, ash and dust handling plant for (John Thompson Group of Companies), 269
- Rods, drill (trade publication), 324
- Roe, A. V., Ltd., use of Hyclad gasket material, 50
- Roff, H. E., on appointment of executives, 765
- Rogack block storage heater (Mantle & Butterworth Ltd.), 460
- Rogers, Dr. R. H., symposium on air gauging, 576
- Rolls, forged steel, exports of (Forth Brown Ltd.), 471
- Rollason, Prof. E. C., review of Mechanics of Metal Extrusion, 758; review of Plasticity for Mechanical Engineers, 758; biographical note, 760
- Roller bearings. See *Bearings*
- Road, GC (Aveling-Barford Ltd.), 353-355
- Steam, Aveling and Porter, 353
- Rolling, flat, theory and practice of, by C. W. Starling (book), 856
- Hot strip, tension control by loopers, 844
- Mill, computer control of, 337
- Experimental, for BISRA (Albert Mann Engineering Co. Ltd.), 21
- Sendzimir (Robertson), 807
- Strip, lubrication of, by J. A. Robertson, 301
- Stock. See also *Locomotive*; *Railcar*; *Wagon*
- Rolls-Royce Ltd., Avon jet engine as gas generator, 262; rotary table with air bearings, 348; introducing schoolboys to industry, 383; four headlights for motor car, 468; "D" range of diesel engines, 567, 579; power pack, 642; Falcon engine, 642; financial aid from Government for Spey by-pass engine, 708; water moderated atomic reactor from Westinghouse, 828; marine engines, 840; cooperation with MAN Turbomotoren Co. on turbine engines, 851
- Rolt, L. T. C., on James Watt (book), 552
- Romania, British exhibition in, 12
- Development of engineering industry, 169
- Romeo, N., biographical note, 633
- Ronuk Ltd., to service Kent floor machines, 241
- Roof & Lining Construction Co. Ltd., insulation at Spencer Steelworks, 652
- Beams, laminated timber (Kingston (Architectural Craftsmen) Ltd.), 203
- Lightweight reinforced concrete, for Christ Church, Staines, 747
- Paraboloid, for Smithfield Poultry Market, 640
- Shell, of Commonwealth Institute building, 574-575
- Timber, with two way spanning, 472
- Roofing, timber, Caromic Di-Grid (William Brown & Co. (Ipswich) Ltd.), 472
- Room, soundproof (Production Engineering Research Association), 609
- Rootes, B. G., on Rootes Marine Ltd., 836
- Rootes, Group, Hillman Super Minx motor car, 13; road test of Hillman Super Minx motor car, 165; improvements to Hawk and Super Snipe motor cars, 333; orders from Czechoslovakia, 708; formation of Rootes Marine Ltd., 836
- Rootes, Lord, on Western Hemisphere Exports Council report, 104
- Rootes Marine Ltd., formation of, 836; marine motors, 836
- Rope, mooring, nylon (British Nylon Spinners Ltd.), 217
- Ulstron (ICI Ltd.), 757
- Ropebelt conveyor structure, Distinguon-Goodman (Distinguon Engineering Co.), 486-488
- Roper, E. A., & Co. Ltd., licences for Centre Technique des Industries de la Fonderie, 52
- Rosair, J. S. B., on engineering education in retrospect, 402
- Rose Bros. (Gainsborough) Ltd., tobacco packaging machinery, 26; historical note, 26
- Rose, Downs & Thompson Ltd., heating unit (trade publication), 422
- Rose, H. E., on Vibration Mills and Vibration Milling (review), 22
- Rosenblatt, M., on Random Processes (book), 822
- Roskill, O. W., & Co. (Reports) Ltd., *Who Owns Whom: Continental Edition*, 836
- Ross Group Ltd., orders placed with Cochrane & Sons Ltd., 845
- Ross, H. C., on air-bubble curtains, 70
- Ross Insulation Products Ltd., Ross-Lite insulation, 764
- Ross, J., on value of apprentice training, 316
- Ross-Lite insulation (Ross Insulation Products Ltd.), 764
- Rossiter, S. A., review of Modern Civil Engineering Practice (review), 218; biographical note, 220
- Rotary Hoes Ltd., products to be marketed by Howard Rotovator Co. Ltd., 81; formation of Howard Rotovator Co. Ltd., 81
- Machine (F. J. Edwards Ltd.), 15
- Rotax Ltd., cooperation with Teddington Aircraft Controls Ltd., 313; Teddington/Micro Turbo gas turbines, 313; Rotax starters, 313
- Rotblat, J., on Atoms and the Universe (book), 252
- Rotocrimp crimping tool (BICC), 207
- Rotorcraft Ltd., Grasshopper helicopter, 367
- Rotork Engineering Co. Ltd., valve actuators for floating dock, 469; gearboxes, 643
- Rottenburg, P. A., on mechanics of billiards, 738
- Rotty, R. M., on Introduction to Gas Dynamics (book), 592
- Rotunda, Ltd., reinforced strapping tape, 83
- Roundabouts, road, signals at, 680
- Roundness measuring machine, with air bearings (Optical Measuring Tool Ltd.), 348
- Rouse, H., on Fluid Mechanics for Hydraulic Engineers (book), 482
- Routemaster bus (London Transport Executive), 385-387
- Coaches for Green Line service, 35
- Rover Co. Ltd., agreement with Ruston & Hornsby Ltd., 113; use of ceramic coated exhaust pipes, 115; 4 x 4 motor vehicle, 401; new designs of motor car to attract younger driver, 500
- Rowbottom, R. W., on Understanding Management (book), 552
- Rowe, Dr. A. P., on Case for University Reform, 244; 446
- Rowe, R. E., on Concrete Bridge Design (book), 817
- Rowen-Arc spot welding machine (Rubery, Owen & Co. Ltd.), 207
- Rowley, B. G. H., on group project training, 825
- Roxbee-Cox, Sir Harold, on Government's role in civil research, 77
- Roy cold heading machine (Gaston E. Marbaix Ltd.), 643
- Royal Air Force V bomber aircraft, 246
- Aircraft Establishment, use of strip-wound pressure vessels, 556; problems of high speed flight, 625; research on new uses of dry-friction damping, 794-796
- Automobile Club, *Running In*, 101
- College of Advanced Technology, Techniques of noise measurement courses, 280
- Institute of British Architects, training period for architects, 461; *Practical Training of Architects*, 461; *Architect and His Office*, 461
- Naval Physiological Laboratory, deep-diving research, 793; new installations at Stokes Bay, 793
- Royal Navy, use of nylon mooring ropes for submarines, 217; gas-turbine powered helicopters ordered, 372; engineers in, 434
- Netherlands Navy, order placed for Augusta Bell helicopters, 201
- Radar Establishment, fast response photo-detector of submillimetre radiation, 699-700
- Small Arms Factory, Enfield, rifle conversion kit, 0-303 in to 7-62 mm, 38
- Society, establishment of research professorships, 89
- of Arts, bursaries for young designers, 315; Cantor Lecture, 829
- on the Prevention of Accidents, *This is YOUR Life*, 785; courses on accident prevention, 785; *The Stacking of Materials*, 790
- Royal Worcester Industrial Ceramics Ltd., Regalox ceramic material, 58-60; products of, 58-60; Electro ceramic material, 60; ceramic wire drawing cones, 471
- Roydalo alumina ceramic (Doulton Industrial Porcelains Ltd.), 146
- Royles Ltd., flash steam condenser, 35; steam traps, 412; automatic pump, 810
- Rubanenko, B. R., on large panel construction, 444
- Rubber, cold cure, RTV731 (Midland Silicones Ltd.), 653
- Cure, Silicoset (ICI Ltd.), 653
- Rubber/metal gaskets, users' comments on, 50
- Rubber, silicone, clear, Silcoloid 201 (ICI Ltd.), 321
- Synthetic neoprene (Du Pont Co. (U.K.) Ltd.), 557
- Vulcanized by radiation, 312
- Rubery Owen & Co. Ltd., Quickstruct shelving, 80; Rowen-Arc spot welding machine, 207; use of tin-terne coated steel, 724
- Ruby laser (CSF (UK) Ltd.), 781
- Rudder for high speed power boat, 227
- Rudnici i Zelezara, joint contract to Davy and United Engineering Co. Ltd. and Wellman Smith Owen Engineering Corp. Ltd., 740
- Rüggien, W., on Compendium on Clutches (book), 288
- Rule, slide. See *Slide Rule*
- Running In, 101
- Russell, G. C. D., on Handley Page Ltd., 813
- Russia, history of electric arc welding in, by Prof. C. Khrenov, 553
- Hydraulic dynamometers for (Heenan & Foude Ltd.), 828
- Men in space projects, 193
- Power line, first 750 kV, 658
- Russian-English Dictionary of Metallurgy and Allied Sciences, by T. Deruguine (book), 592
- Russian language course, 280
- Rustless Iron Co., ceramic coated exhaust pipes, 115

- Ruston & Hornsby Ltd., TF gas turbine. See *Correction*, 35; reorganization, 113; position and prospects, 113; agreement with Rover Co. Ltd., 113; acquisition of Alfred Wiseman & Co. Ltd., 113; products of (trade publication), 288; mobile turbine pumping unit for Iranian Oil Exploration & Producing Co., 399; use of austenitic iron castings, 620
- Ruston, W. J., on Ruston & Hornsby Ltd., 113
- Rustrak Instruments Ltd., miniature chart recorder, 48
- Rutherford High Energy Laboratory, Nimrod proton-synchrotron nearing completion, 248
- Ryan Industries Inc., agreement with W. P. Butterfield Ltd., 177
- Ryder, on Diron steel for one coat vitreous enamelling, 688
- ## S
- SAAB, agreement with Vickers-Armstrongs (Engineers) Ltd., on hovercraft research, 836
- Engine/transmission unit, 72
- Motor car, UK sales of (Swedish Aircraft Co.), 169
- Saab 96 motor car, 72
- Sabre motor car (Reliant Engineering Ltd.), 297
- Safari ambulance, Citroen, 433
- Safe, portable (Checkmate Devices Ltd.), 112
- Safeland aircraft arrester barriers, 293
- Safeland barrier for civil jet aircraft (Borgs Fabriks (BEFAB)), 260-261
- Safety, atomic reactor, by C. R. Russell (book), 856
- Barrier, Darfen Arrester, for motorways (British Ropes Ltd.), 433. See *LETTER*, 570
- Belt. See *Seat belt*
- Cup, Elizabeth Parker, awarded to Stuart Street Training Centre, 211
- Glass, aircraft (Triplex Safety Glass Co. Ltd.), 294
- Making it safer, 165
- (Triplex), 813
- Industrial conference and exhibition, 785
- Net. See *Net*
- Training courses, 279
- Safway load bearing table (Sterling-Safway Ltd.), 267
- Saint. See *St.*
- Salaries, 168
- Paid to executives, conference on, 335
- See also *Income; Pay; Payment; Wages*
- Sales conference of Steel Group, 336
- Management, course in, 649
- Salford Electrical Instruments, Ltd., Teflon film capacitors, 206; equipment for automatically recording movements of railway wagons, 632
- Sally, H. L., on Earth and Rockfill Dam Engineering (book), 592
- Salzer, H. E., on Table of Sines and Cosines to Ten Decimal Places at Thousandths of a Degree (book), 422
- Sampling, acceptance, and statistical quality control, course on, 244
- Sampson, A., on Anatomy of Britain (review), 359
- Sampson H., on World Railways (book), 324
- Sandall Precision Co. Ltd., interface detector (trade publication), 392
- Sanders, D. G. A., on courses for training officers, 483-484
- Sanders & Forster Ltd., standard buildings (trade publications), 24; fabrication of structural steelwork, 139
- Sandvikens Jarnverks AB, steel extrusion presses from Loewy Engineering Co. Ltd., 44
- Sandwell Casting Co. Ltd., use of Metamic metal/ceramic material, 18
- Sandwich courses for overseas students, 257
- Santon Ltd., Devon immersion heater, 292; Brecon immersion heater, 292; Cumberland immersion heater, 292
- Santos-Dumont: A Study in Obsession, by P. Wykeham (review), 323
- Saran lined pipes (J. & T. Lawrie Ltd.), 853
- Saro (Anglesey) Ltd., aluminium/titanium mast, 217
- Satchwell Controls Ltd., new name for Rheostatic Co. Ltd., 813
- Satchwell, L., biographical note, 813; formation of Satchwell Controls Ltd., 813
- Satchwell pneumatic controls (Robertshaw-Fulton Controls Co. and Rheostatic Co. Ltd.), 206
- Satellite booster firing, 405
- Communications conference, 765, 826
- Post-graduate course on, 585
- Station, low cost (Bell), 428
- Still experimental, 826
- Explorer XII, results from, 95
- Injun I, telemetry data from, 365
- Launching rocket, Thor-Able, 46
- Relay, 765
- Russian achievements, 193
- Sub-assemblies, tests of (GEC (US)), 158
- Syncom, 97
- Telstar, 45, 826; Admiralty valve for use with, 96; success of, 97; data from, 221; for international time comparisons, 361; failure to respond to ground signals, 765
- Saudi Arabia, cement plant for, 75
- Saunders, N. (Metal Products) Ltd., moulding press, 270
- Saunders Valve Co. Ltd., plastic coated plugs for ball valves, 82; diaphragm water pump, 294
- Savage, L. J., et al, on Foundations of Statistical Inference: a Discussion (book), 324
- Savage, W. Bryan, Ltd., Bendix cleaning system, 506
- Savannah atomic propelled cargo-passenger ship, 4
- Savings, 265
- Savitsky, E. M., on Influence of Temperature on the Mechanical Properties of Metals and Alloys (book), 482
- Saw, band (Burgess), 396
- Circular, VMS (Channel Tool Distributors Ltd.), 579
- See also *Hacksaw*
- Sawmills (trade publication), 692
- Scaffolding to timber frame fittings (Boulton Scaffolding Ltd.), 377
- Scaffolding, standard (Sterling-Safway Ltd.), 267
- Scammell Lorries Ltd., Constructor dump truck, 578; Constructor 6 by 6 tractor, 669
- Scanner, multipoint, Three Star (Tyer & Co. Ltd.), 171
- Schaverien, Louis J. (Appliances) Ltd., Sink-matic sink, 192
- Schmeisser, K., director-general of Leipzig Trade Fair, 836
- Schofield, L., on Spencer Gears Ltd., 749
- Scholarships, Lockheed, of Automotive Products Group, 787
- Research, 851
- University, awarded by Consett Iron Co., 25
- Industry sponsored, 687
- Scholes, G. H. (Wythenshawe) Ltd., Sonex switch unit, 328
- School leaver statistics, 242
- Unemployed, 493
- Secondary, examination council (HMSSO publication), 384
- Schoolboys, introducing to industry, 383
- Schultz, H., on Technical Report Writing: A Manual and Source Book (review), 154
- Schvartz, J., on S. A. Permali, 49
- Schvartz, R., development of improved wood, 49
- Schwaigerer, S., on Working Party on Pressure Vessels (review), 550
- Schwedt on Oder oil refinery nearing completion, 172
- Science applied, university maze, by J. S. M. Botterill, 554
- Appreciating the history of, by K. D. C. Vernon, 553
- Engineering, and calculations for craftsmen in engineering industries, by W. E. Fisher (book), 514
- Laboratory manual for, by E. C. Halliday and B. P. Morris (book), 656
- in perspective by K. Ball, 721-722
- and government, postscript to, by C. P. Snow (review), 154
- History of, international congress of, 553
- Inspiration of, by Sir George Thomson (review), 358
- Investment in, by Sir John Cockcroft, 293
- Science in your Methods*, 493
- Science, technology and civilization, by Prof. R. V. Jones, 554
- in United States, Canada and Australia, by Prof. D. Fleming, 553
- Scientific design of exhaust and intake systems, by P. H. Smith (book), 482
- Instruments. See *Instruments*
- Manufacturers Association, annual convention, 496
- Project, usefulness of oral history in writing the story of, by Dr. W. D. Miles, 553
- Research. See *Research*
- Resources, rational use of, 159
- Scientists in industry: Conflict and Accommodation, by W. Kornhauser (book), 592
- Scirocco-Powell motor car, 769
- Scoop, powered, Multiscoop (E. V. Twose (Manufacturing) Ltd.), 675
- Scopemaster motor car engine test equipment (Crypton), 39
- Scotland, Mackenzie report on generation and distribution of electricity in Scotland, 829
- Road improvement schemes in, 305
- Scott, B. F., on hydraulic analogue apparatus, 602
- Scott polyurethane foam (Declon Foam Plastics Ltd.), 853
- Scottish Electrical Training Scheme Ltd., annual meeting, 555; member firms of, 555
- Scottish Machine Tool Corp. Ltd., folding and bending machine for plate, 14; opening planing machine, 240; straightening press for marine propellers, 338
- Reactor Centre, by Dr. S. C. Curran, 448
- Scrap industry, ferrous, price stability in, 733
- Shearing machine, Alligator type (Weldall & Assembly Ltd., and George Cohen Sons & Co. Ltd.), 80
- Steel, arc furnace project for, 510
- Screw forming exhibition, 299
- Propeller. See *Propeller*
- Self-locking (Long-Lok Ltd.), 757
- See also *Thread*
- Scripps Institution of Oceanography, FLIP floating instrument platform for underwater research, 289
- Scrubbing plant, titanium tower of, 677
- Sea defences at Margate (Holland & Hannen and Cubitts Ltd.), 304
- Prefabricated walls against the tide, 304
- Water, distillation at Kuwait, by J. D. Addison and R. S. Silver, 130-132
- Seals for integral tanks, 50
- Mechanical (Sealol Ltd.), 643
- Plastisol (Silvertown Rubber Co. Ltd.), 673
- Sealant resin, Loctite (Douglas Kane (Sealants) Ltd.), 388
- Sealing electronic equipment, 50
- Rings, glandless, Pioneer Nu-Lip, 307
- Sealol Ltd., mechanical seal, 643
- Seamarc echo sounder (Marconi), 568
- Search News*, 622
- Search, William G., Ltd., *Search News*, 622
- Seat belt, motor car, Britax, 433
- Motor car, DSIR report on, 769
- Sebag-Montefiore, on Besi, 40
- SECAM transmitting system, 1
- Secker, H. W., on Thos. W. Ward Ltd., 645
- Secondary Schools Examination Council (HMSSO publication), 384
- Secretre hearing aid (Amplivox Ltd.), 732
- Sectra system building site production line (John Laing & Son Ltd. and L. Quentin), 267
- Sectric clock (Smiths English Clocks Ltd.), 666
- Sectronic time keeping movement (Smiths English Clocks Ltd.), 668
- Seer-Thrust pipe pushing system, 473
- Séférian, D., on Metallurgy of Welding (book), 124; (review), 854
- Seippel, Dr. C., on gas-turbine and steam generation of power, 639
- Seismic survey of North Sea, 573
- Seldon, A., on Advertising in Action (review), 623
- Seleromat boring and profiling head (Solar Weld Languepin Ltd.), 270
- Selling in a foreign market, 429
- Selson Machine Tool Co. Ltd., universal milling machine, 143; Holmquist centreless grinding machine, 506
- Semi-Elements Ltd., Ferroglass ferro-magnetic glass, 626
- Semiconductor circuits and valves (trade publication), 252
- Counters, 684
- Devices, diodes and transistors, British, data annual 1962-3, by G. W. A. Dummer and J. M. Robertson (book), 456
- Electronics, handbook of, by L. P. Hunter (book), 56
- Laser diagram, 763
- Materials, 763
- Materials, strain gauges of, by G. R. Higson 522-523
- Photo and thermo-electric effects in, by J. Tauc (book), 124
- Recent developments in, by Professor D. A. Wright, 682-684
- Strain gauges, circuitry for, 523
- Gauges, experience with, 523
- Semiconductors Ltd., position and prospects, 17
- Sendzimir rolling mill (W. H. A. Robertson & Co. Ltd.), 807
- Senior, E. W. on Ransome and Marles Bearing Co. Ltd., 685
- Sentinel automatic door openers (Elcontrol Ltd.), 841
- Sentinel (Shrewsbury) Ltd., shunting locomotives on order, 169
- Separator, centrifugal (Philips of Holland and Control Instruments Ltd.), 240
- Serck Ltd., position and prospects, 685
- Series 60 translucent panels (Isora Illuminating Ceilings Ltd.), 173
- Serpentix flexible conveyor, Stubbe-Metalastik (Mitchell Engineering Ltd.), 331
- Servo Consultants Ltd., modular units, 15
- Servomechanisms, by L. H. Stockdale (review), 286
- Servomex Controls Ltd., variable phase attachment, 171
- Sewer Bridge, 695. See *Correction*, 747; steel cables for (Dorman Long (Steel) Ltd.), 789
- SGB Mitcham Ltd., weather clothing (trade publication), 592
- Shadomaster projector (Watson, Manasty & Co. Ltd.), 441
- Shaft coupling. See *Coupling*
- Crank. See *Crankshaft*
- Dynamometer. See *Dynamometer*
- Shaker, flask (Lede Ltd.), 744
- Shampoo polishing machine (Hoover Ltd.), 32
- Shanks, M., on how to export, 572
- Shaping machine (B. Elliott (Machinery) Ltd.), 270
- Shaving machine, gear (Charles Churchill & Co. Ltd.), 109
- Shaw, A., on Anne Shaw Organization, 181
- Shaw, Anne, Organization, courses at, 181
- Shaw Savill Line, *Northern Star* liner, 33; *Southern Cross* liner, 34
- Shawnee Poole Ltd., rear dump hauler truck, 143
- Shear for cold billets (Lamberton & Co. Ltd.), 78
- Transverse, cracking at notches in, by J. C. Walter, 326-327
- Webs, honeycomb, 838
- Shearing machine for scrap, Alligator type (Weldall & Assembly Ltd. and George Cohen Sons & Co. Ltd.), 80
- for strip, 57
- Sheepbridge Castings Ltd., position and prospects, 277
- Sheepbridge Engineering Ltd., position and prospects, 277; subsidiaries of, 277; acquisition of Perfection Engineering Ltd., 277
- Sheepbridge Equipment Ltd., *Adma Constructor* barge 305; Air-Float conveyor, 662. See *LETTERS*, 738, 770
- Sheepbridge Stokes Ltd., position and prospects, 277
- Sheet, aluminium for vehicle body building (James Booth Aluminium Ltd.), 389
- Metal, working equipment for (trade publication), 624
- Sheeting, Coroplast (Holoplast Ltd.), 842
- Sheffield, J. V., on Southcross Ltd., 81
- Shell Chemical Co., Epikote resin, 284; extensions to Egham laboratories, 372; functions and services of, 372
- Shell/Esso/BP, seismic survey of North Sea, 573
- Shell International Petroleum Co. Ltd., Templug miniature thermometers, 800
- Shell-Mex and BP Ltd., Macron multi-purpose machine tool oil, 147; appointed lubrication consultants to Colvilles Ltd., 301; symposium on hydraulic fluids, 459; fuel and oil for Spencer Steel Works, 537. See *LETTER*, 603
- Shell Mex Oil Co., to form joint company with Esso, Mobil, Regent and BP for pipeline construction, 774
- Shell Oil Co., robot well-head assembly and maintenance machine, 775
- Shell Research Centre, photographic observation of engine deposits, 160
- Shell Research Ltd., design of periphery camera, 110
- Shell roof. See *Roof*
- Shellac, origin and applications, by E. Hicks (book), 252
- Shelter, inflatable (Walter Kidde & Co. Ltd.), 284
- Portable, Elephant (John Smith & Co. (London) Ltd.), 238
- Shelton Iron & Steel Co., new mill building for, 377
- Shelving, Fix Assistants (Fix Equipment Ltd.), 270
- Shelving, Quickstruct (Rubery Owen & Co. Ltd.), 80
- Shepherd, C., award of Consett Iron Co. university scholarship, 25
- Shepherd, G. T., on Calder Hall type atomic reactor, 696
- Sherborne Rubber Co. Ltd., Double-D fendering strip, 621
- Sherby, S. S., on Airplane Aerodynamics (book), 456
- Shercliff, J. A., on Theory of Electro-magnetic Flow Measurement (book), 760
- Shields, flange, in plastic (IMPA Ltd.), 367
- Radiation, beta-ray (Spemby Ltd.), 128
- Ships, aluminium superstructures for, insurance underwriters' concern with, 429, 432
- Atomic propulsion of. See *Atomic propulsion*
- Automatic controls for, 331
- Helmsman for (S. G. Brown Ltd.), 798
- Cargo, basic design (Swan, Hunter & Wigham Richardson Ltd.), 129
- *Clan Macgillivray*, 331
- Cargo-passenger, *Savannah*, 4
- with centralized engine room control, 703
- *Clan Macgillivray*, 703
- Design, 129
- Flow lines for, 577
- *Gladstone Star*, Guardion cathodic protection of, 621
- Propulsion. See *Atomic propulsion; Engine; Turbine; Propeller*
- Remote and automatic controls for, 703
- Research, circulating water channel for, 290
- Standard dry-cargo (Swan, Hunter & Wigham Richardson Ltd.), 162
- Stopping tests, 293, 296
- Weirpak closed feed system for (G. & J. Weir Ltd.), 704
- See also under specific types
- Shipbuilding Conference, shipping statistics, 136
- Industry, unhappy outlook for, 136
- Shipping Advisory Panel, setting up, 161; members of, 161
- Downward trend, 136
- Standardized (Cammell Laird Ltd.), 529
- Statistics, 136
- Shipworm, Teredo, 605
- Shipyards, Palmers Hebburn, Vickers-Armstrongs new dry dock, 442-443, 462
- Tower crane for use in, 43
- Shock tubes, by J. K. Wright (review), 183
- Waves in chemistry and physics, by J. N. Bradley (book), 220; (review), 655-656
- Underwater, air bubbles to dampen (Atlas Copco Ltd.). See *LETTER*, 70
- Shockcrete Ltd., Commonwealth Institute building, 575
- Shoebus project (International Business Machines Ltd.), 257, 291
- Shone, Sir Robert, opening address to BIM Conference, 150; on investment allowance, 629
- Shop window for Britain (FBI), 193
- Shorland fork lift truck (Short Bros. & Harland Ltd.), 80
- Short Bros. & Harland Ltd., plastic machine guards, 51; Shorland fork lift truck, 80; automatic landing system for Belfast aircraft, 222; aircraft freight lashing fittings, 296; rocking table, 475
- Short, L. H., mission to Sweden, 372
- Shotblasting begins fabrication line, 139
- Equipment, Wheelabrator (Tilghman's Ltd.), 139
- Unit (F. W. Berk & Co. Ltd.), 52
- Portable (Tilghman's Ltd.), 840
- Shovel, rocker, rail mounted (Eimco (Great Britain) Ltd.), 143
- Tractor, Michigan, 675
- Show. See *Exhibition*
- Shrive, J. D., on engineering education, 350-352
- Shrubsole, B. C., on high energy rate forging machines, 36
- Shurcliff, W. A., on Polarized Light: Production and Use (book), 252
- Shutter, photographic, fast opening, 737
- Wall, travelling, for concrete (Rapid Metal Developments Ltd.), 503
- Shuttle car (Qualter, Hall & Co. Ltd.), 144
- Sibbett, H., group engineer for Birmingham No. 1 Group for group apprenticeship training, 243
- Sideslip in motor cars, by H. Darwin and C. V. Burton, 832
- Siebe Gorman & Co. Ltd., new electro-plating plant (Electro-Chemical Engineering Co. Ltd.), 789; effluent and sewage treatment plant installed at Chessington plant, 807
- Siebrecht thermometer (Wymark Co.), 643
- Sierra Leone Development Co. Ltd., iron ore (trade publication), 156; contract placed with Woodall-Duckham Construction Co. Ltd., 772
- Sigma Instrument Co. Ltd., Ariel electro-pneumatic gauge, 441
- Signal dish at Goonhilly Downs research station of GPO, 45
- Generator (Narda Microwave Corp. and Aveley Electric Ltd.), 142
- Horn at Andover, USA, 45
- Lamp fittings (trade publication), 482
- Linked, on roads, 679
- Road, at roundabouts, 680
- Traffic, 680
- Signalling, railway, fifty years of, by O. S. Nock (book), 656
- Sound, experiments (Tannoy Products Ltd.), 564
- Signs, traffic, for motorways, final report of committee on, 705
- Silcock, R., & Sons Ltd., new sugar silos (John Laing & Son Ltd.), 17
- Silcock, T. M. B., on metal resistivity under strain, 70; on strain gauging. See *LETTER*, 40
- Silcoloid 201 clear silicone rubber (ICI Ltd.), 321
- Silencer for Aerofoil axial flow fans (Woods of Colchester Ltd.), 380
- Silicon strain gauges, 522

- Silicones, introduction to chemistry and applications, by G. G. Freeman (book), 552
- Rubber, clear, Silcoloid 201 (ICI Ltd.), 321
- Silicose cold cure rubber (ICI Ltd.), 653
- Silkin, Lord, on industry, population and planning, 733
- Silo, malt and barley, for R. & W. Paul Ltd., 713
- Silver Blades Ice Rinks, new amusement centre at Leeds, 203
- Silver Feather rock drill (Holman Bros.), 695
- Silver-82 rock drill (Holman Bros.), 695
- Silver, R. S., on distillation of sea water at Kuwait, 130-132
- Silvertown Lubricants Ltd., formation of Gulf Oil (Great Britain) Ltd., 436
- Silvertown Rubber Co., Ltd., plastisol seals, 673
- Silvester, R., on timing unit for measuring discharge rate, 657-658
- Simca 1000 motor car, road test of, 39
- Simms Motor Units Ltd., compensating hydraulic governors, 768
- Simon-Carves Ltd., coke ovens for Spencer Steel Works, 534; dust precipitator for Reed Paper Group's new extension, 842
- Simon, Richard, & Sons Ltd., automatic coal weighing device for Reed Paper Group's new extension, 842
- Simon, R. W., Ltd., Vent-A-matic fan. See LETTER, 40
- Simon, Viscount, opening of Purfleet oil storage installation, 605
- Simons, E. N., on Surface Treatment of Steel (book), 592; (review), 816
- Simons-Lobnitz Ltd., formation of Hymatic Dredges Ltd., 431, 549
- Simonson, W. F., on steam set capacity, 639
- Simplex Dairy Equipment Co. Ltd., Complex convecter heaters, 292
- Simplex Products Ltd., Horstmann table lamps, 428
- Sims, C. J., Ltd., repairs to Tower Bridge, 357
- Simulators, flight, Vickers VC 10 aircraft, for BOAC (Redifon Ltd.), 827
- Sines, table of, by H. E. Salzer and N. Levine (book), 422
- Singer, H., Ltd., Champion Super spray gun, 306
- Singer Sewing Machine Co., vacuum cleaner, 32
- Sink, Sinkmatic (Louis J. Schaverien (Appliances) Ltd.), 192
- Sinkmatic sink (Louis J. Schaverien (Appliances) Ltd.), 192
- Sinter plant control panel (Contro-panels Ltd.), 176
- Oil fired, for Skinningrove Iron Co. (Head Wrightsons Iron & Steelworks Engineering Ltd.), 176
- Sintered components, high speed press for (F. J. Stokes Corp.), 269
- Sintered Metal Components (Chard) Ltd., high speed press for sintered components installed, 269
- Siporex concrete (Richard Costain Ltd.), 775
- Sir George Cayley's Aeronautics 1796-1855, by C. H. Gibbs-Smith (book), 422; (review), 654
- Sirocco fan (Davidson & Co. Ltd.), 380
- Sisler, C. W., on Industrial Painting, The Engineered Approach (review), 421
- Sites, construction, investigation of problems of, 11
- Sizewell atomic power station, model tests on cooling water intakes, 712
- Skicraft GmbH, boats fitted with NSU/Wankel rotary engine, 567
- Skids, motor car, learning to combat, 165
- Skidding and motor vehicles, 832
- Skills, managerial, productivity out of, by A. J. Speakman, 812
- Method and time study. See MST
- Recognizing, 416
- Training for, Carr Report, 244
- Skinner, K. A., on Key Engineering Co. Ltd., 477
- Skinningrove Iron Co. Ltd., shunting locomotives ordered from Sentinel (Shrewsbury) Ltd., 169; oil fired sinter plant installed, 176
- Skiving machine, abrasive belt, with air bearings (English Abrasives Corp. Ltd.), 710
- Skoda excavator (Strojimport and Strojexport), 412
- Skoda Octavia motor car, 423
- Sky, artificial, at Cambridge University, 76, 809
- Sky High Project, probable cancellation, 365
- Skybolt missile, cancellation of, 829
- Slattery, Sir Matthew, on BOAC, 461
- Sleeving, electrical, pte, Tygaflor (Tygadure Ltd.), 389
- Pvc, heat shrinkable, Polyshrink (Hayward Turbine Plastics Ltd.), 589
- Slide rule (trade publication), 124
- and sector, by Professor A. N. B. Garvan, 553
- Systematic technique, by R. K. Allan (book), 124
- Slim, Field-Marshal Viscount, on television by slotmeter payment, 65
- Slip-power recovery units (GEC Ltd.), 38
- Slotted angle, Dexion, 436
- Slough College of Further Education, monthly lectures, 485, 619
- Smart & Brown Ltd., acquired by Tap & Die Corp., 477
- Smelting furnace. See Furnace
- Smith, A. A., review of Metallurgy of Welding, 854; review of Brazing and Soldering of Metals, 854; biographical note, 854
- Smith, F. H., brief reviews of books, 591-592; on the Moulton bicycle, 635. See LETTER, 706; see also On The Shelf articles
- Smith, G. H. E., on Industrial Organization and Management (review), 759
- Smith, G. W. Q., on Channel Tunnel, 605
- Smith, I. R., review of Total Quality Control: Engineering and Management, 219; biographical note, 220
- Smith, John, & Co. (London) Ltd., Elephant portable shelters, 238
- Smith, L., formation of Lesney Products & Co. Ltd., 718
- Smith, P. H., on Scientific Design of Exhaust and Intake Systems (book), 482
- Smith, R. A., on Wave Mechanics of Crystalline Solids (review), 182
- Smith & Robinson (Leeds) Ltd., road tanker with plastic tank, 452
- Smith, S., historical and biographical note, 666
- Smith, S., & Sons (England), Ltd., historical note, 666; staff management training course, 787
- Smith, Samuel, & Sons Ltd., position and prospects, 581; subsidiaries of, 581
- Smith, S. B., on Samuel Smith and Sons Ltd., 581
- Smith, S. E., on Inert Atmospheres in the Chemical, Metallurgical and Atomic Energy Industries (review), 122
- Smith, T., on training managers, 382
- Smithells, C. J., on Metals Reference Book (book), 184
- Smithfield Poultry Market, paraboloid dome roof for, 640
- Smiths' Clocks and Watches Ltd., historical note, 666
- Smiths' English Clocks Ltd., synchronous electric clocks, 666-668; historical note, 666; Setric clocks, 666; Bijou electric clock movement, 666; Setric time-keeping movement, 668
- Smith's Industrial Division, multi-point indicator, 240; protection panel, 610; mineral insulated heaters, 663
- Smiths, John, of Keighley, cranes for Park Gate Iron and Steel Co. Ltd., 232
- Smith's Stamping Works (Coventry) Ltd., position and prospects, 645
- Smoke Control (England & Wales) 1963-1966, 829
- Snow, C. P., on Postscript to Science and Government (review), 154
- Snow, effect on railways, 797
- Snowdon, J., award of Consett Iron Co. university scholarship, 25
- Soag Machine Tools Ltd., wire and strip forming machine, 238; Rasmussen tube gilling machines, 507; Firma Curd Nube copy milling machine, 714
- Social Accounting Matrix, 65
- Distinctions and pay, 57
- Harmonization, 612
- Society of British Aircraft Constructors, Farnborough Air Show. See Farnborough
- of Instrument Technology, meeting, 844
- Organization, automation and, by R. A. Brady (review), 480
- Problems and methods of study, by A. T. Welford, M. Argyle, D. V. Glass and J. N. Morris (book), 656
- Soil compactors (Armstrong Whitworth (Metal Industries) Ltd.), 674
- Corrosion. See Corrosion
- Mechanics (trade publication), 288
- Soil Mechanics Ltd., soil mechanics (trade publication), 288; dry dock for Vickers-Armstrongs, 442-443
- Soil testing pocket penetrometer (Clockhouse Engineering Ltd.), 377
- Solano Air & Heat Systems Ltd., insulation at Spencer Steelworks, 652
- Solar batteries, 683
- Solar Industries Ltd., position and prospects, 613
- Solar Radiation Problems in Buildings, 1
- Solar Weld Languepin Ltd., Seleromat boring and profiling head, 270
- Solartron Electronic Group Ltd., analogue computer, 307
- Soldering and brazing of metals, by N. F. Lashko and S. V. Lashko-Avakyan (book), 88; (review), 854
- Solenoid, superconducting, of niobium/zirconium alloy (C. A. Parsons & Co. Ltd.), 659
- Solids, crystalline, wave mechanics of, by R. A. Smith (review), 182
- Soltronic electronic clock (Solvil & Titus), 600
- Solus-Schall equipment (Rank Organization), 487
- Solus-Schall Ltd., eddy current tester, 171
- Solvil & Titus, Soltronic electronic clock, 600
- Somatometry, introduction to, by R. W. Parnell, 264
- Somers, F. J., on Walter Somers Ltd., 313
- Somers, Walter, Ltd., position and prospects, 313; re-equipping of plants, 313
- Somers, Walter (Materials Handling) Ltd., position and prospects, 313
- Somerset Refrigeration Co. Ltd., to be taken over by Gardiner Prestcold Ltd., 49
- Sonar, variable depth, equipment (EMI-Cossor Electronics Ltd.), 396
- Sonex switch unit (G. H. Scholes (Wythen-shawe) Ltd.), 328
- Sormel 62 work bench (Henri Picard & Frère Ltd.), 207
- Sound broadcasting: general principles, by K. R. Sturley (review), 791
- Signalling experiments (Tannoy Products Ltd.), 564
- Soundproof room (PERA), 609
- Soup vending machine, Ditchburn Minispa, 256
- South Africa, Komati power station, 268
- Order placed with Blackburn Aircraft Ltd. for Buccaneer aircraft, 501
- South Coast Ready-Mixed Concrete Co. Ltd., share capital acquired by Ready Mixed Concrete (United Kingdom) Ltd., 17
- South Durham Steel & Iron Co. Ltd., pipe for Gas Council, 321; steel pipes for gas grid, 377; Spencer Steel Works, 535; new oil facilities for Petrofina at Wearside, 809
- South-East Essex Society of Professional Engineers, 570
- South of Scotland Electricity Board, contracts placed for Cockenzie power station, 713; progress at Hunterston atomic power station, 857
- Wales/London Motorway, 775
- South Wales Switchgear Ltd., position and prospects, 381; coming-of-age, 381
- South Western Marine Factors Ltd., agreement with Maybach Motorenbau GmbH and Mercedes-Benz (Great Britain) Ltd., 529
- Southampton University, research on concrete structures, 62-63; lack of funds for yacht design, 629
- Water, Esso pipelines under, 202
- Southeros Ltd., position and prospects, 81; annual review, 81; acquisition of D. S. Fordyce & Co. Ltd., 81
- Southdown Motor Services, Hovercraft service, 525
- Southern Air Traffic Control Centre, 332
- Southern Analytical Ltd., cathode-ray polarography (trade publication), 514
- Southern Cross liner (Shaw Savill), 34
- Southern Gas Board, use of aluminium-clad chimney, 216
- Southern Industries (Croydon) Ltd., acquired by Spencer Gears Ltd., 749
- Southern Instruments Ltd., miniature recorder, 295
- Sowers, G. F., on Earth and Rockfill Dam Engineering (book), 592
- Space, atomic reactor for, ground test on, 458
- Demands nuclear power systems, by B. C. Lindley, 457-458
- Hilbert, introduction to, by S. K. Berberian (book), 88
- Materials in, symposium on, 231
- Men in, Russian projects, 193
- Power system, Sunflower, 521
- Probe, Mariner II, 829
- Mars I, 829
- Race, US investment in, 293
- Simulation, high vacuum (F. J. Stokes Corp.), 158
- Spacecraft and missiles, structural design of, by L. H. Abraham (review), 250
- Orbiting, joining two (Westinghouse), 253
- Spacemaker reach truck (Lansing Bagnall Co. Ltd.), 582-584
- Spachner, Dr. S. A., on new press forging techniques, 626
- Spacing attachment (A. A. Jones & Shipman Ltd.), 440
- Spadadam Rocket Establishment, 405
- Spalding, Prof. D. B., review of Grosskessel-Feuerungen: Theorie, Bau und Regelung, 54; biographical note, 56; review of Thermodynamics, 420; review of Textbook on Heat Transfer, 420; biographical note, 422
- Spandofam expanded polyurethane foam (Baxenden Chemical Co. Ltd.), 357
- Sparatron (Manufacturing) Ltd., electrolytic grinding machine, 208; spark erosion machine, 475
- Spark erosion circuit, Linderode (Linderfort Ltd.), 16
- Machine (Sparatron (Manufacturing) Ltd.), 475
- Spartan Steel & Alloys Ltd., stainless steel, 338; Polyvac spectrographic laboratory, 338
- Speakman, A. J., on work study, 755; on productivity out of managerial skills, 812
- Specifications. See British Standards Institution; Standards
- Spectra Chemicals Ltd., layout fluid, 115
- Spectrographic Laboratory, Polyvac, for Spartan Steel & Alloys Ltd. (Hilger & Watts Ltd.), 338
- Spectrometer, electron spin resonance (Atomic Laboratories Inc.), 159
- Speed limits on roads, 679
- Speiser, A. P., on Digital Computers (review), 123
- Spemby Ltd., intercom equipment, 16; beta-ray radiation shield, 128
- Spencer Gears Ltd., position and prospects, 749; acquisition of Southern Industries (Croydon) Ltd. and Wright Bros. (Sheet Metal Workers), Ltd., 749
- Spencer & Halstead Ltd., expansion of factory, 509; historical note, 581; products of, 581; position and prospects, 581
- Spencer, H. F., on Spencer Steel Works, 532; on demand for steel strip, 540
- Spencer, I., to continue as chairman of Hamworthy Engineering Ltd., 477
- Spencer (Melksham) Ltd., Tema docks conveyor system, 217
- Spencer Steelworks, 525; contractors for, 532-540; details of, 532-540; equipment and machinery suppliers, 532-540; fuel oil for, 537. See LETTER, 603; staff training facilities, 538-539; foremen training at, 539; management training at, 539; metallurgical and chemical training at, 539; prospects of, 540; LD process at, 609; insulation at, 652; cost of, 661; see also Richard Thomas & Baldwins
- Spencer, Walter, & Co. Ltd., position and prospects, 717
- Sperry Gyroscope Co. Ltd., GSP-Matic jig-boring machine installed, 204
- Sperry Rand Corp., Univac 422 computer to teach data processing, 415; coherent radiation with lasers, 764
- Spey-by-pass engine, Government aid for (Rolls-Royce Ltd.), 708
- Spheres, Allplas (Lacrinoid Products Ltd.), 432
- Ethylene storage, for ICI Ltd. (Whessoe Ltd.), 217
- Spheriseal ball bearing units (Ransome & Marles Bearing Co. Ltd.), 811
- Spirax-Sarco Ltd., float trap, 16
- Spitfire 4 motor car, Triumph, 499
- Sportsman Vario 35 mm camera (Ilford Ltd.) 119-121
- Sportsmaster camera (Ilford Ltd.), 119
- Spot welding. See Welding
- Spotts, M. F., on Design of Machine Elements (book), 288
- Sprawler crane, truck mounted, NCK-RapieR 555 (NCK-RapieR Ltd.), 641
- Spray drying equipment, Luwa, made to measure (Steels Process Plants Ltd.), 709
- Equipment, Versa (TC Spray Finishing Systems (Bede) Ltd.), 541
- Gun. See Gun
- Nozzle. See Nozzle
- Painting unit, airless, Titan (Alfred Bullows & Sons Ltd.), 841
- Spraying, crop, equipment, use of austenitic cast iron, 815
- Equipment, Hydro-Spray, Graco (F. W. Berk & Co. Ltd.), 689
- Spraying equipment, plasma (Associated Engineering Ltd.), 670
- Power-Flo, Graco (F. W. Berk & Co. Ltd.), 689
- Spraymat ice protection system for aircraft (D. Napier & Son Ltd.), 90-92
- Spraymix mixing unit (Gardners of Gloucester), 735
- Spreadbury, E. A. W., on Television Receiver Servicing (book), 124
- Spreadbury, L. F., on Electronic Rectification (book), 288
- Springs (trade publication), 817
- Design and application, by N. P. Chironis (review), 622
- Manufacturers Research Association, investigation of hydrogen embrittlement, 521
- Square D Ltd., mobile showroom, 73; position and prospects of, 549; products of, 549; new factory, 549
- SS-11 missile, 631
- St. John Shipbuilding & Drydock Co. Ltd., cranes from Butters Bros. & Co. Ltd., 768
- Staalconstructie Montagebouw DEMY, NV, to represent Qualter, Hall & Co. Ltd., 349
- Stabilizers, Denny-Brown, for Northern Star liner, 35
- Stacey, N. H., on Common Market, 572; on export operations, 772
- Stacey, Nicholas, Associated, economic advisers, 572
- Stacking of Materials (RoSPA publication), 790
- Stackman, H. A., on Industrial Organization and Management (review), 759
- Staddon, R. G., on the age of lawn mowers, 298-299
- Stade, G., on Technique of Grinding (review), 691
- Staebler, U. M., on water moderated atomic reactors, 696
- Staehele gear hobbing machine (BPS Machinery & Spares Co. Ltd.), 341
- Stag Allenite Tiptaker toolholders, positive and negative rakes (Edgar Allen & Co. Ltd.), 578
- Staging, mobile, Longjohn (Access Equipment Ltd.), 506
- Stahler, A. F., theory of free-surface water-table analogue of compressible source vortex flow, 489
- Stainless steel. See Steel
- Stainless Steel Pumps Ltd., stainless steel pump, 378
- Stainless Steel Vessels (London) Ltd., fountains for Hyde Park, 357; stainless steel fountain bowls, 544
- Stalwart amphibious vehicle, Alvis, 296, 526
- Standard Steel Corp., processing equipment, 306
- Standard Telephones & Cables Ltd., semiconductor circuits and valves (trade publication), 252; use of aluminium extrusions as heat sinks, 418; Executive Intercom local telephone system, 476; suggestion prize to W. R. Netherton, 649; ILS localizer aerial, 736, 761; cable link between New Zealand and Fiji, 772
- Standards, Plain Words on, 634
- United States Bureau of. See United States National
- Standley, K. J., on Oxide Magnetic Materials (review), 360
- Stanford, E. G., on Progress in Non-Destructive Testing (review), 322
- Stanford University, caesium plasmas, 256
- Stanhope Machine Tools Ltd., GSP-Matic jig-boring machine, 204
- Stankoimport, contracts placed with Newall Engineering Co. Ltd., 336
- Stanley, Dr. C. O., on British Electronic Industries Ltd., 613; on Pilkington Committee, 613
- Stanley Magic-Door automatic door (Tonks-Rowley Automatic Doors Ltd.), 342
- Stanton Ironworks, experimental solid fuel for cheaper steelmaking, 762
- Stanton & Staveley Ltd., research on injecting fluid coal into blast furnaces, 788
- Star Cranes Ltd., mobile self-erecting tower crane, 105
- Starling, C. W., on Theory and Practice of Flat Rolling (book), 856
- Starters (trade publication), 456
- Automatic, for motors, Vapormatic (George Ellison Ltd.), 111
- Rotax (Teddington Aircraft Controls Ltd. and Rotax Ltd.), 313
- Unit, emergency (trade publication), 856
- Startrite Machine Tool Co. Ltd., Inca wood-working machine, 396
- Stationery Office, road accident statistics, 832
- Statistical inference, the foundations of: a discussion, by L. J. Savage *et al* (book), 324
- Statistics, mathematical, elements of, by J. F. Ratcliffe (book), 252
- Use and abuse of, by W. J. Reichmann (book), 56
- Status symbols, Plain Words on, 570. See LETTER, 707
- Staveley Industries Ltd., research and development contract on machine tools from DSIR, 53
- Steam for paper production, 842-843
- Plant, austenitic cast iron for, 814
- Rollers, Aveling and Porter, historical note on, 353
- See also Road roller
- Set capacity, 639
- from test equipment, using, 35
- Trapping and condensate removal (Engineering Equipment Users' Association) (book), 728
- Traps, Conflow (W. Hopwood & Co. Ltd.), 378
- Turbine. See Turbine
- Steamship. See Liner: Ship; etc.
- Steeds, W., on Motor Vehicle: Textbook for Students, Draughtsmen and Owner Drivers (book), 124; on Cambridge Don examines his bookshelf, 496
- Steel, alloy, bridge, brittle fracture of, 375
- Alloying elements in, by E. C. Bain and H. W. Paxton (book), 220

- Steel, brittle fracture of, 594
— Cables for River Severn suspension bridge (Dorman Long (Steel) Ltd.), 789
— Carbon, carbon oxidation in weld pool during metal-arc welding of, by A. Apold (book), 624
Steel & Co. Ltd., output and trading surplus, 277; position and prospects, 277
Steel Co. of Wales, computer control of rolling mills, 337; subscription to University College of Wales appeal, 448; Arch process control system installed (Elliott-Automation Ltd.), 779
Steel, cold extrusion, research on, 31
— Forging of, by H. D. Feldman (review), 322
— Creep resisting, 275
— Cut to size, 109
Steel Equipment Co. Ltd., Beamlock racking, 208
Steel foundry. See *Foundry*
— Furnace. See *Furnace*
— Girder Bridges, BS 153—Part 3B—Stresses, revision in part by British Welding Research Association, 695
— Bridges, by J. McHardy Young, 839
Steel Group, sales conference, 336
Steel, heat treatment of. See *Heat treatment*
— Heavily tinned (Richard Thomas & Baldwins Ltd.), 724-725
— Industry, British, history of, by J. C. Carr and W. Taplin (review), 251
— Changes in, 637
— Growth factors in, 540
— and iron, manufacture of, by G. R. Bashforth (book), 792
Steel, J., on Steel & Co. Ltd., 277; on Steel Group, 336
Steel, L. J. S., on Triplex Holdings Ltd., 445
Steel, mild, yield of, 594
— Operatives, heat resisting jackets for (United Steel Cos. Ltd.), 337
— Partition panels (Aerograph-DeVilbiss Co. Ltd.), 579
Steel Peech & Tozer Ltd., arc furnace project for scrap steel, 510
Steel plate girders, welded, investigation of fatigue resistance of, 11
— Handling equipment, Collocator, 237
— Lifting equipment, Vac-U-Lift, 577
— Products (trade publication), 220
— Properties of, by Ritchie, 557
— Protection system, Ferrodor (Griffiths Bros. & Co. London Ltd.), 217
— Rail. See *Rail*
— Scrap. See *Scrap*
— Slitting and cutting equipment (Auxiliary Rolling Machinery Ltd.), 109
— Stainless, castings of (AB Bofors), 689
— Laser hole in, 764
— Pump of (Stainless Steel Pumps Ltd.), 378
— (Startan Steel & Alloys Ltd.), 338
— Steel clad, 453
— Valve (Audo Co. Ltd.), 321
— Stock list (trade publication), 456
— Strip, prospect for, by Q. Lumsden, 540
— Structural, priming at the mill, by A. J. Rhind-Tutt, 234-235
— Surface treatment of, by E. N. Simons (book), 592; (review), 816
— Terne coated (Richard Thomas & Baldwins Ltd.), 724-725
— Tin-terne coated (Richard Thomas & Baldwins Ltd.), 724-725
— Vacuum remelted (Firth Brown Ltd.), 789
— for vitreous enamelling, Diron, 688
— Wrought, comparison of standards, 621
Steelmaking, experimental solid fuel for cheaper, 762
— Furnace. See *Furnace*
Steels Process Plants Ltd., Luwa spray drying equipment made to measure, 709
Steelweld Ltd., welding transformers, 542
Steelwork, structural (trade publication), 422
— Fabrication of (Sanders and Forster Ltd.), 139
Steelworks, Spencer. See *Spencer*
— See also *Iron and steel works*
Steeper, Hugh, Ltd., Hugh Steeper artificial arm, 317-319; historical note, 317; associations with other companies, 317
Steering control system, marine, Brown GMS/Dan (S. G. Brown Ltd.), 798
— Gear for high speed power boat, 227
Steinecker Hydro-Automatic brewing system, 453
Stelcon Industrial Floors Ltd., prefabricated level crossing, 107
Stelvetite steel panels for lift doors, 189
Stencil washing machine (Berridge Aircraft Ltd.), 541
Stenner of Tiverton Ltd., sawmills (trade publication), 692
Stenner's Ltd., exhibit at British Industrial Equipment Exhibition, 529
Step Industrial Equipment Ltd., Wanner lubrication equipment, 15
Stephen, Alexander, & Sons Ltd., use of Collocator plate handling plant, 237; *British Bombardier* tanker for BP Tanker Co., 296
Stephens Belting Co. Ltd., Miracon sectional conveyor, 463
Sterilization, irradiation plant for, 757
Sterling Cables Ltd., Hi-Den polyethylene tubing, 757
Sterling-Safway Ltd., standard scaffolding and economic formwork; Safway load bearing table, 267
Stern, H., on Design of Hydraulic Control Systems (review), 286
— L. H. G., on Progress in Aeronautical Sciences (book), 482
Stetson, R., on Electrical Encapsulation (book), 792
Stevenage Development Corp., contract to John Mowlem & Co. Ltd., for further development at Stevenage, 169
Stevenage, further development at, 169
Stevens, H. G., Co. Ltd., Hans-Worm Unimatic linear ball bearing, 777
Stewart, D. A., on Design and Placing of High Quality Concrete (book), 624
Stewart, D. J., review of Colour Photomicrography with a 35 mm. Camera, 590; biographical note, 592
Stewart & Grey Ltd., Manchester headquarters of Co-operative Insurance Society Ltd., 573
Stewart-Richardson, Sir Ian, on Vokes Group Ltd., 313
Stewarts Construction Equipment Ltd., lorry mounted tower crane, 38
Stewarts & Lloyds Ltd., steel piping for Fawley to London pipeline, 202; pipe for Gas Council, 321; steel pipes for gas grid, 377; training school, 515; pipework for Spencer Steel Works, 537; lighting columns for Hyde Park/Marble Arch road improvement scheme, 544
Stillite Products Ltd., insulation at Spencer Steelworks, 652; Therbloc insulation lags, 652; mineral wool insulation, 764
Stinton, Sqdn./Ldr. D., review of Santodumont: A Study in Obsession, 323; biographical note, 324
Stockdale Engineering Ltd., string discharge filters (trade publication), 422; rotary filters (trade publication), 692
Stockdale, L. H., on Servomechanisms (review), 286
Stockholm, British Exhibition at, 104
— Technical Fair, 436
Stokes, F. J., Corp., high vacuum space simulation, 158; high speed press for sintered components, 269; vacuum evaporation system, 521
Stokvis, R. S., & Sons Ltd., Dico Ovenette, 128
Stone-Chance Ltd., Omniflasher beacon flasher, 714
Stone, J., & Co. (Deptford) Ltd., Stone-Vapor packaged boiler, 750-752; historical note, 750; licensing agreement with Vapor Corp. of America, 750
Stone, Josiah, historical and biographical note, 750
Stone, Professor R., Social Accounting Matrix, 65
Stone-Vapor packaged boiler (J. Stone & Co. (Deptford) Ltd.), 750-752
Stop valve. See *Valve*
Storage racks. See *Racks*
Storemaker fork lift truck (Lansing Bagnall Ltd.), 378
Storey, Thos. (Engineers) Ltd., Uniflote floats, 75; Bailey bridging (trade publication), 592
Stoves with back boilers, 796
— Closed, with back boiler, Parkray 66 (Radiation Group), 796
Stoves Ltd., use of Diron steel for one coat vitreous enamelling, 688-689
Stoving ovens. See *Ovens*
Stour Valley Motor Co. Ltd., position and prospects, 509
Stour Valley Trucks Ltd., position and prospects, 509
Strachan, G., appointed deputy managing director of John Brown & Co. (Clydebank) Ltd., 613; biographical note, 613
Strachan & Henshaw Ltd., wagon handling equipment for Spencer Steel Works, 532
Strahl patrol boat for Federal German Navy (Vosper Ltd.), 637
Straightener, stretch (Chatburn & Chantry Ltd.), 841
Straightening press. See *Press*
Strain, constant, testing machine, 172
— Gauge. See *Gauge*
— Gauging for design and control. See *LETTERS*, 40, 70
— Metal resistivity under, 40, 70
— See also *Stress*
Strapping tape, reinforced (Rotunda Ltd.), 83
Street, A., on Metals in the Service of Man (book), 592
Street lighting, 680
Streety Manufacturing Co. Ltd., trade moulders, 558; formation of BIP Engineering Ltd., 558; historical note, 558; association with British Industrial Plastics Ltd., 558
Strength of materials, by J. P. D. Hartog (book), 514
— of materials, elements of, by S. Timoshenko and D. H. Young (book), 56
Stress, alternating. See *Fatigue*
— Steel girder bridges, BS153, Part 3B, revision in part by British Welding Research Association, 695
Stretch straightener (Chatburn & Chantry Ltd.), 841
Strike at Maltby Main Colliery, 25
Strip mills, lubricating, by J. A. Robertson, 301
— Shearing machine, 57
— Steel, prospect for, by Q. Lumsden, 540
— and wire forming machine, (Meyer Roth and Paster & Soag Machine Tools Ltd.), 238
Strojexport, Skoda excavator, 412; surface grinding machine, 412; milling machine, 412; crankshaft grinding machine, 412; copying lathe, 412
Strojimport, chemical plant for Czechoslovakia ordered from Humphreys & Glasgow Ltd., 572
— Computer, 143
— Skoda excavator, 412; surface grinding machine, 412; milling machine, 412; crankshaft grinding machine, 412; copying lathe, 412
Structural adhesive. See *Adhesive*
— Design of missiles and spacecraft, by L. H. Abraham (review), 250
— Engineering, aluminium in, symposium on, 770
— Application of digital computer to, by D. M. Brotton (book), 624
— Steel. See *Steel*
— Steelwork (trade publication), 422
— Fabrication of (Sanders & Forster Ltd.), 139
Structural Uses of Aluminium, 809
Structures, concrete. See *Concrete*
— Marine, and ports, design and construction of, by A. De F. Quinn (review), 591
— Model, fire research using, 394
Structures, rigid-jointed, rapid method of analysis for: moment distribution, by E. Lightfoot (review), 22
— Size effects in models of, by E. H. Brown, 593-595
Stuart, D. A., Oil Co. (Great Britain) Ltd., Dasco IFR hydraulic fluid, 147; Hi-D water grinding concentrate, 147
Stuart, Dr. P. R., review of Experimental Cryophysics, 309; biographical note, 392
Stuart Street Basic Training Centre, award of Elizabeth Parker Safety Cup, 211
Stubbe-Metalastik Serpentin flexible conveyor (Mitchell Engineering Ltd.), 331
Stübner, K., on Compendium on Clutches (book), 288
Stubs, P., note on, 509
Stubs, Peter, Ltd., historical note, 509; automatic cutting machines, 509; subsidiaries of, 509
Stubs Welding Ltd., position and prospects, 509
Stuchbery, A. L., on profits, 733
Studebaker Avanti motor car, 498
Students, overseas, in Britain (British Council publication), 585
— Sandwich courses for, 257
— Technical, use of English for, by R. A. Kelly (review), 154
Studies, advanced, UK's first institute for, by Professor S. A. Tobias, 178-180
— Liberal, booklet on (Ministry of Education), 485
Sturley, K. R., on Sound and Television Broadcasting: General Principles (review), 791
Sturtevant Engineering Co. Ltd., flue-dust extraction plant for Reed Paper Group's new extension, 842
Styling, comparison with design, 102, 134
Submarine, *Dreadnought*, atomic propelled, 828
— *Finwhale*, 217
— Perspex, Aquamobile (Submarine Products Ltd.), 600
Submarine Products Ltd., Aquamobile perspex submarine, 600
— Nylon mooring ropes for, 217
Sud Aviation, agreement with British Aircraft Corp., on design of Concord supersonic airliner, 734
Sudan, Khashm el Girba housing scheme, 407
Sugden, E. W., on Parmiter Hope & Sugden Ltd., 145; on J. F. Collier & Co. Ltd., 145
Suit, flying, high altitude (Baxter Woodhouse & Taylor Ltd.), 295
Sullivan, Maj. C., bridge deck launching system, 695
Sullivan, R. M. E., on Vibration Mills and Vibration Milling (review), 22
Sulphur dioxide, dry process of adsorption (DSIR), 626
Sulzer Bros., design of Monotube boiler, 2; circulating water channel for ship research, 290
Sulzer Bros. (London) Ltd., diesel engines for rail traction (trade publication), 514; Sulzer diesel engines for locomotives, 740
Sulzer high-powered diesel engine (Swan, Hunter & Wigham Richardson Ltd.), 112
— Locomotive diesel engines (Vickers-Armstrongs (Engineers) Ltd.), 740
— Monotube boiler for Drakelow C power station (International Combustion Ltd.), 2-4
Summer, W., on Ultra-Violet and Infra-Red Engineering (review), 87
Summers, John, & Sons Ltd., Stelvetite steel for lift doors, 189; Stelvetite steel for shutter doors, 453; Diron steel for one coat vitreous enamelling, 688-689; paper on hot strip mill tension control by loopers, 844
Summers, Sir Richard, on changes in British Steel Industry, 637
Sumo Pumps Ltd., submersible pump, 110
Sun. See *Solar*
Sunbeam Electric Ltd., electric can opener, 828
Sunderland Shipbuilding Dry Docks & Engineering Co., association with William Doxford & Sons (Engineers) Ltd., 215
Sundstrand Corp., USA sales rights of Desoutter Bros. Ltd. tools, 572
Sunflower space power system, 521
Super Minx motor car, Hillman, road test of (Rootes Group), 165
— Motor car, Hillman (Rootes Group), 133
Super Snipe motor car, improvements to, 333
Super Ultrasonic boilers (Davey, Paxman & Co. Ltd.), 142
Superconducting solenoid of niobium/zirconium alloy (C. A. Parsons), 659
Superheater and turbine by-pass system for boilers, 4
Superstructure, aluminium, for ships, underwriters' concern with, 429, 432
Supervisors, a method of fairer pay for, by J. J. Henderson, 437
— Course at Dowty Seals Ltd., 755
Supervisory Training Services, *Developing Management*, 617; scope of courses, 617
Supramar hydrofoil boat, 830
Surat power station, 425
Surface, fast moving, measuring temperatures of, 768
— Indicator, Surfindicator (Aveley Electric Ltd.), 112
— Treatment of steel, by E. N. Simons (book), 592; (review), 816
Surfindicator surface indicator (Aveley Electric Ltd.), 112
Surge tester, high voltage (Rank Cintel Ltd.), 578
Surgery, cardio-vascular, European Society of, Congress of, 191
Surgical implants of titanium, 678
Survey Technical Services Ltd., formation of, 315
Surveyor project, 193
Suspension, air, Dunlop Pneuride, for BMC commercial vehicles, 333
— for motor vehicles (trade publication), 482
— for motor vehicles (AEC Ltd.), 401
— Systems for tanks, 631
— Unit for motor cars, Hydrolastic, 194
Sutcliffe, Richard, Ltd., Double Drive conveyor driving head, 170
Sutton Power Units Ltd., power pack mounting and cowlings, 642
Swales, G. L., on austenitic iron in the chemical and petroleum industries, 620
Swallow, W., on Vauxhall Motors Ltd., 713
Swan, Hunter & Wigham Richardson Ltd., Sulzer high-powered diesel engine, 112; basic design cargo ship, 129; order position, 129; "standard" dry-cargo ship, 162; flow lines for ships, 577; shipyard modernization, 577
Swansea University, postgraduate courses, 279
Swedish Aga Co., mechanical heart, 191
Swedish Aircraft Co., UK sales of Saab motor cars, 169
— State Power Board, optimum pylon positioning by computer, 698
Sweet, R. W., on road drainage, 746
Swihry-Christoffel transformation, 199
Swift metal spraying gun (Mining & Chemical Products Ltd.), 475
Swindin, N., on Engineering Without Wheels (book), 252
Swingloader unloader (C. H. Johnson (Machinery) Ltd.), 207
Switch, Classic, Crabtree, 328
— Master (Asquith Electric (Colne) Ltd.), 142
— Micro (trade publication), 184
— Miniature tap, Grayhill (Dubesco Laboratories Ltd.), 240
— Pressure (trade publication), 728
— Push button (trade publication), 482
— Rotary (Austinite Ltd.), 672
— Time (Venner Ltd.), 380
— Unit, Sonex (G. H. Scholes (Wythenshawe) Ltd.), 328
Switchgear, circuit breakers, Bulldog Pushmatic (H. J. Baldwin), 79
Sykes, A. J. M., on Dis-Incentives within British Industry, 167-168
Sykes, Henry, Ltd., Layton diaphragm pump, 14; Univac trailer pump, 579
Sykes, J. H. M., on drain on world power resources, 604; on limits of traditional power sources, 638-639. See *LETTER*, 706; on nuclear battle: graphite versus water, 696-697; on developing atomic power, 701
Sykes, Dr. P. H., technologist and productivity, 687
Sykes, W. J. A., on disc brakes for railway rolling stock, 661
Symbols, status. See *Status symbols*
— World screw thread series, guide to (W. H. A. Robertson & Co. Ltd. publication), 471
Symmons, R. W., window extraction fans, 40
Symonds, A. H., on vitreous enamel, 588
Symonds, D., on Symonds Engineering Co. Ltd., 145
Symonds Engineering Co. Ltd., position and prospects, 145
Synchrotron, zero gradient, tuning up, 361
Syncom satellite, 97
Synonyms, 547
Synthesis of optimum nonlinear control systems, by H. L. Van Trees (book), 514
System-Matic duplicating machine (Gestetner Duplicators (BSO) Ltd.), 476
Systems Engineering Services Ltd., Fluoro-Glide pte lubricant, 147
Systems Research Ltd., research and study on teaching machines, 723

T

- T188 research aircraft, Bristol, 259
T195 self-propelled howitzer, 631
Tables, air-supported, for machine tools, 346
— Automatic indexing (Allen Keir Ltd.), 410
— Industrial engineering, by S. Eilon (book), 124
— Load bearing, Safway (Sterling-Safway Ltd.), 267
— Rocking (Short Bros. & Harland Ltd.), 475
— Rotary, with air bearings (Rolls-Royce Ltd.), 348
— of sines and cosines to ten decimal places at thousandths of a degree, by H. E. Salzer and N. Levine (book), 422
Tait, Dr. J. S., on Colleges of Advanced Technology, 244, 446
Talbot, J. H., development of tinplate classifying machine, 778-779
Talbot-Stead Tube Co. Ltd., formation of TI Stainless Tubes Ltd., 477; Godolphin food processing valves, 600
Talisman sheet metal storage racks (Williams & Dickenson (London) Ltd.), 238
Tandy, R., on conveyors for metal powders, 738. See *LETTER*, 770
Tangyes Ltd., Kempsafe-Tangyes industrial heater, 378; Tangye Hydralite heavy duty jack, 518-520; historical note, 520
Tank, aluminium, for liquid oxygen (BOC Ltd.), 83
— AMX, 631
— Battle, M60, 630
— Centurion, 630
— Chieftain, 630
— Design, impasse in, by R. M. Ogorkiewicz, 630-631
— Fuel, collapsible, POL (Flight Refuelling Ltd.), 367
— Gas turbine engines for, 631
— Guided weapons systems for, 631
— Leaks, repair with epoxy resin, 557
— Lining, plastic, Pentaphane (British Cellophane Ltd.), 589
— Oil storage, putting new life into, 284-285. See *LETTER*, 496
— Optical range finders for, 631
— Optimum gun size for, 630
— Petrol and diesel engines for, 631
— Plastic, for road tanker, 452
— Repairs by glass reinforced epoxy resin (Liquid Metal Applicators Ltd.), 284-285
— Rexoplast (H. Erben Ltd.), 506
— Seals for integral tanks, 50
— Suspension systems for, 63
— Titanium, 678

- Tank, transformer, in aluminium (Alcan Industries Ltd.), 321
 — Weight reduction, 631
 Tanker, *British Bombardier*, stopping tests on, 296
 — *British Hussar* (BP Tanker Co. Ltd.), 858
 — *British Merlin*, for BP Ltd. (Harland & Wolff Ltd.), 479
 — *Esso Hampshire*, 201
 — Liquid gas (Vickers-Armstrongs (Shipbuilders) Ltd.), 377
 — Methane, aluminium plates for, 115
 — Road. See *Motor vehicle*
 — Standing waves in, by Prof. J. R. D. Francis and G. Kempson, 858-859
 — Stopping tests on (British Ship Research Association), 296
 — Terminal, offshore, Foa, Iraq (Raymond-Costain-De Long), 503
 — 100,000 ton, for BP Tanker Co. Ltd. (Vickers-Armstrongs Ltd.), 703
 — Vehicle. See *Motor vehicle*
 Tannoy Products Ltd., sound signalling experiments, 564
 Tap & Die Corp., position and prospects, 477; acquisition of Smart & Brown Ltd., 477
 Tape control, cheap, common sense brings, 608
 — Duct sealing, flame resistant Minnesota Mining & Manufacturing Co. Ltd.), 453
 — Recorder, miniature (Southern Instruments Ltd.), 295
 — Strapping, reinforced (Rotunda Ltd.), 83
 — Tarred, Pitchkote, for pipe protection (Metal & Pipeline Endurance Ltd.), 389
 — Tygaflo (Tygadure Ltd.), 389
 Taplin, W., on History of the British Steel Industry (review), 251
 Tar-L automatic copying machine (Tarex (England) Ltd.), 271
 Tarex (England) Ltd., Tar-L automatic copying machine, 271
 Tasman Bridge (Braithwaite & Co. Engineers Ltd.), 381
 Tauc, J., on Photo and Thermoelectric Effects in Semiconductors (book), 124
 Taunus 12M motor car, Ford, details of, by G. Wilkins, 368
 Tavistock Institute of Human Relations, research into industrial relations, 754
 Tawe River, clean water for, 774
 Tax dodging, 168
 — Purchase, reduction on motor cars, 597
 Taxation, 168, 265
 Taylor, C. F. (Metal Workers) Ltd., use of Quenchweld method of welding heavy iron castings, 478
 Taylor & Challen Ltd., notching press, 410
 Taylor Electrical Instruments Ltd., multimeter, 170; panel meters (trade publication), 252
 Taylor, J. A., on information on liquid fuels, 716
 Taylor, W. T., on Perkins Mars gas turbine water pumping set, 145; on Perkins portable pumping set, 145
 Taylor-Woodrow-Anglian Ltd., formation of, 74; activities of, 74; factory made housing units, 74
 Taylor Woodrow & Co. Ltd., overseas orders, 407; Arcon buildings, 407
 Taylor Woodrow Construction Ltd., cooling water intakes for Sizewell atomic power station, 712
 Taylor Woodrow Ltd., formation of Taylor-Woodrow-Anglian Ltd., 74
 Taylor Woodrow (Overseas) Ltd., Port of Spain "B" power station, 73; Congo Comilog Railway, 407; contract for Miraflores Dam, 503
 Taylor Woodrow (Sierra Leone) Ltd., floats for derrick crane, 75
 TC indexing head (United Technical Supplies Ltd.), 542
 TC Spray Finishing Systems (Bede) Ltd., Versa spray equipment, 541
 T.D. Animation Ltd., Movotron animator, 12
 Tea-vending machine costs, 334
 — Machine, Teamatic (Machine Economy Ltd.), 256
 Teacher, cinema film for (Machine Tool Trades Association), 211
 — University, some thoughts on, 383
 Teaching and learning machines, programmed, by R. Goodman, 316
 — Machine, adaptive, 723
 — getting them into proper perspective, 316
 — Work sampling through films, 686
 — See also *Course; Education*
 Teamatic tea vending machine (Machine Economy Ltd.), 256
 Techne (Cambridge) Ltd., fluidized bath, 508
 Technivision Ltd., *International Focus on Technological Development*, 550
 Technological change, speed of, 9
 — Development, international focus on (Technivision Ltd. publication), 550
 Technologies, interaction of, by L. Holliday, 352
 Technology, American and British, in the 19th century, by H. J. Habakkuk (review), 726
 — Diploma of, mounting interest in, 212; statistics on, 753
 — Science and civilization, by Prof. R. V. Jones, 554
 Tecon Corp., Derbendi Khan Dam, 106
 Tectool Manufacturing Co., hand grooving tool, 396
 Tedder, O., on electromagnetic control of liquid iron, 174
 Teddington Aircraft Controls Ltd., cooperation with Rotax Ltd., 313; Teddington/Micro Turbo gas turbines, 313; Rotax starters, 313
 Tees Conservancy Commissioners, models of rivers for, 75
 Tees Side Bridge & Engineering Works Ltd., blast furnace for Dorman Long (Steel) Ltd., 49; blast furnace, 672
 Teflon film capacitors (Salford Electrical Instruments Ltd.), 206
 Tel-E-Lect Products Inc., Tel-E-Lect line construction unit, 406
 Telcon Metals Ltd., use of Metamic metal/ceramic material, 18
 Telecommunications equipment (trade publication), 392
 Teledictation dictation system (Aga Dictating Machine Co. Ltd.), 476
 Teledicator Ltd., development of high speed automatic timplate classifying machine, 778-779
 Teleflex Products Ltd., lubrication of linear actuators, 61; aircraft control linkages, 295
 Télémeccanique Électrique, methods of personnel selection, 193
 Telemetry data from Injun I satellite, 365
 — System, voice frequency (EMI Electronics Ltd.), 325
 Telephone exchange equipment, automatic, for Jordan (AEI Ltd.), 232
 Telephone/radio units for police (Cossor Communications Co. Ltd.), 469
 Telephone, sound powered, Genephone (John Davis & Son (Derby) Ltd.), 463
 — System, local, Executive Intercom (Standard Telephones & Cables Ltd.), 476
 — Self fault finding (Bell), 94
 Telequipment Ltd., oscilloscope, 47, 79
 Telescope, radio. See *Radio-telescope*
 Television Act of 1954, 773
 — Aerial at Croydon for ITA, 773
 — Broadcasting: general principles, by K. R. Sturley (review), 791
 — Closed circuit, for archaeological observation, 253
 — Circuit, for Latina atomic power station (Pye TVT Ltd.), 793
 — Circuit, for rear vision in aircraft (EMI Electronics Ltd.), 361
 — Colour, as advertising medium, 1
 — Paying by slotmeter, 65
 — Pilkington Committee report on, 1
 — Receiver servicing, by E. A. W. Spreadbury (book), 214
 — Stations, educational, prospects for, 280
 Telstar satellite, 45, 826; Admiralty valve for use with, 96; success of, 97; data from, 221; international time comparisons, 361; failure to respond to ground signals, 765
 Tema Docks conveyor system (Spencer (Melksham) Ltd.), 217
 Temperature conversion table (trade publication), 456
 — Indicator, Bikini (Fielden Electronics Ltd.), 80
 — Influence on the mechanical properties of metals and alloys, by E. M. Savitsky (book), 482
 — Measurement, of fast moving surfaces, 768
 — See also *Thermocouple; Thermometer*
 — Standards (Research & Engineering Controls Ltd.), 307
 — Transmitter (Fielden Electronics Ltd.), 800
 Tempering equipment, continuous (AEI-Birlec Ltd.), 779
 Template, circle, Circlemaster (Euco Tools Ltd.), 610
 Templug miniature thermometers (Shell International Petroleum Co. Ltd.), 800
 Tensator Ltd., springs (trade publication), 817
 Tent, Tent-o-Matic (ICM (Manufacturers) Ltd.), 160
 Tent-o-Matic tent (ICM (Manufacturers) Ltd.), 160
 Teredo shipworm, 605
 Terminal box, indoor (AEI Ltd.), 642
 — for Nelson High Power Laboratories (Lancashire Dynamo & Crypto Ltd.), 589
 Terne coated steel. See *Steel*
 Terrington, Dr. J. S., review of Introduction to Deep Foundations and Sheet Piling, 182; biographical note, 184
 Terris, A. K., replacement of Harringay West/Hornsey rail viaduct, 641
 Test. See under specific types of test and materials and items tested
 Testing machine, constant strain, 172
 — (Saml. Denison & Son Ltd.), 342
 — See also under specific types of testing machine
 Tewson, G. E., review of Smaller Firm and Technical Education, 55; biographical note, 56; review of History of the British Steel Industry, 251; review of Emden and Watson's Building Contracts and Practice, 324; review of British Industry and Town Planning, 758
 Textile processing mechanisms, symposium on, 402
 Therbloc insulation lags (Stillite Products Ltd.), 652
 Thermal capacity storage of electricity, 767
 — Methods of electricity storage, 767
 Thermionic energy converters, 255
 — Valve. See *Valve*; see also *Radar; Radio*
 Thermobloc air heaters, Wanson, 237
 Thermocouple voltmeter, differential (National Bureau of Standards), 127
 Thermofore block storage heater, 460
 Thermodynamics, nonequilibrium: phenomenological theory of irreversible processes in fluid systems, by D. D. Fitts (book), 24
 — by Y. Rocard (review), 420
 Thermoelectric generators (Martin Co.), 256
 — and photo effects in semiconductors, by J. Tauc (book), 124
 — Power conversion, 254
 Thermoelectricity, 684
 — Science and engineering, by R. R. Heikes and R. W. Ure (book), 156
 Thermometer, glass (trade publication), 24
 — Industrial (Wayne Kerr Laboratories Ltd.), 48
 — Low temperature ultrasonic, 730
 — Miniature, Templug (Shell International Petroleum Co. Ltd.), 800
 — Siebrecht (Wymark Co.), 643
 Thermostat, air (Wayne Kerr Laboratories Ltd.), 307
 Thermostatic control, Panguard, for cookers, 860
 Thermostat Ltd., fume cupboards, 115
 Theta Instrument Corp., computing resolvers (trade publication), 88
 Thinking, straight, course on, 448
 This is YOUR Life (RoSPA booklet), 785
 Thomas, Dr., on industry, 741
 Thomas, Dr. H. A., on automation, 818
 Thomas Industrial Automation Ltd., Resistron liquid level controller, 714
 Thompson, Dr. J. B., review of Principles of Vacuum Engineering, 86; biographical note, 88
 Thompson, John, Group of Companies, ash and dust handling plant for Rodenhuize power station, 269
 Thompson, John, Industrial Constructions Ltd., refuse disposal (trade publication), 656
 Thompson, John, Ltd., interest in foreign languages, 33; motor car chassis frames, 597
 Thompson, John, Water Tube Boilers Ltd., order from CEGB, 372
 Thompson, John (Wilson Boilers) Ltd., Multipac packaged boiler, 379
 Thompson, W., on Peter Brotherhood Ltd., 685
 Thompson, W. R., on hazards of motorways, 765
 Thomson, Sir George, on Inspiration of Science (review), 358
 Thor (Birmingham) Ltd., hammers with interchangeable faces, 396
 Thor-Able satellite launching rocket, 46
 Thor-Delta rocket system, 221
 Thor Power Tool Co., power trowel, 674
 Thor Tools Ltd., impact wrench (trade publication), 482; portable heater, 811
 Thorax Clinic, experimental mechanical heart, 191
 Thorn Electrical Industries Ltd., position and prospects, 241; subsidiaries of, 241
 Thorn, J., on Thorn Electrical Industries Ltd., 241
 Thread gauges (Tolimit Ltd.), 206
 — Screw, world, guide to (W. H. A. Robertson & Co. Ltd. publication), 471
 — World, series symbols, guide to (W. H. A. Robertson & Co. Ltd. publication), 471
 — See also *Screw*
 Threading machine (Landis Machine-Maiden Ltd.), 714
 Three Star multipoint scanner (Tyer & Co. Ltd.), 171
 Thyratron, cinema film on, 649
 TI Stainless Tubes Ltd., formation of, 477
 Tide, prefabricated walls against, 304
 Tigre motor car, Panhard PL17, road test report, 101
 Til-Lucent shotblast helmet (Tilghman's Ltd.), 170
 Tilbury B power station, 104
 Tilghman's Ltd., Wheelabrator shot blasting equipment, 139; Til-Lucent shotblast helmet, 170; portable shot blaster, 840
 Tilling Stevens Ltd., use of Loctite sealant resin, 388
 Timber adhesives, 837
 — Flooring (Hollis Bros. Ltd.), 374
 — Portals, laminated, 839
 — Roof beams, laminated (Kingston (Architectural Craftsmen) Ltd.), 203
 — with two way spanning, 472
 — Roofing system, Caromic Di-Grid (William Brown & Co. (Ipswich) Ltd.), 472
 Time comparison, international, by Telstar satellite, 361
 — Keeping movement, Sctrionic (Smiths English Clocks Ltd.), 668
 — Study, method, skill and. See *MST*
 Timer, electronic (Donovan Electrical Co. Ltd.), 16
 — Reversing (Electrical Remote Control Co. Ltd.), 47
 Times, The, on Hovercraft, 525
 Timetable, British Railways, computer prepares, 273
 Timing unit for measuring discharge rate, by R. Silvester and J. Mills, 657-658
 Timoshenko, S., on Elements of Strength of Materials (book), 56
 Tin, alluvial mining for, by H. L. H. Harrison (book), 324
 — Opener. See *Can opener*
 — Printing, propane fired oven for (Controlled Heat & Air Ltd.), 108
 Tin-terne coated steel. See *Steel*
 Tinned steel. See *Steel*
 Timplate classifying machine, high speed automatic, 778-779
 Tipper, C. F., on Brittle Fracture Story (review), 183
 Tirfor Ltd., pulling machines, 80
 Titan airless spray painting unit (Alfred Bullows & Sons Ltd.), 841
 Titanium alloy velocity transformer, 677
 — Fatigue data for. See *Correction*, 64
 — Anodes for cathodic protection, 678
 — Corrosion resistant applications of, 677
 — Development of, 676
 — and application of, by J. Monaghan, 676-678
 — Discovery by William Gregor, 676
 — Fire walls for aircraft, 676
 — Historical notes on, 676
 — Modern production of, 676
 — Properties and uses of, 676
 — for pumps (Imperial Metal Industries (Kynoch) Ltd.), 703
 — Rivet, blind, self plugging (Advel Ltd.), 296
 — Scrubbing plant tower, 677
 — Surgical implants, 678
 — Tank, 678
 Tobermorite gel—the heart of concrete, 137
 Tobias, Prof. S. A., on first UK Institute for Advanced Studies, 178-180; machine tool vibration, 504; review of Tools and Machine Tools, 691; review of Chip Removing Machine Tools, 691; review of Technique of Grinding, 691; review of Tools for Machining, 691; biographical note, 692; direction of dynamic tests on machine tools, 730
 Token Construction Co. Ltd., 33 floor hotel in London, 138; use of Record tower cranes, 138
 Tokyo-Osaka railway, 225
 Toledo Bend Project, Kaplan turbines for (English Electric Co. Ltd.), 740
 Tolerances, engineering, by H. G. Conway (book), 360
 — Tighter, air gauging fits the, 576
 Tolimit Gauges Ltd., thread gauges, 206
 Tompkins, Charles H., Co., Derbendi Khan Dam, 106
 Tone arm, Zenith Micro-Touch (United Mercantile Co. Ltd.), 364
 Tonks-Rowley Automatic Doors Ltd., Stanley Magic-Door automatic door, 342
 Tools (trade publication), 482
 — Air, Par-A-Matic (Broom & Wade Ltd.), 611
 — Cabinet set of (Stanley Bridges Ltd.), 396
 — Colour code (ISO), 109
 — Cutting (trade publication), 592
 — Dualok (Edibrac Ltd.), 239
 — Finding tougher materials for, 491
 — Finishing machine (trade publication), 124
 — Gauge and power press exhibition, 410, 440
 — GPO orange series of, 406
 — Hand and small power, exhibition of, 770
 — Portable electric (Black & Decker Ltd.), 306
 — and machine tools, by B. D. H. Bruins (review), 691
 — for machining, by J. Witthoff (review), 691
 — Noise, measurement of, 609
 — Power, 828
 — Store, Randalrak (James H. Randall & Son Ltd.), 21
 Toolholders, Stag Allenite Tiptaker, positive and negative rakes (Edgar Allen & Co. Ltd.), 578
 Tooling, optical, for precise manufacture and alignment, by P. Kissam (book), 624
 Toolmasters Ltd., Diaform grinding wheel profiling units, 411
 Toothbrush, electric (Riam S.A.), 128
 Topaz welding electrode (Cooper & Turner Ltd.), 189
 Toplock self-locking nuts (Whitehouse Industries Ltd.), 208
 Toronto docks, twin-boom crane, 366
 — Transit Commission, subway cars with Westcode braking system (Montreal Locomotive Works), 398
 Torque meter. See *Dynamometer*
 Torquemaster dial reading torque wrenches (Precise Torque Ltd.), 611
 Torsionmeter. See *Dynamometer*
 Torvac Ltd., electron beam unit, 793
 Tower Bridge, use of Spandofam in repairs to, 357
 — Cooling. See *Cooling tower*
 — Crane. See *Crane*
 — Latticed (trade publication), 88
 — Scrubbing plant, of titanium, 677
 — Suspension, 605. See *Correction*, 713
 Towler Bros. (Patents) Ltd., hydraulic valves and pumps, 338
 Towler, F. H., on keeping up with latest developments, 397
 Town Centres—Approach to Renewal, 129
 Town gas, hardening equipment using, 470
 — Planning and British industry, by A. Goss (review), 758
 — Lighting and (DSIR report), 1
 Townend, C. B., on discharge of sewage into rivers, 607
 Townsend, G., on Design Guide to Orbital Flight (review), 286
 Toys, diecast, "Matchbox" (Lesney Products & Co. Ltd.), 718-720
 Track relaying gantry, Boyer Scharz, 573
 Traction machines, windings on: insulation and construction, by W. Duckett (book), 817
 — System, rail transport, of the future, 731
 Tractor, Constructor 6 by 6, Scammell, 669
 — Crawler loader, Deere (JD Tractors Ltd.), 580
 — Porsche-Diesel, 436
 — Shovel, Michigan, 675
 Trade, Board of. See *Board of Trade*
 — British, in the Common Market; Plain facts about the Common Market, by C. Clark (book), 288
 Trade Effluent Disposal and Water Supplies in Western Germany (FBI publication), 340
 Trade Exhibition. See *Exhibition*
 — with Japan, 733
 — Mobility between, 414
 — Tests, 849
 Trade Unions in a Changing Society, 661
 Trades Union Congress, annual general meeting, 293; motions put, 293
 — See also under names of specific unions
 Traditions, railway, Plain Words on, 834
 Traffic control area, of roads, 681
 — Instrumentation and techniques, 679
 — Delays and road haulage, 705
 — Engineering, how successful is it? by J. A. Hillier, 679-681
 — London, 681
 — Road, increase of, 629
 — and roads of Great Britain, sample survey of (Road Research Laboratory publication), 701
 — Signals, 680
 — Signs for motorways, committee on, final report, 705
 — Tribulations and their solutions, 161
 Trailer, camping, "341" (M. F. Robertshaw Ltd.), 160
 — Salvage, Lewin (Lewin Road Sweepers Ltd.), 675
 Train. See *Railway train*
 Training, analytical, nature of, 416
 — Apprentices on the Continent, 849
 — Bill, 850
 — Boys in industry—non-apprentices—(Industrial Training Council booklet), 244
 — Consultancy keeps up-to-date, 181
 — Courses, 812
 Training Girls in Industry, 787
 Training, graduate, experiments in, symposium on, 335
 — Group project, by B. G. H. Rowley, 825
 — Project, on the grand scale, 148-149
 — Industrial, Carr Report on, 850
 — White Paper on, 765
 — Management, European look at, 447
 — Made to measure, 617-618
 — New developments in, by N. Fisher, — (Valve Engineering Ltd.), 515

- Training, management, what goes on in, 382
Training Managers, 382
 Training methods in Government training centres, by T. M. Iley, 825
 — Need for, 812
 — Officer, cinema films for (Machine Tool Trades Association), 211
 — Course for, 483-484
 — Pre-apprentice, by Marriott, F., 485
 — of professional engineers, 25
Training for Skill, Carr Report, 244
 Training at Spencer Steel Works, by O. W. Reynolds, 538
 — Technical, in underdeveloped areas, by H. R. Mills, 293
 — Work study, "Bristol-fashion," 586-587
 — Youth, for leadership, by Air Vice Marshal T. N. Coslett, 825
 — See also *Course; Education, etc.*
Tramontana power boat (Vosper Ltd.), 226-227; winner of *Daily Express* Offshore Power Boat Race, 329
 Transducers, 819
 — Load (Saunders-Roe Division of Westland Aircraft Ltd.), 144
 — Pressure (Consolidated Electrodynamics Corp. (UK) Ltd.), 208
 — — Electromagnetometer (Consolidated Electrodynamics Corp. (UK) Ltd.), 611
 Transformation, Swahry-Christoffel, 199
 Transformers for CEBG (AEI Ltd.), 44
 — for CEBG (English Electric Co. Ltd.), 12
 — for CEBG (Ferranti Ltd.), 44
 — Tanks in aluminium (Alcan Industries Ltd.), 321
 — Testing at AEI Ltd., 494-495
 — Velocity, of titanium, 677
 — Welding, Lark II (ETS Ltd.), 378
 — — (Steelweld Ltd.), 542
 Transistor, British, diode and semi-conductor devices data annual, 1962-3, by G. W. A. Dummer and J. M. Robertson (book), 456
 — Drift, 682
 — High frequency, 682
 — Junction, circuit analysis, by S. S. Hakim (book), 422; (review), 726
 — Mesa, 682
 — Repeaters for submarine cable, 325
 Translators, professional 70, 102, 134, 231, 334, 664
 Transmission delay measuring set (Acton Laboratories Inc.), 364
 Transmission/engine unit, Saab, 72
 Transmission line over River Forth, 605. See *Correction*, 713
 — Mechanical power, research, by Prof. R. H. Macmillan, 627-628
 — Motor car, research, 627
 — Power (trade publication), 552
 — See also *Drive; Power*
 Transmitter, 2MT, historical details of (Marconi), 729
 — Pressure (Fielden Electronics Ltd.), 239
 Transmitter/receiver (trade publication), 817
 — — Aircraft (Burndept Ltd.), 294
 Transmitter, temperature (Fielden Electronics Ltd.), 800
 Transmitting system, NTSC, 1
 — — SECAM, 1
 Transom drive for boats, Z-drive (Perkins Group), 572
 Transonic flow, theory of, by K. G. Guderley (review), 623
 Transport Act (1962), 503
 — Air. See *Aeronautics; Air; Aircraft; Aviation*
 — Minister of, road spending during the next five years, 629
 Transport, Ministry of, *Town Centres—Approach to Renewal*, 129; contracts for Newport By-Pass road, 136; setting up of Shipping Advisory Panel, 161; road programme, 201; trunk road to join A34 with M6 Motorway, 201; roadside checks on vehicles, 225; sound signalling experiments, 564; *Roads in England and Wales*, 629
 — Rail. See *Rail; Railway*
 — Road. See *Motor Road; Traffic, etc.*
 — Sea. See *Ship; Shipping*
 — Traction system, rail, of the future, 731
 Transport Vehicles (Daimler) Ltd., Fleetline bus chassis for Birmingham Corp., 136
 Transporter, works (Cranes (Dereham) Ltd.), 240
 Trap, float (Spirax-Sarco Ltd.), 16
 — Steam, Conflow (W. Hopwood & Co. Ltd.), 378
 Trapmore, H. C. W., on Supervisory Training Services, 618
 Travel-Master portable dictaphone (Magnesium Elektron Ltd.), 621
 Traverse, R., on Industrial Constructions: The Complete Factory (review), 155
 Traverse unit, vertical, DRAT (Berridge Aircraft Ltd.), 341
 Treasury, *Bulletin for Industry*, 280
 Treaty, commercial, Anglo-Japanese, 733
 Trentham, G. T., Ltd., water tower for Ford's Liverpool factory, 713
 Trentham, Percy, Ltd., new tractor plant for Ford Motor Co., 232
 Tri-Ni three layer nickel plating (Electro Chemical Engineering Co. Ltd.), 853
 Trichlorethylene as a drying medium, Trisec process (ICI Ltd.), 320
 Trico-Folberth Ltd., Magneti Marelli brake control system, 433
 Trident aircraft, de Havilland, on order by BEA, 258
 Trigonometrical approximations, 230
 Trilac resin lacquer for metals (ICI Ltd.), 853
 Trimming machine, rotary cross (Auxiliary Rolling Machinery Ltd.), 507
 Trinidad and Tobago Electricity Commission, Port of Spain "B" power station contracts, 73
 Triode valve (AEI Ltd.), 110
 Triple Fundamental Research Laboratory, research in cold-steel extrusion, 31
 Triplex Holdings Ltd., position and prospects, 445; profits, 445; acquisition of Charles S. W. Grigg Ltd., 445
 Triplex Safety Glass Co. Ltd., aircraft safety glass, 294; research on safety glass, 813; Open Day, 813
 Trisec process, trichlorethylene as a drying medium (ICI Ltd.), 320
 Triumph Spitfire 4 motor car, 499
 Trolley, car assembly, plastic coating for, 82
 — Site (Cranes (Dereham) Ltd.), 777
 Troskolanski, A. T., on Hydrometry: Theory and Practice of Hydraulic Measurements (review), 23
 Trowel, powered (Thor Power Tool Co.), 674
 Truck, dump, self-loading (British Jeffrey-Diamond Ltd.), 840
 — Fork lift, maintenance service for (L. Lipton Ltd.), 804
 — — Lift (Riordan Enterprises Ltd.), 841
 — — Lift, Shorland (Short Bros. & Harland Ltd.), 80
 — — Lift, Storemaker (Lansing Bagnall Ltd.), 378
 — Lift, Coolie Cub (Polymathic Engineering Co. Ltd.), 14
 — — Heavy duty (British Hoist & Crane Co. Ltd.), 79
 — Pallet, Coolie (Polymathic Engineering Co. Ltd.), 342
 — — Paliton Bantam (Omic Ltd.), 642
 — Railway. See *Wagon*
 — Reach, Spacemaker (Lansing Bagnall Co. Ltd.), 582-584
 — Rear dump hauler (Shawnee Poole Ltd.), 143
 — Stillage (Montgomerie Reid Engineering Co. Ltd.), 47
 — See also *Motor vehicle*
 "True Motion" radar for ships (Decca Radar Ltd.), 201
 Truman, Dr. A. B., on innovations in paper-making machinery, 343-344
 Trunk Pipelines Ltd., pipelines linking importing ports, 774
 Truscott, S. J., on Mine Economics (book), 624
 Truxal, J. G., on Principles of Electronic Instrumentation (review), 551
 Tsai, D. H., fast opening photographic shutter, 737
 Tube, aluminium, for typewriter platens (Elm Engineering Ltd.), 249
 — Electronic, photomultiplier (Allen B. DuMont Laboratories), 393
 — Gilling machine, Rasmussen (Scag Machine Tools Ltd.), 507
 — Glass, for boiler air pre-heaters (QVF Ltd. report), 115
 — Inflatable framework, BTR, 284
 Tube Investments of India Ltd., new factory in Madras, 73
 Tube Investments Ltd., development projects, 232; formation of TI Stainless Tubes Ltd., 477; constituent companies (trade publication), 514
 Tube Products Ltd., tubes for bicycles, 599
 — Railway. See *Underground; London Transport Executive*
 — Shock, by J. K. Wright (review), 183
 — Welding to tube plates, conference on, 197
 — See also *Pipe*
 Tubing, flexible, absorbing vibrations with, 704
 — — (Power Flexible Tubing Co. Ltd.), 704
 — Polyethylene, Hi-Den (Sterling Cables Ltd.), 757
 Tuf-Tak adhesive (Ucan Development Ltd.), 453
 Tunnel, Channel, 605
 — Diodes, 683
 — Mont Blanc, progress on, 173
 — Story of the World's great, adventure underground, by J. Gies (review), 855
 Tunnelling with crawler mounted loaders, 473
 Tupholm, C. H. S., on Colour Photomicrography with a 35mm Camera (review), 590
 Tuplin, W. A., on Involute Gear Geometry (book), 422; on Gear Design (book), 760
 Turbidity meter (Hird-Brown Ltd.), 170
 Turbine blading, materials for, 852
 — Deriaz, for Culligran power station (English Electric), 191
 — Gas, coal fired, investigation into (Aeronautical Research Laboratories), 563
 — — Collaboration committee, 21st anniversary of first meeting, 651
 — — Power and heating from (Centrax Ltd.), 704
 — — Power station (trade publication), 156
 — — for tanks, 631
 — — Teddington/Micro Turbo (Rotax Ltd. and Teddington Aircraft Controls Ltd.), 313
 — — TF. See *Correction*, 35
 — — See also *Aircraft engine*
 — Generator unit, development of (J. & S. Pumps Ltd.), 399
 — Hydraulic. See also *Hydro-electric; Power plant*
 — Kaplan, for Toledo Bend Project (English Electric Co. Ltd.), 740
 — Lubrication, by G. H. von Fuchs, 127
 — for Northern Star liner (Parsons Marine Turbine Co. Ltd.), 34
 — Power station, gas (trade publication), 156
 — Pump. See *Pump, centrifugal*
 — and superheater by-pass system for boilers, 4
 Turbo-generator, testing at AEI Ltd., 494-495
 — See also *Generator*
 Turbochargers of austenitic cast iron, 814
 Turbocraft boat (Dowty Marine Ltd.), 527
 Turley, J. W., on mechanics of billiards, 298. See *LETTER*, 738
 Turner Bros., Asbestos Co. Ltd., V-drives (trade publication), 220
 Turner, D. R. S., world selling survey, 469; visits to overseas companies, 469
 Turner, E., on Birmingham Small Arms Co. Ltd., 717
 Turner, P. W., constant strain testing machine, 172
 Turning, copy, hemispherical forms (Hepworth Iron Co.), 175
 Turriff Construction Corp. Ltd., Khashm el Girba housing scheme in Sudan, 407
 Turriff Construction Ltd., irradiation plant for sterilization, 757
 Tweeddale, J. G., on Metallurgical Principles for Engineers (book), 288; (review), 691
 20th Century Electronics Ltd., boron-10 supply to UKAEA, 860
 206Y aircraft (Beagle Aircraft Ltd.), 259
 Tyer & Co. Ltd., Three Star multipoint scanner, 171
 Tygadore Ltd., Tygaflor pte electrical sleeving, 389; Tygaflor cords and tapes, 389
 Tygaflor cord and tape (Tygadore Ltd.), 389
 — Pte electrical sleeving (Tygadore Ltd.), 389
 Tyneside, new dry dock for Vickers-Armstrongs at Palmers Hebburn shipyard, 442-443
 — Newer industry on display, 806
 Typewriter platen. See *Platen*
 Tyre, Earthmover, as rotating fenders for docks, 462
 — Force, relation with deflection angle with wet and dry road surfaces, 832
 — Grip loss, 832
 — Ice (Dunlop), 133
 — in mechanical handling (trade publication), 692
- U**
- UBAC copper plating process (Electro-Chemical Engineering Co. Ltd.), 321
 Ucan Development Ltd., Tuf-Tak adhesive, 453
 Udal Co. Ltd., belt conveyor, 307
 Uddeholm Ltd., steel lighting masts, 399; new headquarters for, 413; stainless pipe fittings (trade publication), 482; cutting tools (trade publication), 592
 Uddeholms Aktiebolag, historical note on, 413
 Ulmer, G., cupola design, 52
 Ulstron ropes (ICI Ltd.), 757
 Ultra Electronics Ltd., Packset communication equipment, 476
 Ultra-Violet and Infra-Red Engineering, by W. Summer (review), 87
 Ultrasonic testing, course on, 787
 Ultrasonics used for miniature oil burner (Esso), 128
 Undercarriage, aircraft, steerable nose, (Dowty Group Ltd.), 294, 400
 Underdeveloped areas, technical training in, by H. R. Mills, 293
 Underdone electric bell (V. & E. Friedland Ltd.), 700
 Undergraduate and industrial research, 415
 — Vacation training for (British Petroleum Co. Ltd.), 244
 Underground railway, Victoria Line, 225
 Underpass, Hyde Park Corner (Cubitts-Fitzpatrick-Shand), 543-544
 Underwood Business Machines Ltd., use of aluminium tube for typewriter platens, 249
 Underwriters, insurance. See *Insurance*
 Unemployment, fear of, 167
 — in school leavers, 493
 Unicom Summer School in Infrared Spectroscopy, 212
 Uniflote and Bailey bridge handbook, by E. Aubury (book), 817
 Uniflote floats (Thos. Storey (Engineers) Ltd.), 75
 Unimatic linear ball bearing, Hans-Worm (H. G. Stevens Co. Ltd.), 777
 Union, trade. See *Trade Union and under names of specific unions*
 Unipactor soil compactor (Armstrong Whitworth (Metal Industries) Ltd.), 674
 Unistrut Ltd., building for artificial sky of Cambridge University, 809
 Unit Plan heating system, 460
 United Dominions Trust Ltd., profits, 209; position and prospects, 209; foundation of, 209
 United Kingdom Atomic Energy Authority, trading by, 33; annual report, 33; co-operation with Belgium, 397; method of determining atomic reactor "doubling-time," 521; Dounreay atomic reactor, 561; radiation sensitive paint, 730; irradiation plant for sterilization, 757; boron-10 supply from 20th Century Electronics Ltd., 860
 United Mercantile Co. Ltd., Zenith Micro-Touch tone arm, 364
 — Nations Economic Commission, survey of Afghanistan, 266; *Multiple-Purpose River Basin Development: Water Resources Development in Afghanistan, Iran, Republic of Korea and Nepal*, 266
 United Power Co., Wylfa atomic power station, 364
 — States Atomic Energy Commission, boiling water atomic reactor power plant project, 31; simple atomic generator, 96; Plowshare Programme, 396; Project Chariot atomic excavation experiment, 396; ground tests on nuclear reactors for space, 458; report on mass flow system, 564; twelve year programme, 701
 — Dept. of Commerce, Manual of Properties of Combined Beam and Plate (book), 156
 United States Industries Inc., high energy rate forging machines, 36-37
 — Investment in space-race, 293
 — National Bureau of Standards, development of new type Dewar flask, 61; differential thermocouple voltmeter, 127; shielded standard resistor, 127; research on surface reactions during metal fatigue, 190; new laboratory for, 222; seminar on mass measurement, 292; corrosion study on steel piling, 453; microscopic magnetic-field probe, 490; study of corrosion by electrochemical polarization, 491; low temperature ultrasonic thermometer, 730; fast opening photographic shutter, 737
 — Project Sky High, 365
 — Science in, by Prof. D. Fleming, 553
 — Trade Centre, exhibition of hand and small power tools, 770
 — See also *American*
- United Steel Cos. Ltd., expansion programme, 140; continuous casting at Scunthorpe works of Appleby-Frodingham, 140-141; steel products (trade publication), 220; use of Black Moly molybdenum disulphide lubricants, 249; heat resisting jacket for steel operatives, 337
 United Steel Structural Co., new mill building for Shelton Iron & Steel Co., 377
 United Technical Supplies Ltd., TC indexing head, 542
 United Towing Co. Ltd., orders placed with Cochrane & Sons Ltd., 845
 Univac 422 computer to teach data processing (Sperry Rand Corp.), 415
 Univac trailer pump (Henry Sykes Ltd.), 579
 Universal Boilers & Engineering Co. Ltd., road tanker for hot paraffin wax, 367
 — Folding brakes (Keeton, Sons & Co. Ltd.), 541
 — Joints, Fairlon (W. M. Pollard Ltd.), 341
 Universe, atoms and the, by G. O. Jones, J. Rotblat and G. J. Whitrow (book), 252
Universities and Colleges, 365
Universities need CAT's, 150
 — *Persona* of, 446
 — and sixth form specialization, 384
 University applied science maze, by J. S. M. Botterill, 554
 University College, research on rough riding on railways, 29-30; laminar flows by birefringence, 157
University and College Entrance—the Basic Facts, 515
 University College of Wales, subscribers to appeal, 448
 — Computing machine in, by Dr. Booth, 200
 — Courses, 350
 — Engineering courses, 721-722
 — — Evolution of, by K. Ball, 650-651
 — — in Pakistan, by B. C. Brookes, 210
 — Professors, conference of, 279
 — Reform, a case for, by Dr. A. P. Rowe, 244
 — Scholarships awarded by Consett Iron Co., 25
 — — Industry sponsored, 687
 — Status, 753
 — Teachers, some thoughts on, 383
 — "Thick sandwich" course, 57
 — What does it do for an engineer? 279
 — See also *under names of specific universities*
 Unloader, Swingloader (C. H. Johnson (Machinery) Ltd.), 207
 Uranium, radiochemistry of, by J. E. Grindler (book), 218
 Urbistondo, on hydroelectric power resources, 638
 Ure, R. W., on Thermoelectricity: Science and Engineering (book), 156
 Urwick Management Centre, course in sales management, 649; teaching work sampling through films, 686; General Management course, 851
 Urwick, Orr & Partners, Urwick Management Centre, 244; course on planning for management succession, 244
 Usher, Sir George, on South Wales Switchgear Ltd., 381
 Utah Co., Comilog Railway, Congo, 407
 Utrecht International Spring Fair, 804
- V**
- V-DRIVES (trade publication), 220
 VA3 hovercraft, protection with Cellon-Docker polyurethane paint, 557
 — — on scheduled service, 98-99
 — — Trials completed (Vickers Armstrongs Ltd.), 525, 527
 Vac-U-Lift steel plate lifting equipment, 577
 Vacuum brake. See *Brake*
 — Cleaner. See *Cleaner*
 — Engineering, principles of, by M. Pirani and J. Yarwood (review), 86
 Vacuum Generators Ltd., electrometer DC amplifier, 715; vacuum valve, 810
 — High, space simulation (F. J. Stokes Corp.), 158
 Vacuum Industrial Applications Ltd., high vacuum furnace, 16
 — Melting service (Deritend Precision Castings Ltd.), 644
 — Plant (trade publication), 692
 — Pump. See *Pump*
 — Pumping system (Mullard Ltd.), 270
 — Refrigeration (trade publication), 24
 Vajda, S., on Mathematical Programming (review), 454; on Readings in Mathematical Programming (book), 728
 Value Analysis Inc., value engineering and analysis, 175; setting up Value Engineering Ltd. in UK, 515
 Value Engineering Ltd., management training, 515
 Valves (trade publication), 88, 324, 360, 592
 — Actuators for floating dock (Rotork Engineering Co. Ltd.), 469
 — — Jones-Tate (Dewrance Co. Ltd.), 379
 — Admiralty designed, for use with telstar satellite, 96
 — Ball, Lincoln Powerseal (Mashed Design Studies Ltd.), 737
 — — Plastic coated plugs for, 82
 — Check (Hydraulics Components), 611
 — Discharge (Collectron Ltd.), 811
 — Fluidal (Bendix Corp.), 132
 — Flush bottom (Metaducts Ltd.), 206
 — Food processing, Godolphin (Talbot Stead Tube Co. Ltd.), 600
 — High pressure air (Hymatic Engineering Co. Ltd.), 715
 — Historical note on, 821
 — Hydraulic (Donald Brown (Brownall) Ltd.) 744
 — — (Towler Bros. (Patents) Ltd.), 338
 — for immiscible liquid separation (Metaducts Ltd.), 228
 — Microwave, conference on design and use of, 434
 — Newman Fluidal (Newman Hender & Co. Ltd.), 132
 — Parallel slide (Dewrance Co. Ltd.), 821-823
 — Relief (Keelavite Hydraulics Ltd.), 810
 — Seats of austenitic cast iron, 814

- Valves and semi-conductor circuits (trade publication), 252
- SENTRY, COPPUS (George Meller Ltd.), 432
- Servo control (trade publication), 856
- in stainless steel (Audco Ltd.), 321
- Stop (Hymatic Engineering Co. Ltd.), 270
- Triode (AEI Ltd.), 110
- Trip (Martonair Ltd.), 342
- Vacuum (Vacuum Generators Ltd.), 810
- Van de Graaf accelerator, at Liverpool University, 762
- van Doorne's Automobiefabriek NV., DAF Variomatic motor car, 229
- Van Eldick, P. F., on AC Devices with Iron Cores (book), 760
- van Schoor, J. V., on mechanics of billiards, 196. See LETTER, 298
- Van Trees, H. L., on Synthesis of Optimum Nonlinear Control Systems (book), 514
- Vapor Corp. of America, licencing agreement with J. Stone & Co. (Deptford) Ltd., 750
- Vapomatic automatic motor starter (George Ellison Ltd.), 111
- Varactor applications, by P. Penfield and R. P. Rafuse (book), 514
- Vario 35 mm camera, Sportsman (Ilford Ltd.), 119-121
- Variomatic motor car, DAF (van Doorne's Automobiefabriek NV.), 229
- Vaughan, Edgar, & Co. Ltd., cutting oils (trade publication), 792
- Vauxhall Motors, Ltd., VX490 motor car, road test report, 133; Velox motor car rebodied, 467; Cresta motor car rebodied, 467; plant extensions, 713; use of tin-terne coated steel, 725
- VC10 aircraft. See *Vickers VC10*
- Velan Engineering Co. Ltd., valves (trade publication), 592
- Velox motor car, Vauxhall, rebodied, 467
- Ven Te Chow, Prof., on Hydrological Determination of Waterway Areas, 33
- Venables, A., formation of Hack Saws Ltd., 509
- Venables, P. R. R., on Smaller Firm and Technical Education (review), 55
- Venables, W., formation of Hack Saws Ltd., 509
- Vencill, G. J., on peak electricity demands, 638
- Vending machine, coal (Charbonnage de France), 256
- Soup, Ditchburn Minispa, 256
- Tea, costs of, 334
- Tea, Teamatic (Machine Economy Ltd.), 256
- Venezuela Air Force, Jet Provost aircraft ordered, 372
- Venner Ltd., time switch, 380
- Vent-A-Matic fan (R. W. Simon Ltd.). See LETTER, 40
- Ventilating and heating system (Andrew Air Conditioning Ltd.), 100
- Heating and air conditioning exhibition, 380
- and fuel efficiency exhibition, 379
- Ventilation, air-over-frame, of electric motors (GEC (US) and International General Electric), 191
- Ventilator, extractor, Mechadome (Greenwood's and Airvac Ventilating Co. Ltd.), 715
- Roof, glass-fibre (Fenton Byrn & Co. Ltd.), 663
- Vernier, G., universal milling machine, 143
- Vernon, Dr. H. M., foundation of Vernon Prize, 89; biographical note, 89
- Vernon, K. D. C., on appreciating the history of science, 553
- Vernon Prize awarded to Dr. H. Kay, 89
- Vero Electronics Ltd., Veroboard circuit assembly board, 844
- Vero Precision Engineering Ltd., Hydro-Copier copying machine, 440
- Veroboard circuit assembly board (Vero Electronics Ltd.), 844
- Versa spray equipment (TC Spray Finishing Systems (Bede) Ltd.), 541
- Vessel, brewery, made from stainless steel clad steel, 453
- Liquid gas storage (British Oxygen Engineering Co. Ltd.), 338
- Pressure. See *Pressure vessel*
- Process, in aluminium bronze (Daniel Adamson & Co. Ltd.), 789
- Reaction, aluminium bronze (Daniel Adamson & Co. Ltd.), 249
- Viaduct, Harringay West/Hornsey, replacement of, 641
- See also *Bridge*
- Viard, Dr., methods of personnel selection, 193
- Vibration, absorbing with flexible tubing, 704
- Analysis, computer for, 100
- and design of foundations for machines and turbines, by A. Major (book), 760
- Effects on the human body, 32
- on vision, 158
- in machine tools, 504
- Machine tool, by Prof. Tobias, 504
- Measurement (Associated Engineering Ltd.), 671
- Vibro Energy Mill, Podmore-Boulton (W. Podmore & Sons and William Boulton Ltd.), 83
- Vibro-Tool engraving tool (Burgess Products Co. Ltd.), 811
- Vick, Dr. F. A., on Education for Atomic Energy Research and Development, 448
- Vickers-Armstrongs (Engineers) Ltd., to absorb Vickers-Armstrongs (South Marston), Ltd., 17; aluminium plates for Daphne atomic reactor, 51; electric arc furnaces for English Steel Corp., 302-303; strip-wound pressure vessels, 556; Sulzer locomotive diesel engines, 740; formation of cement machinery division, 781; W. Fisher appointed manager of cement machinery division, 781; agreement with SAAB on hovercraft research, 836
- Vickers-Armstrongs Ltd., VA-3 Hovercraft trials completed, 525, 527; use of austenitic iron castings, 620; 100,000 ton tanker for BP Tanker Co. Ltd., 703
- Vickers-Armstrongs (Shipbuilders) Ltd., Northern Star liner for Shaw Savill, 34; vessels to carry liquid gas, 377; new dry dock at Palmers Hebburn shipyard, 442-443; use of rotating fenders at Palmers Hebburn dry dock, 462; Pitt-Scott (Johnson type) winches for Palmers Hebburn dry dock, 747; submarine *Dreadnought*, 828
- Vickers-Armstrongs (South Marston) Ltd., products of, 17; Hovercraft, 17; to be integrated with Vickers-Armstrongs (Engineers) Ltd., 17
- Vickers and Bookers Ltd., associated with John Laing & Son Ltd., 17
- Vickers Sperry Rand Ltd., hydraulic equipment (trade publication), 552
- Vickers VA-3 Hovercraft on scheduled service, 98-99
- Hovercraft protected with Cellon-Docker polyurethane paint, 557
- Hovercraft trials, 525, 527
- VC10 aircraft flight simulators for BOAC (Revifon Ltd.), 827
- Aircraft on order by BOAC, 258
- Victoria Line underground railway, construction to start, 225
- Villiers Engine Co., diesel engine, 79
- Villiers Engineering Co. Ltd., industrial engines, 776
- Vincens, on hydroelectric power resources, 638
- Vincent, L. N., strip shearing machine, 57
- Vincent Thomas bridge, Los Angeles, 605
- Vine, Dr. A., on FLIP floating instrument platform for under-water research, 289
- Viscosity requirements of mineral oils for hydraulic systems, by T. L. Jackson, 459-460
- of water, 299
- Vision, effects of vibration on, 158
- Vision Engineering Ltd., stereoscope projector, 14
- Visual identification of voices, unique, 291
- Instruction in advanced workshop technology, 374
- Vitreous enamel. See *Enamel*
- Enamelling. See *Enamelling*
- VMS circular saw (Channel Tool Distributors Ltd.), 579
- Vocational guidance, 196
- Voices, unique visual identification of, 291
- Vokes Group Ltd., growth of, 313; annual general meeting, 313; subsidiaries of, 313; position and prospects, 313
- Vokes Ltd., historical note, 313
- Vole drill (Holman Bros. Ltd.), 674
- Volk, M. C., on Electrical Encapsulation (book), 792
- Voltmeter, thermocouple, differential (National Bureau of Standards), 127
- Volvo 122S motor car, road test of, 333
- von Fuchs, G. H., on turbine lubrication, 127
- Vortex flow, compressible source, free-surface water-table analogue of (Boeing Co.), 489
- Vosper Ltd., *Strahl* and *Pfeil* patrol boats for Federal German Navy, 637; *Tramontana*, high speed power boat, 226-227, 329
- Voss Engineering Co., Voss Precision Invested Roller Levellers, 710
- Voss Precision Inverted Roller Levellers (Foster Yates & Thom Ltd.), 710
- Vulcan aircraft, Avro, 247
- Vulcan Foundry Ltd., Clayton mobile boilers for English Electric Co. Ltd., 708
- Vulcanizing rubber by radiation, 312

W

- WADE, G., on work study, 586-587
- Wadham College, course in management practice, 649
- Wafers, chocolate (G. & T. Bridgewater Ltd.), 28
- Wage incentive systems, effect of on managerial authority: piecework abandoned, by W. Brown (review), 655
- Offer of Electricity Council, 779
- Wage Policies in the Public Sector, 661
- Wages and productivity, 812
- Structure, 57
- See also *Income; Pay; Payment; Salaries*
- Wagons, apparatus for automatic record of movements, 632
- Rail tank, use of Ferodo brake blocks on, 432
- Waive, Dr. T. E., design of Cape-Waive anaesthetic machine, 702-703
- Wairakei geothermal power station, New Zealand, 663
- Waite, W. E., Ltd., earth anchors, 573
- Wakefield impact breaker (Construction Machinery Ltd.), 674
- Wakeling, E. G., appointed managing director of Nagard Ltd., 645
- Wales, University College of, subscribers to appeal, 448
- Walker, C., & Sons Ltd., steel stock list (trade publication), 456
- Walker Crossweller & Co. Ltd., Arkon differential pressure gauge, 47; new London showroom for, 336
- Walker, Dr. P. B., review of Sir George Cayley's Aeronautics, 1796-1855, 654; biographical note, 656
- Walkways (trade publication), 288
- Wall Colmonoy (Canada) Ltd., hard facing alloys (trade publication), 817
- Walls, fire, for aircraft, of titanium, 676
- Frame system (trade publication), 220
- Prefabricated, against the tide, 304
- Wallace Bros. (Holdings) Ltd., acquisition of International Aquavion SA., 228; Waterman Aquavion hydrofoil craft, 228
- Wallace & Tiernan Ltd., effluent disposal system for Delaney Galley Ltd., 19; fog horn, 714
- Walling, Dr. J. C., on travelling wave maser, 95
- Wallis & Longden Ltd., to go into voluntary liquidation, 81; historical note, 81; position and prospects, 81
- Walpamur Co. Ltd., GWD 346 cleaning liquid, 249
- Walshaw, A. C., on Mechanics of Fluids (book), 817
- Walston, Lord, on population, industry and planning, 733
- Walter, F., development of Caromic Di-Grid timber roofing system, 472
- Walter, J. C., on cracking at notches in transverse shear, 326-327
- Walter Reed Army Institute of Research, medical atomic reactor for research, 699
- Walterisation Co. Ltd., degreasing and pickling solutions, 217; Noralbryte smoothing chemical dip for aluminium 589
- Walters, R. C. S., on Dam Geology (review), 513
- Walton, E. C., & Co. Ltd., sectional houses (trade publication), 324
- Wanner lubrication equipment (Step Industrial Equipment Ltd.), 15
- Wanson Co. Ltd., package steam boiler (trade publication), 760
- Wanson Thermobloc air heaters, 237
- War Office, order for CC-2 Cushioncraft placed with Cushioncraft Ltd., 372
- Ward Brooke, position and prospects, 81
- Ward, Thos. W., Ltd., position and prospects, 645
- Warmth, insulation for, 764
- Warnings and alarms, 700
- System, early, for Motorways, 705
- Warren, H. E., self-starting synchronous motor, 666
- Warri dockyard opened in Nigeria, 305
- Warring, R. H., on Hydraulic Fluids and Engineering Applications (review), 323
- Warsaw Film Congress, 135
- Prefabricated flats in, 444
- Waser-Werft Co., boat fitted with NSU/Wankel rotary engine, 567
- Washer, sealing, metallic (M.L. Aviation Co. Ltd.), 600
- Washing machine for stencils (Berridge Aircraft Ltd.), 541
- Waste disposal plant for Bradford Corp. (Heenan & Froude Ltd.), 305
- Disposer (English Electric Co. Ltd.), 192
- Radioactive, disposal (trade publication), 124
- Watches and clocks, dictionary of, by E. Bruton (book), 124
- Water Act (1945), 606
- Analogue of air, wet wind tunnel (Boeing Co.), 489. See LETTER, 602
- Clean, for Rivers Wye and Tawe, 774
- Water Conservation—England and Wales, 629
- Water conservation, question of quality, 606-607
- Conversion, research contracts on, 1
- Fittings, domestic, research on (Barking Brassware Co. Ltd.), 30
- Heater. See *Heater, water*
- Hot, home heating and (Gas Council publication), 596
- Level gauge, Reflex, 281
- Indicator, Dewrance-Yarway Color-Port (Dewrance & Co. Ltd.), 811
- Policy, national, 33
- Power. See also *Hydraulic; Hydroelectric; Power plant*
- Research Association, activities of, 33; symposium on measurements in hydrology 71; three investigations in water research, 125-126; annual report, 125; hydrology, 125; water treatment, 125; water mains leak detection, 126; pipe cleaning "ferret" with magnetic transmitter, 305
- Three investigations in (Water Research Association), 125-126
- Water Resources Bill, 629
- Conservation of, symposium on, 231, 606-607
- Development in Afghanistan, Iran, Republic of Korea and Nepal: multiple purpose river basin development (UN Survey), 266
- Samplers, portable (Elcontrol Ltd.), 76
- Sea. See *Sea Water*
- Supply for Hong Kong, 105
- and trade effluent disposal in Western Germany (FBI publication), 340
- See also *Irrigation*
- Tower for Ford's Liverpool factory, 713
- Treatment, 125
- (trade publication), 592
- Aqua-Clear (Kinnis & Brown Ltd.), 479
- Versus graphite: nuclear battle, by J. H. M. Sykes, 696-697
- Viscosity of, 299
- Waterloo Bridge approaches, realigning, 641
- Waterman hydrofoil craft, Aquavion (Duncan Macneill & Co.), 228
- Craft Aquavion (Wallace Bros. (Holdings) Ltd.), 228
- Waters, H., on trigonometrical approximations, 230
- Waterway areas, hydrological determination of, by Prof. Ven Te Chow, 33
- Wates (Midlands) Ltd., use of Star mobile self-erecting tower crane, 105
- Watford College of Technology, symposium on air gauging, 576
- Watkins, William, Ltd., orders placed with Cochrane & Sons Ltd., 845
- Watson, G. O., on Marine Electrical Practice (book), 692
- Watson, Manasty & Co. Ltd., Shadomaster projector, 441
- Watson, P. L., appointed production manager of Microcell Ltd. and Palmer Aero Product Ltd., 613
- Watson & Sons (Electro-Medical) Ltd., X-ray unit, 507
- Watt, James, Day, 370, 525
- Watt, James, by L. T. C. Rolt (book), 552
- Wave mechanics of crystalline solids, by R. A. Smith (review), 182
- Ocean, platforming on a hydrofoil, by C. Hook, 830-831
- Radio surface, by H. M. Barlow and J. Brown (review), 218
- Shock, in chemistry and physics, by J.N. Bradley (book), 220; (review), 655-656
- Standing, danger of in oil tanker, by Professor J. D. Francis and G. Kempson, 858-859
- Waveguide, multichannel, 65
- Wax primer for pitted steel (Drynamels Ltd.), 321
- Wayne Kerr Laboratories Ltd., industrial thermometer, 48; air thermostat, 307
- Weapons, guided, short-range, by J. Clemow (review), 54
- Systems for tanks, 631
- Wearside, oil facilities at, 809
- Weatherfoil Ltd., Commonwealth Institute building, 575
- Weatherhead hydraulic pump (Fairley Engineering Ltd.), 580
- Weaver, H., on streamlining the building industry, 89
- Web, shear, honeycomb, 838
- Webb, H. C., & Co. Ltd., battery electric lawn mower, 185-187; historical note, 185
- Webb, Maj. M. J., on Midland Industries Ltd., 549
- Webster & Bennett Ltd., position and prospects, 349
- Webster, R. G., on Technical Report Writing: A Manual and Source Book (review), 154
- Weedon, H., new car body plant for Pressed Steel Co. Ltd., 544
- Weighing machine, continuous belt (Fisons Fertilizers Ltd. and L. A. Mitchell Ltd.), 239
- Unit, automatic (Production Sales & Service Ltd.), 432
- Weir, G. & J., Ltd., association with Richardsons, Westgarth & Co. Ltd., 1; Weirwater distilling plant for Northern Star liner, 35; use of fibreglass, 113; formation of Weir, Westgarth Ltd., 381; Weirpak packaged closed feed system for ships, 704
- Weir, Westgarth Ltd., formation of, 381; aims of, 381
- Weirpak packaged closed feed system for ships (G. & J. Weir Ltd.), 704
- Weirwater distilling plant for Northern Star liner (G. & J. Weir Ltd.), 35
- Welbourn, D. B., on making faces fit, 264; review of Design of Hydraulic Control Systems, 286; review of Handbook of Automation, Computation and Control, 286; review of Servomechanisms, 286; biographical note, 288; review of Kinematics of Epicyclic Gearing, 454; biographical note, 456; review of Non-Linear Control Systems Analysis, 481; biographical note, 482; on Cambridge Don examines his bookshelf, 602. See LETTERS, 634, 707
- Welbourn, H., review of Adventure Underground. The Story of the World's Great Tunnels, 855; review of Automation, 855; review of Eagle Book of How it Works, 855; biographical note, 856
- Weld, laser, 763
- Radiography, interpretation of, course on, 787
- Weldall & Assembly Ltd., Alligator type shearing machine, 80; acquisition of Charles S. W. Grigg Ltd., 445
- Weldall-Grigg Ltd., press for Triplex Fundamental Research Laboratory, 31; new range of mechanical presses, 430-431; presses for Jaguar Cars Ltd., 430; new name for Charles S. W. Grigg Ltd., 445
- Weldcraft Ltd., Gasfluxer fluxing unit, 610
- Welded fabrications in aluminium (Controlled Heat & Air Ltd.), 589
- Seams, laser, 763
- Welder & Cutter, 89
- Welding agricultural machinery, course on, 778
- Electric arc, history of, in USSR, by Professor C. Khrenov, 553
- Electrodes, for alloy and cast steel, Eutectrodes (Eutectic Welding Alloys Co. Ltd.), 357
- Topaz (Cooper & Turner Ltd.), 189
- Engineering 1962 Exhibition, 278
- Equipment, stud, Cyc-Arc E3 (Crompton Parkinson Ltd.), 717
- Gun, spot (Portable Welders Ltd.), 578
- Handbook, by A. L. Phillips (book), 456
- Heavy iron castings, Quenchweld method (Eutectic), 478-479
- Helical, of pipe, Driam machinery for, 409
- Journal, British (Institute of Welding), 278
- Laser, trials of, 764
- Machine, spot, Rowen-Arc (Rubery, Owen & Co. Ltd.), 207
- Metal-arc, carbon oxidation in weld pool during welding of plain carbon steels, by A. Apold (book), 624
- Metallurgy of, by D. Seférian (book), 124; (review), 854
- Projection, investigation by BWRA for NATO, 31
- Shielded, Argomix gas for (British Oxygen Co. Ltd.), 19
- Spot, of aluminium (Aluminium Laboratories Ltd.), 21
- Technology, courses on, 278
- Tube to tube plates, conference on, 197
- Welford, A. T., on Society: Problems and Methods of Study (book), 656
- Well-head machine, robot, for assembly and maintenance (Shell Oil Co.), 775
- Wellings, J. A., appointed managing director of George Cohen 600 Group Ltd., 413
- Wellington, Duke of, opening of Hyde Park Corner underpass, 543
- Wellman Smith Owen Engineering Corp. Ltd., installations at Spencer Steel Works, 534, 535, 537; and Davy & United Engineering Co., joint contract with Rudnici i Zelezara through Invest-Import, 740
- Wernher, Sir Harold A., appointed caretaker chairman of Plessey Co. Ltd., 781
- Wesker, A., on Challenge of Leisure, 485
- Wessnauer, G. O., on efficiency in fuel burning, 639
- Wessex Industries (Poole) Ltd., Wrigley ambulance, 508
- West African Portland Cement Co. Ltd., to increase in size, 445
- West Burton power station, four Avon generating units for, 262
- West of England Engineering Employers Association, training courses, 812
- West Midlands Gas Board, Coleshill Works 241
- West Monmouthshire Motor Co., use of Quenchweld method of welding heavy iron castings, 479

- Westcode railway train braking system (Westinghouse Brake & Signal Co. Ltd.), 398
- Westerbeke, J. H., generating sets for Arctic use, 658
- Western Avenue, cost of extensions to, 503
- Western Hemisphere Exports Council, report of, 104
- Westinghouse Brake & Signal Co. Ltd., plug-in relays, 110; Westcode railway train braking system, 398; use of aluminium extrusions as heat sinks, 418; Introduction to Industry course, 687
- Westinghouse Electric Corp., research on cutting with lasers, 31; joining two orbiting spacecraft, 253; solid state acoustic flowmeter, 328; ships with centralized engine room control for Gibb Shipyards Inc., 703; water moderated power reactor, 828
- Westinghouse Research Laboratories, MHD generator, 256
- Westlake, Sir Charles, on Supervisory Training Services, 618; on Metal Industries Group, 717
- Westland Aircraft Ltd. Saunders-Roe Division, load transducers, 144; orders from Farnborough Air Show, 372
- Westland Engineers Ltd., Garador garage door, 21
- Westminster chime unit (V. & E. Friedland Ltd.), 700
- Weston, F. D., appointed to board of Montgomerie Reid Engineering Co. Ltd., 177
- Westrex Co. Ltd., public address equipment, 144
- West's Piling & Construction Co. Ltd., Belfast refinery for BP Co., 73; Spencer Steel Works, 535
- Westwater, F. L., review of Analogue Computation, 512; biographical note, 514
- Wheels, engineering without, by N. Swindin (book), 252
- Railway, rotation at different speeds. See LETTERS, 602, 706, 802
- Wheelabrator shot blasting equipment (Tilghman's Ltd.), 139
- Wheeler, C. R., on steel stock fluctuations, 540
- Whessoe Ltd., position and prospects, 49; yeast hoppers for Distillers Co. Ltd., 189; ethylene storage sphere for ICI Ltd., 217; oil facilities for Petrofina at Wearside, 809
- Which? (publication), 813
- Whitaker, T., on 100 ton load cell for piling loading tests, 693-695
- White, Dr. F. A., on role of instrumentation in evolution of modern physics, 553
- White, G., research on transmission systems, 628
- White, P. A. F., on Inert Atmospheres in the Chemical, Metallurgical and Atomic Energy Industries (review), 122
- Whitehead Iron & Steel Co., roller hearth annealing furnace installed (AEI-Birlec Ltd.), 269
- Whitehouse Industries Ltd., Griplock, Centre-lock and Toplock self-locking nuts, 208
- Whitrow, G. J., on Atoms and the Universe (book), 252
- Who Owns Whom: Continental Edition, 836
- Wholesaler, can he survive? (Management Consultants Association publication), 740
- Wichita Ltd., disc brakes and clutches, 610
- Wickman Ltd., contract from Bulgarian Trade Mission, 44; single spindle automatic machine, 47; position and prospects, 277, 349
- Wider View cinema film, 585
- Widney Dorlec constructional system for technical furniture (Hallam, Sleight & Cheston Ltd.), 614-616
- Wiggin, Henry, & Co. Ltd., sewage and effluent purification plants installed, 774
- Wilde, H. B. T., on Smith's Stamping Works (Coventry) Ltd., 645
- Wildhaber, E., inventor in gear field, 634
- Wilding, J. S., on classification of liquid fuels, 716
- Wilkins, G., on Ford Taunus 12M motor car, 368; on Consul Cortina, 369; on current contrasts in automobile design, 466; on new site and new models for Paris Salon, 498
- Wilkinson, K., on Armatures and Field Coils (review), 87
- Wilkinson Rubber Linatex Ltd., Linatex centrifugal pump, 675
- Willcocks, R. G. W., on rough riding on railways, 602. See LETTER, 802
- Willets, Dr. B. F., on Massey-Ferguson Group, 577
- Williams, D., on using dry-friction damping in a new way, 794-796
- Williams, J. A. C., review of Armatures and Field Coils, 87; biographical note, 88; on importance of vocational guidance, 196; on engineers' status in the Royal Navy, 434; on practical training at College of Aeronautical and Automobile Engineering, 649
- Williams, J. E., research on transmission systems, 628
- Williams, John, of Cardiff Ltd., use of austenitic iron castings, 620
- Williams, Sir Owen, & Partners, M1 Motorway extension, 201
- Williams, R. W., on Analogue Computation (review), 512
- Williams, W. J., on Smaller Firm and Technical Education (review), 55
- Wilsford Shaft, use of closed circuit television for observations, 253
- Wilson, A. D., on Common Market, 565
- Wilson, J. D., & Partners, Rotterdam depot for British-Borax (Holdings) Group, 305
- Wilson, R. W., on influence of physical properties of liquid on the severity of cavitation damage, 459-460
- Wimbush, A. D., & Son Ltd., use of Double-D fendering strip, 621
- Wimpey, George, & Co. Ltd., Belfast refinery for BP Co., 73; extension to M1 Motorway, 201; overseas orders, 407
- Winch, Pitt-Scott (Johnson type) for Palmers Hebburn dry dock (Laurence, Scott & Electromotors Ltd.), 747
- Wind pressures on multi-storey buildings, by B. G. de Bray, 10-11
- Tunnel, wet: water analogue of air (Boeing Co.), 489. See LETTER, 602
- Winding machine, induction coil (Frieseke & Hoepfner and Embassy Engineering Ltd.), 238
- on traction machines: insulation and construction, by W. Duckett (book), 817
- Unit, Flexmaster (Flexible Drives (Gilmans) Ltd.), 143
- Windscreens, motor car, laminated glass versus toughened glass, 601
- Winfrith Atomic Energy Establishment, atomic reactor DIMPLE in operation, 32
- Wing, aircraft, laminar flow, Handley Page, 462
- Winget Gloucester Ltd., position and prospects, 549; merger with Gloucester Railway Carriage and Wagon Co. Ltd., 549; subsidiaries of, 549
- Winternitz, Dr. F. A. L., review of Hydro-metry: Theory and Practice of Hydraulic Measurements, 23; biographical note, 24
- Wire drawing cones, ceramic (Royal Worcester Industrial Ceramics Ltd.), 471
- Packaging equipment, Draw-pak, (Reliance Gear Co. Ltd.), 306
- and strand, prestressing (trade publication), 360
- and strip forming machine (Meyer, Roth & Paster and Soag Machine Tools Ltd.), 238
- Wiring, electronic, at low temperatures (ASTM), 159
- Wiseman, Alfred, & Co. Ltd., acquired by Ruston & Hornsby Ltd., 113
- Witthoff, J., on Tools for Machining (review), 691
- Wohlfarth, Dr. E. P., review of Oxide Magnetic Materials, 360; biographical note, 360
- Woldman, N. E., on Engineering Alloys (book), 817
- Wolf Electric Tools Ltd., use of Loctite sealant resin, 388; wall chart (trade publication), 456
- Wolverhampton Metal Co. Ltd., position and prospects, 145; J. H. Furnival resigned as chairman, 145; D. P. C. Neave appointed chairman, 145
- Wolvey Anti-Skid School, learning to combat skids, 165
- Women and higher education, by Dr. M. Reeves, 244, 447
- Wood, Harold, & Sons Ltd., road tanker for hot paraffin wax, 367
- Wood, impregnated and irradiated, 312
- Wood, Joshua, foundation of Dewrance Co. Ltd., 821
- Wood, R., on electricity and productivity, 733, 741
- Woodall-Duckham Construction Co. Ltd., coking plant for African Metals Corp., 73; Coleshill Works for West Midlands Gas Board, 241; contract from Sierra Leone Development Co. Ltd., 772
- Woodcock, G., on Challenge of Modern Society, 485
- Woodfield Rochester Ltd., hose handling equipment, 107
- Woodhead, R. W., on Frame Analysis (review), 22
- Woods of Colchester Ltd., Xpelair fan, 52; silencer for Aerofoil axial flow fans, 380
- Woodward, Lt. Col. T., direction of atomic reactor for medical research at Walter Reed Army Institute of Research, 699
- Woodworking machine, Inca (Startrite Machine Tool Co. Ltd.), 396
- Wool (and Allied) Textile Employers Council, training courses, 812
- Balls of, labelling machine for (Purdy Machinery Co. Ltd.), 844
- Wooldridge, D. E., on Handbook of Automation, Computation and Control (review), 286
- Woolliscroft, R., on Supervisory Training Services, 618
- Worcester Royal Porcelain Co. Ltd., historical note, 58
- Work, people's interest in, 525
- Sampling, teaching through films, 686
- Standards, practical, by F. G. Pappas and R. A. Dimberg (book), 482
- Starting time, Plain Words on, 530
- Study, 812
- Glossary of terms in (British Standards Institution), 416
- Practice of, course on, 586-587
- Practitioners, certificate for (City and Guilds), 755
- Training "Bristol-fashion," 586-587
- Workers, dis-incentives of, 167
- Working at home, 628
- Hours. See Hours
- Workshop, home, 396
- Technology, advanced, visual instruction in, 374
- World Bank. See International Bank
- Power Conference, 464, 604, 638, 696, 716
- Worham Blake & Co. Ltd., Dolphin marine petrol engines, 777
- Wrench, impact (trade publication), 482
- (Consolidated Pneumatic Tool Co. Ltd.), 579
- Torque, dial reading, Torquemaster (Precise Torque Ltd.), 611
- Wright, A. P., on T. M. Birkett, Billington & Newton Ltd., 717
- Wright Bros. (Sheet Metal Workers) Ltd., acquired by Spencer Gears Ltd., 749
- Wright, Prof. D. A., on recent developments in semiconductors, 682-684
- Wright, D. F., appointed sales director of Montgomerie Reid Engineering Co. Ltd., 177
- Wright, Dr. D. L., review of Mechanics of Inertial Position and Heading Indication, 359; biographical note, 360
- Wright, Harold, Memorial Lecture, 797
- Wright, J. K., on Shock Tubes (review), 183
- Wright, R. W. A., review of Cold Forging of Steel, 322; biographical note, 324
- Wrigley ambulance (Wessex Industries (Poole) Ltd.), 508
- Writing the story of Scientific projects, usefulness of oral history, 553
- Technical report: manual and source book, by H. Schultz and R. G. Webster (review), 154
- Wunsch, H. L., on design and application of air bearings, 345-348
- Wye River, clean water for, 774
- Wykeham, P., on Santos-Dumont: A Study in Obsession (review), 323
- Wylfa atomic power station, increased capacity for, 364
- Wymark Co., Siebrecht thermometer, 643
- Wynne, G., study of mobile exhibitions, 12
- Wyrne, Greville, Ltd., association with Mobile Exhibitions Ltd., 12

X

- X-RAY analyser, Microscan (Cambridge Instrument Co. Ltd.), 732
- Equipment, industrial (trade publication), 856
- Equipment, 360°, Muller (Research & Control Instruments Ltd.), 703
- Film. See Film
- Tube, Machlett, 507
- Unit (Watson & Sons (Electro-Medical) Ltd.), 507
- Xpelair fan (Woods of Colchester), 52

Y

- YACHT design, Southampton University, 629
- Racing, *Noisaga*, 217
- Yakima Bridge, Delta girder construction of, 267
- Yarwood, J., on Principles of Vacuum Engineering (review), 86
- Yield-line theory, by K. W. Johansen (book), 552
- of mild steel, 594
- Young, A. P., on Automobile Electrical Equipment (book), 482
- Young, D. H., on Elements of Strength of Materials (book), 56
- Young, J. McHardy, on steel girder bridges, 839
- Young, Dr. S. A., on research and development establishments, 701
- Younger, W. McE., on construction industry, 597
- Youth training for leadership, by Air Vice Marshal T. N. Coslett, 825

Z

- Z-DRIVE transom drive for boats (Perkins Group), 572
- Zealley, Sir Alec, on Remploi Ltd., 749
- ZEBRA atomic reactor, 860
- Zeichnerische Darstellungsmethoden, by H. Berns (book), 792
- Zeiss, Carl, *Jena Review*, 154
- Zeltan oilfield, 695
- Zenith Corp., Micro-Tough tone arm, 364
- Zero-Karb cation exchange material, 807
- Zircon grinding medium, Hi-den (W. Podmore & Sons), 83
- Zwicky Ltd., Linemaster hose-end coupling, 163