

Advertisements.

Smoke consumer, J. Player..... 449,827
 Snap hook, Buckingham & Yeates..... 449,870
 Soldering tool, H. Beutelspacher..... 450,034
 Spark arrester, E. J. Hadlock..... 450,012
 Speculum, J. E. Lee..... 449,447
 Speed governor, C. W. Roberts..... 449,729
 Speed regulator, A. B. Morse..... 449,688
 Spike, C. E. Seymour..... 449,705
 Spindle bands, take-up device for, T. Walker..... 449,810
 Spool for textile machinery, J. E. Phillips..... 449,914
 Spring, See Vehicle spring
 Stairs, metallic corner for, L. A. Howell..... 450,102
 Stamp actuated by electro-magnets, time, W. B. Martindale..... 449,759
 Stamp, hand printing, R. H. Smith..... 449,831
 Stanchion for ships, J. H. Bell..... 449,934
 Staple fastening machine, R. H. Little..... 449,719
 Steam boiler, Vogt & Burbs..... 449,923
 Steel, crucible for the manufacture of, G. Nimmo
 Steel, process of and apparatus for hardening hollow articles of, H. A. Brustlein..... 449,938
 Stocking, R. M. Appleton..... 449,920
 Stool for chairs, vertically-adjustable seat to, A. Nantz..... 449,689
 Stopper, See Bottle stopper
 Stove, E. B. Colby..... 449,929
 Stove, air heating, J. B. Oldershaw..... 449,611
 Stove, gas, P. J. Grinberg..... 449,776
 Stove leg attachment, J. B. Morse..... 449,518
 Stove or range, C. V. Roberts..... 449,918
 Stump puller, W. B. Morris..... 449,558
 Sugar, apparatus for lixiviating, C. Steffen..... 449,976
 Sugar from saccharine materials, apparatus for extracting, G. K. Patrick..... 449,747
 Supporter, See Garment supporter
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 Switch board, electrical, J. B. Lyon..... 449,685
 Syringes, piston for, A. Molinari..... 449,883
 Tack driving machine, M. G. Mains..... 450,027
 Tanning, process of and composition for, C. B. Warrand..... 450,121
 Tea kettle, J. H. Clark..... 449,839
 Telegraphy, F. Anderson..... 449,865
 Telegraphy, R. G. Brown..... 449,897
 Telephone, multiple, W. W. Jacques..... 449,679
 Thermal gauge, tracklayers, P. H. Fontaine..... 450,065
 Threshing machine cutter and feeder, J. Eakles-ton..... 450,098
 Threshing machine feeding device, J. P. Monnet..... 450,084
 Tidy holder, W. G. Browne..... 449,898
 Tire for vehicle wheels, A. W. Thomas (r)..... 11,155
 Tool holder, L. B. Nielsen..... 450,031
 Tower and mast, F. L. Butler..... 449,730
 Toy, E. P. Roberts..... 449,715
 Toy bank, registering, Headley & Horton..... 450,071
 Toy detonator, A. L. Seymour..... 449,706
 Toy pistol, T. C. Murray..... 449,781
 Toy swing, D. L. Keeler..... 449,938
 Track cleaner and lubricator, T. J. King..... 449,855
 Track clearing and lubricating device, T. J. King..... 449,855
 Train signal, Finn & Garner..... 449,672
 Transom lifter, O. Lund..... 449,800
 Trap, See Animal trap
 Tricycle, J. Carter..... 450,001
 Truss, J. H. Parker..... 449,836
 Tub, mould for generating, J. M. Moore..... 449,884
 Tub clip, name, G. D. Stulken..... 449,714
 Tug, hull, J. S. Hurley..... 449,906
 Twines, etc., machine for the manufacture of, W. H. Avis..... 449,991
 Type mould, Mitchell & Milne..... 450,083
 Typewriting machine, F. M. Miller..... 450,107
 Typewriting machines, electrical, E. F. Youngs..... 449,923
 Typewriting machines, type cleaning brush for, F. Van Fleet..... 450,126
 Umbrella, T. J. Thorp..... 449,716
 Valve and connection of wash basins and the like, waste and water pipe, J. R. Whiting..... 449,989
 Valve controller, electric, G. E. Turner..... 449,889
 Valve mechanism for carbonic acid gas generators, F. J. Johnston..... 450,076
 Valve, steam actuated, J. H. Baker..... 449,868
 Vehicle lamp, automatic, A. F. Geerze..... 449,850
 Vehicle spring, H. W. Pell..... 449,690
 Vehicle spring, H. Timken..... 449,717
 Vehicles, metallic end for, E. K. Bumpass..... 449,664
 Vending machine, A. W. Kooovers..... 449,749
 Veterinary surgical instrument, J. W. Mullen..... 450,086
 Vise, C. Weiss..... 449,865
 Wagon dump, motor, J. S. Kidd..... 449,680
 Wagon trains, connection for, W. H. Thurman..... 449,980
 Waistband, F. Spitz..... 449,710
 Wall paper, sales rack for, W. H. Eastman..... 449,734
 Walls or ceilings, device for securing fixtures to, T. W. Riley..... 450,127
 Washboard, H. Smith..... 449,872
 Wash boiler, C. H. Fitzgerald..... 450,044
 Washer, See Dish washer
 Washing machine, W. J. Bennington..... 449,965
 Washing machine, W. H. Parker..... 449,694
 Washing machine, K. S. Folk..... 449,700
 Washing machine, packet & Raddas..... 449,879
 Washing preparation, R. F. Halleck..... 449,879
 Watch bow fastener, C. F. Morrill..... 449,885
 Watch, stop, L. E. Pignet..... 449,915
 Water closet tanks, operating valve in, W. H. Ward..... 449,770
 Water closet tanks, water supply apparatus for, T. McHugh..... 449,934
 Water closet valve, W. H. Ward..... 449,769
 Water closets, water supplying apparatus for, W. H. Ward..... 449,768
 Water elevator, automatic, R. Estes..... 450,042
 Water meter, rotary, L. H. Nash..... 449,821
 Welding, electric, E. Thomson..... 449,836
 Well, tubular, Cameron & Chapman..... 449,771
 Wheel, See Car wheel
 Wick raiser, B. P. Luce..... 450,106
 Window, H. N. Mesker & Arbogast..... 449,744
 Window frame, Mesker & Arbogast..... 450,082
 Wire, machine for laying and spooling, Johnson & Hale..... 450,022
 Wire stretching, Springer & Jackson..... 449,881
 Wood polishing machine, J. E. Carpenter..... 449,686
 Wood working machine, J. L. Perry..... 449,687
 Wrench, See Monkey wrench
 Wrench, C. H. Driver..... 449,793
 Wrench, A. C. Whittier..... 449,722
 Wringer, See Clothes wringer.

DESIGNS.

Advertising card, W. H. Spahr..... 20,663
 Carpet button or fastener, stair, D. Walker..... 20,661
 Cracker, etc., E. C. Pearson..... 20,662
 Handle for spoons, etc., G. & B. W. Gooding..... 20,664
 Spoon, E. C. Pearson..... 20,665
 Spoon, A. J. Dempsey..... 20,669
 Spoon, etc., J. H. Johnston..... 20,698
 Sugar bowl, etc., G. L. Crowell, Jr..... 20,667
 Water closet bowl, C. A. Jaynes..... 20,659
 Weighing machine case, H. E. Patterson..... 20,660

TRADE MARKS.

Alcohol, wood, J. A. & W. Bird & Co..... 19,278
 Beer, Bavarian Brewing Co..... 19,305
 Beer, O. S. Neale..... 19,310
 Beer, lager, G. Uebel & Sons..... 19,307
 Bicycles, Keefe & Bannan..... 19,286
 Candy tablets, T. Candy..... 19,283
 Chains, vest, D. C. Percival & Co..... 19,273
 Cigars, S. Azcano y Meana..... 19,274
 Cigars, J. Alvarez & Co..... 19,274
 Cigars, V. Bustillo & Brother..... 19,274
 Cigars, J. Suarez y Gonzalez..... 19,285
 Cigars, Grommes & Ullrich..... 19,279
 Cigars, J. Ybaseta..... 19,287
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 Diamonds, imitation, D. C. Percival & Co..... 19,284
 Games, F. K. Kline..... 19,282
 Hose, textile fire, C. Callahan Company..... 19,292
 Oil, illuminating, Tide Water Oil Company of Georgia..... 19,297
 Organs, Hamilton Organ Company..... 19,281
 Paper bags, W. A. Chipman..... 19,285
 Paper making materials, Liverpool Marine Store Co..... 19,308
 Remedy for diseases of the stomach, bowels, liver, and kidneys, M. E. Welch..... 19,294
 Steel plates, Bessemer, E. Davies & Sons..... 19,286
 Thread, spool, J. Chadwick & Bro..... 19,280
 Tin, terne, and black plates, and Canada-plate plates, Gwendraeth Tin Plate Company..... 19,289 to 19,293
 Tin, terne, zinc, and black plates, Redbrook Tin-plate Company..... 19,303 to 19,305

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LIST OF BOOKS ON ELECTRICITY

- Alternate Current Transformer in Theory and Practice.** Vol. I. The Induction of Electric Currents. 500 pages. Fully illustrated and with copious index. By J. A. Fleming. 8vo. cloth. London, 1889. \$3.00
- This book treats both practically and theoretically the subject of Electric Current Induction and the Alternating Current Transformer.
- Arithmetic of Electricity.** By T. O'Conor Sloane, A.M., E.M., Ph.D. This work gives Electric Calculations in such a simple manner that it can be used by any one having a knowledge of Arithmetic. It treats of calculations for wiring, resistance in general, arrangement of batteries for different work, and is supplemented by the most practical series of tables ever published. It is absolutely indispensable to the practical electrician, as well as to the amateur. Fully illustrated. 1891. \$1.00
- Art of Electrolytic Separation of Metals.** By G. Gore. Theoretical and practical. Fully illustrated. 8vo. cloth. London, 1880. \$3.50
- Dynamo.** How to make a Dynamo. A Practical Treatise for Amateurs. Containing numerous illustrations, and detailed instructions for constructing a small dynamo to produce the electric light. By Alfred Crofts. 12mo. cl. London. Second edition. 1889. .50
- Electric Batteries.** Elementary Treatise on. From the French of Alfred Naudet, translated by L. M. Fishback. Fifth edition. N. Y., 1888. \$2.50
- Electric Lighting.** The Elements of Electric Lighting, including Electric Generation, Measurement, Storage, and Distribution. By Philip Alkinson, A.M., Ph.D., author of "Elements of Static Electricity." Contents: Electricity a Mode of Molecular Motion; Alternate Current Dynamos; Direct Current Dynamos; Electric Terms and Units; Electric Measurement; The Arc Lamp; The Incandescent Lamp; The Storage Battery; Electric Distribution, etc. Fourth edition. 200 pages. 104 illustrations. 1889. \$1.50
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- Electricity: The Science of the Nineteenth Century.** A sketch for General Readers. By E. M. Caillard. Illustrated. 1891. \$3.00
- Electricity.** In Theory and Practice; or, the Elements of Electrical Engineering. By Lieut. Bradley A. Fiske, U. S. N. 256 pages, and many illustrations. 1888. \$2.50
- Electricity.** The A B C of. An elementary manual giving in simple language a general outline of the science. 128 pages, with 36 illustrations. Wm. H. Meadorcroft. 12mo. cloth, 1889. .50
- Electricity in our Homes and Workshops.** A practical Treatise on Auxiliary Electrical Apparatus. With numerous illustrations. Sydney F. Walker. 12mo. cloth. London, 1889. \$1.50
- Electrical Instrument Making for Amateurs.** By S. R. Bottone. A practical hand-book. Cloth, 175 pages. 59 illustrations. .50
- Electrical Rules and Tables.** A pocketbook of Electrical Rules and Tables for the use of Electricians and Engineers. Revised and enlarged. 496 pages. 32nd ed. Sixth edition. 1889. \$2.50
- Electricity and Magnetism.** Elementary Lessons in Electricity and Magnetism. By S. Vanuxem P. Thompson. 171 illustrations and 442 pages. 1889. \$1.25
- Electrical Dictionary.** A Dictionary of Electrical Words, Terms, and Phrases. By Edwin J. Houston, A.M. Electrician of the International Electrical Exhibition. 640 pages and 396 illustrations. 1889. \$2.50
- The author has aimed to give a concise definition of the word term, or phrase, of the science, and to insert when possible, a cut of the apparatus described or employed in connection with the word, term, or phrase defined.
- Electrical Engineering.** By W. Slingo and A. Brooker. A Practical Book for Electric Light Artisans and Students. This is a Comprehensive Treatise on the more important Modern Applications of Electricity. 680 pages. 300 illustrations. \$3.50
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- Lectures on the Electro-Magnet.** By Silvanus P. Thompson. Authorized American Edition. Just Published. Cloth..... \$1.00
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- Telephone.**—The Electric Telephone. By George B. Prescott. Second edition revised and enlarged. 512 illustrations. 790 pages. 1890. \$6.00
- The Electrical Engineer's Pocket Book.** Modern Rules, Formulae, Tables, and Data. By H. R. Kempe. 32mo. leather. London. 1880. \$1.75
- The Telephone.** By Wm. H. Preece and Julius Moser, Ph.D. 30 chapters, 290 illustrations, and 482 pages. 1889. \$4.00
- Voltaic Accumulator.** The Voltaic Accumulator, an elementary treatise. By Emile Reynier. Translated from the French by J. A. Bodv. 1889. \$3.00
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