

RECENTLY PATENTED INVENTIONS.

Pertaining to Apparel.

COLLAR.—B. S. ELLS, Troy, N. Y. The purpose of this invention is to provide a collar having improved means of attaching the same to the collar button at the back of the neck band, and which will operate to prevent the button at this point from coming in contact with the cravat or necktie which may be worn with the collar.

EAR-JEWEL FASTENING.—C. WELLER, Newark, N. J. The improvement refers to jewelry and its object is to provide a jewel fastening arranged to securely hold the jewel in place on the lobe of the ear without requiring piercing thereof, and to allow convenient manipulation of the fastening when applying or removing the jewel.

Of Interest to Farmers.

TROUGH.—J. S. WEAVER and J. B. WEAVER, New Oxford, Pa. This invention is an improvement in troughs such as are generally used for feeding and watering stock, and has in view a trough such that the ends may be easily applied to and detached from the body and from water-tight connection therewith, whereby the parts when disassembled can be closely packed, convenient for shipment and stowage.

DESICCATING APPARATUS.—J. ROEH, Spokane, Wash. This apparatus may be used for carrying out the process disclosed in a divisional application formerly filed by Mr. Roeh. The invention relates more particularly to an apparatus especially designed for use in the treatment of milk to remove the water therefrom and produce a powdered product.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Legal Notices

PATENTS

INVENTORS are invited to communicate with Munn & Co., 361 Broadway, New York, or 625 F Street, Washington, D. C., in regard to securing valid patent protection for their inventions. Trade-Marks and Copyrights registered. Design Patents and Foreign Patents secured.

A Free Opinion as to the probable patentability of an invention will be readily given to any inventor furnishing us with a model or sketch and a brief description of the device in question. All communications are strictly confidential. Our Hand-Book on Patents will be sent free on request.

Ours is the Oldest agency for securing patents; it was established over sixty years ago.

MUNN & CO., 361 Broadway, New York Branch Office, 625 F St., Washington, D. C.

INDEX OF INVENTIONS

For which Letters Patent of the United States were issued for the Week Ending July 13, 1909,

AND EACH BEARING THAT DATE [See note at end of list about copies of these patents.]

Table listing inventions such as Acceleration controlling device, Adding machine, Adjustable clamp, etc., with corresponding patent numbers.

Main table listing inventions such as Bottle locking bar, Bottle stopper, Bowl holder, etc., with corresponding patent numbers.

Table listing inventions such as Key hook, Kinetoscope, Kitchen implement, etc., with corresponding patent numbers.

Classified Advertisements

Advertising in this column is 75 cents a line. No less than four nor more than ten lines accepted. Count seven words to the line. All orders must be accompanied by a remittance. Further information sent on request.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. There is no charge for this service. In every case it is necessary to give the number of the inquiry. Where manufacturers do not respond promptly the inquiry may be repeated.

MUNN & CO.

BUSINESS OPPORTUNITIES.

WANTED.—Manufacturer to handle match box and automatic clear-tip cutter (Patent No. 244,651) on royalty. Nothing like it patented. Write for model. Address G. L. Buckman, 212 B St., S. E., Washington, D. C.

Inquiry No. 8868.—Wanted to buy nickeloid for buttons.

WANTED, by established manufacturers of metal specialties, patents of metal specialties which could be sold to the carriage or hardware trade. Answer, giving full description, Cately & Etting, Cortland, N. Y.

Inquiry No. 8918.—For manufacturers of "Wyd't's Electro-Catalytic Sparking Plug."

PATENTS FOR SALE.

FOR SALE.—Patent No. 916,512. Self timing speed indicator. A most improved instrument. Center runs idle till clutch is thrown in. When revolutions for the desired time are registered it will disconnect automatically, thus no watch is needed, nor light. One hand can operate it which is convenient for shafts near floor or ceiling. Simple in construction and cheap to manufacture. K. Weiss, 118 Cherry St., Waterbury, Conn.

Inquiry No. 8921.—For the manufacturers of gilt paper.

FOR SALE.—Patent No. 886,802. Revolving wrench. Is a parallel jaw pliers with revolving handles, which will grip tight or loose as desired in either direction. Very quick motion for turning screws, nuts, etc. Have many requests to put this wrench on the market. K. Weiss, 118 Cherry St., Waterbury, Conn.

Inquiry No. 8922.—Wanted the address of Worthington Boiler Co.

FOR SALE.—Patent No. 921,806. Just issued. Can be made the biggest little thing going. Demand already created. Small cost to manufacture. Address Inventor, No. 2315 Whittemore Place, St. Louis, Mo.

Inquiry No. 8931.—For parties who manufacture the Western Stump Borer for boring stumps.

FOR SALE.—Rights under U. S. French and Italian photo-sculpture patents. A device of extreme accuracy, yet flexible. See Scientific American, July 10. J. Hammond Smith, University of Pittsburgh.

Inquiry No. 8941.—For manufacturers of machinery for making fly screens.

FOR SALE.—U. S. Patent No. 885,787; France, No. 384,241; England, No. 19,138. Steel railway joint. No fish plates needed. Sure money maker. No reasonable offer refused. Address Wilbur H. Keel, Pennsgrove, N. J.

FOR SALE.

FOR SALE.—Specialty for manufacturers. Dental floss holder, patented May 1909. For further particulars apply direct to inventor, T. A. Tubbs, Seattle, Wash., care H. S. Emerson Company.

Inquiry No. 8960.—For the address of the Windsor Mfg. Co., manufacturers of waterproof collars and cuffs.

HELP WANTED.

YOUNG MAN, graduate of some school in mechanical engineering, for position in woodworking plant in small Tennessee town. Good opportunity for advancement. State experience, if any, and salary. Answer "Position," Box 773, New York.

Inquiry No. 8966.—Wanted the address of the Cobendet Motor Co.

LISTS OF MANUFACTURERS.

COMPLETE LISTS of manufacturers in all lines supplied at short notice at moderate rates. Small and special lists compiled to order at various prices. Estimates should be obtained in advance. Address Munn & Co., List Department, Box 773, New York.

Inquiry No. 8969.—Wanted machines that make accordion dress plating (steam).

A LIST OF 1,500 mining and consulting engineers on cards. A very valuable list for circularizing, etc. Price \$15.00. Address Munn & Co., List Department, Box 773, New York.

Inquiry No. 8974.—For address of firms interested in fishing reels.

Inquiry No. 8977.—For manufacturers of machinery for manufacturing denatured alcohol.

Inquiry No. 8978.—Wanted the address of manufacturers of dry pans or crushers to grind sand for plastering and cement works.

Inquiry No. 8980.—For the address of manufacturers of mortars and pestles that are used by druggists.

Inquiry No. 8984.—Wanted the address of the manufacturers of Cyprus wash tubs.

Inquiry No. 8987.—Wanted, the manufacturers of the Van Winkle, Woods & Sons, and the Weber power meters.

Inquiry No. 8990.—For information regarding shoes not made of leather but similar to the same and are as durable.

Inquiry No. 8996.—Wanted addresses of manufacturers of machinery for working orange wood manicure sticks.

Inquiry No. 8997.—Wanted the address of the manufacturers of bread or cake boxes.

Inquiry No. 8999.—For manufacturers of combined clothes and clothes pin receptacle.

Inquiry No. 9001.—For the address of progressive manufacturers of fruit jars.

Inquiry No. 9003.—For the address of parties who make "Invar" or other metals having a low coefficient of expansion.

Inquiry No. 9004.—Wanted to buy machinery suitable for grinding, sifting and preparing cooked cereals; also packing same in cartons.

Inquiry No. 9005.—For the address of manufacturers of 4 oz. cylindrical paper boxes.

Inquiry No. 9006.—Wanted to buy a machine that will sew or clamp a thin two-ply wood cover on to the top of a bushel basket, wiring and sealing it quickly by power machinery.

Inquiry No. 9007.—Wanted, a tin churn for churning milk that has a wire spring at top and bottom of churn and operated by pressing the wire springs.

Inquiry No. 9008.—For manufacturers making a specialty of match boxes.

Table listing various mechanical parts and their prices, including items like Plow attachment, Pluggers, Powder table, and various pumps and engines.

"Star" Lathes advertisement featuring an image of a lathe and text describing its features for fine, accurate work.

Engine and Foot Lathes advertisement from Sebastian Lathe Co., highlighting machine shop outfits and workmanship.

Veeder Counters advertisement showing a counter with the number 99728 and describing its use for registering reciprocating movements.

A Home-Made 100-Mile Wireless Telegraph Set advertisement, including a diagram of the telegraph and details about the kit.

GILSON ENGINE advertisement featuring an image of the engine and text describing its use for pumping cream and other applications.

WHAT WE DO—HOW WE DO IT advertisement from Knickerbocker Machine Works, Inc., offering technical services.

WELL DRILLING MACHINES advertisement from Williams Bros., Ithaca, N. Y., listing various drilling equipment.



Made in the largest and most up-to-date plant in the world advertisement for Gray Motor Co., featuring an image of a motor and text about their marine motors.

Schools and Colleges Mackay School of Mines University of Nevada advertisement, describing the school's facilities and location.

Rose Polytechnic Institute, Terre Haute, Indiana advertisement, listing courses in mechanical, electrical, and civil engineering.

Learn Watchmaking advertisement from St. Louis Watchmaking School, offering instruction in watch repair.

The Design and Construction of Induction Coils advertisement by A. Frederick Collins, featuring a large image of a coil and a detailed list of chapters.

Please mention the SCIENTIFIC AMERICAN when writing to advertisers



Home-Made Experimental Apparatus

In addition to the following articles, the Scientific American Supplement has published innumerable papers of immense practical value, of which over 17,000 are listed in a carefully prepared catalogue...

If there is any scientific, mechanical, or engineering subject on which special information is desired, some papers will be found in this catalogue, in which it is fully discussed by competent authority.

A few of the many valuable articles on the making of experimental apparatus at home are given in the following list:

ELECTRIC LIGHTING FOR AMATEURS. The article tells how a small and simple experimental installation can be set up at home. Scientific American Supplement 1551.

AN ELECTRIC CHIME AND HOW IT MAY BE CONSTRUCTED AT HOME, is described in Scientific American Supplement 1556.

THE CONSTRUCTION OF AN ELECTRIC THERMOSTAT is explained in Scientific American Supplement 1566.

HOW TO MAKE A 100-MILE WIRELESS TELEGRAPH OUTFIT is told by A. Frederick Collins in Scientific American Supplement 1605.

A SIMPLE TRANSFORMER FOR AMATEUR'S USE is so plainly described in Scientific American Supplement 1572 that anyone can make it.

A 1/2-H.P. ALTERNATING CURRENT DYNAMO. Scientific American Supplement 1558.

THE CONSTRUCTION OF A SIMPLE PHOTOGRAPHIC AND MICRO-PHOTOGRAPHIC APPARATUS is simply explained in Scientific American Supplement 1574.

A SIMPLE CAMERA-SHUTTER MADE OUT OF A PASTEBOARD BOX, PINS, AND A RUBBER BAND is the subject of an article in Scientific American Supplement 1578.

HOW TO MAKE AN AEROPLANE OR GLIDING MACHINE is explained in Scientific American Supplement 1582, with working drawings.

EXPERIMENTS WITH A LAMP CHIMNEY. In this article it is shown how a lamp chimney may serve to indicate the pressure in the interior of a liquid; to explain the meaning of capillary elevation and depression; to serve as a hydraulic tourniquet, an aspirator, and intermittent siphon; to demonstrate the ascent of liquids in exhaustive tubes; to illustrate the phenomena of the bursting bladder and of the expansive force of gases. Scientific American Supplement 1583.

HOW A TANGENT GALVANOMETER CAN BE USED FOR MAKING ELECTRICAL MEASUREMENTS is described in Scientific American Supplement 1584.

THE CONSTRUCTION OF AN INDEPENDENT INTERRUPTER. Clear diagrams giving actual dimensions are published. Scientific American Supplement 1615.

AN EASILY MADE HIGH FREQUENCY APPARATUS WHICH CAN BE USED TO OBTAIN EITHER D'ARSONVAL OR OUDIN CURRENTS is described in Scientific American Supplement 1618. A plunger battery of six cells, a two-inch spark induction coil, a pair of one-pint Leyden jars, and an inductance coil, and all the apparatus required, most of which can be made at home.

SIMPLE WIRELESS TELEGRAPH SYSTEMS are described in Scientific American Supplements 1363 and 1381.

THE LOCATION AND ERECTION OF A 100-MILE WIRELESS TELEGRAPH STATION is clearly explained, with the help of diagrams, in Scientific American Supplement 1622.

THE INSTALLATION AND ADJUSTMENT OF A 100-MILE WIRELESS TELEGRAPH OUTFIT, illustrated with diagrams, Scientific American Supplement 1623.

THE MAKING AND THE USING OF A WIRELESS TELEGRAPH TUNING DEVICE, illustrated with diagrams, Scientific American Supplement 1624.

HOW TO MAKE A MAGIC LANTERN, Scientific American Supplement 1546.

THE CONSTRUCTION OF AN EDDY KITE. Scientific American Supplement 1555.

THE DEMAGNETIZATION OF A WATCH is thoroughly described in Scientific American Supplement 1561.

HOW A CALORIC OR HOT AIR ENGINE CAN BE MADE AT HOME is well explained, with the help of illustrations, in Scientific American Supplement 1573.

THE MAKING OF A RHEOSTAT is outlined in Scientific American Supplement 1594.

Good articles on SMALL WATER MOTORS are contained in Scientific American Supplement 1494, 1499, and 1406.

HOW AN ELECTRIC OVEN CAN BE MADE is explained in Scientific American Supplement 1472.

THE BUILDING OF A STORAGE BATTERY is described in Scientific American Supplement 1433.

A SEWING-MACHINE MOTOR OF SIMPLE DESIGN is described in Scientific American Supplement 1210.

A WHEATSTONE BRIDGE, Scientific American Supplement 1595.

Good articles on INDUCTION COILS are contained in Scientific American Supplements 1514, 1522, and 1527. Full details are given so that the coils can readily be made by anyone.

HOW TO MAKE A TELEPHONE is described in Scientific American Supplement 966.

A MODEL STEAM ENGINE is thoroughly described in Scientific American Supplement, 1527.

HOW TO MAKE A THERMOSTAT is explained in Scientific American Supplements 1561, 1563, and 1566.

ANEROID BAROMETERS, Scientific American Supplements 1500 and 1554.

A WATER BATH, Scientific American Supplement 1464.

A CHEAP LATHE UPON WHICH MUCH VALUABLE WORK CAN BE DONE forms the subject of an article contained in Scientific American Supplement 1562.

Each number of the Scientific American Supplement costs 10 cents by mail.

Order from your newsdealer or from MUNN & CO., - 361 Broadway, New York

Table listing various scientific apparatus and their corresponding page numbers in the Scientific American Supplement. Items include: Sweeper, pneumatic, A. E. Moorhead; Switch handle, electric, G. D. Platt; Switch operating device, G. A. & J. F. Schwebel; Table locking device, folding, D. Buel; Table mat, H. M. Kaylor; Tally card, E. D. McKenna; Telegraphy, wireless, J. H. Cuntz; Telephone coin box, C. S. Ellis; Telephone divided multiple switchboard system, W. Aitken; Telephone metering system, R. M. Eaton; Telephone system, M. Baumer; Telephone system, selective, H. G. Guyle; Telephone transmitters, hygienic attachment for, E. C. Smith; Thill, vehicle, P. E. Ebrez; Tile, Miller & Huggins; Tile machine, Stewart & Schenk; Tile mold, J. H. Stewart; Timepiece, E. Aufero; Time recorder, workman's, F. G. Lake; Time recording device, E. S. Bassett; Time switch, automatic, J. & J. Jones, Jr.; Tire, J. C. Barker; Tire, armored, S. T. Moser; Tire and clamping means, pneumatic, H. M. Hartman; Tire protector, W. Green; Tire protector, C. E. Kimball; Tire repair device, O. C. Reich; Tire, vehicle, D. Pollard; Tobacco box, sheet metal pocket, W. J. Chambers; Toilet chairs, W. F. Hedstrom; Tonge, E. J. Walker; Tongue switch, E. T. Alburger, Jr.; Tool for breaking bands, wire, and the like, J. M. Heckman; Tool handle, C. B. Stanley; Tool head, rotary, A. E. Church; Tool holder, C. Karpa; Tool, refile, J. E. Graybill; Tool shank, C. F. Sullivan; Tool, valveless pneumatic, J. F. Clement; Toy, J. C. Turner; Toy block, L. Johnson; Toy, detonating, J. A. Dainty; Toy, illusion, F. L. Oleson; Transmission apparatus, J. O. Forker; Transmitter mouthpiece, W. W. Dean; Trolley, E. Y. Moore; Trolley harp mounting, G. L. Adams; Trolley pole guide, J. P. Brennan; Trolley wheel, E. G. Gannoe; Trolley wire switch, S. H. Sherrill; Trolley wire switch mechanism, F. M. Zimmerman; Truck, car, F. Gebhardt; Truck construction, E. B. Dailey; Truck, gasoline motor, A. Kabureck; Truck, rigger's, J. Ross; Tube mill, G. S. Emerick; Tubes and for other uses, machine for straightening, L. D. Davis; Turbine, J. Forman; Turbine, D. Burfield; Turbine elastic fluid, C. G. Curtis; Turbine, steam, D. Kemble; Turning and shaping tools, holder for, B. M. W. Hanson; Typewriter ribbon spool, J. F. O'Connor; Typewriters, line space indicator for, C. C. Poole; Typewriting and adding machines, variable automatic spacing mechanism for combined, W. L. Densch; Typewriting machine, G. Woodard; Typewriting machine, F. W. Sickles; Typewriting machine ribbon spool, G. A. Selb; Typographic form, F. H. Richards; Typographic forms, mechanism for making, F. H. Richards; Umbrella, Z. F. Dunlap; Umbrella, J. J. Bardon; Umbrella drip cup, detachable, R. Winkelmaier; Uncapping tool, A. Rydquist; Valve, E. Phillipson; Valve, A. C. Rickseker; Valve, C. A. Harvey; Valve, air, F. H. Sauer; Valve, cap, A. E. Moorhead; Valve, combined emergency and throttle, Callan & Johnson; Valve device, V. Bloom; Valve gear and ignition apparatus for internal combustion engine, M. Briggs; Valve mechanism, W. H. & F. M. Spayd; Valve mechanism for engines and compressors, S. A. Reeve, reissue; Valve, sand, Irwin & Knowlson; Valve, water pressure regulating, E. Conley; Vapor burner feed device, E. E. Flora; Vehicle, motor, J. W. Davis; Vehicle spring, C. C. Hayes; Vehicle spring wheel, T. S. Dunn; Vehicle wheel, E. S. Stancifft; Vehicle wheel, elastic tread, J. Marroy; Vehicles, apparatus for regulating and controlling the speed of motor, F. Loos; Vehicles, hydraulic steering check for, H. Lemp; Vehicles, track for single rail, A. E. Davis; Vending machine, cigar, F. C. Kainer; Veneering press, Kaufman & Yohe; Vessel, compound, E. Drouilly; Vessel, double walled, G. R. Paalen; Vibrator, electrical, M. K. Gorden; Vise, T. C. Basset; Wagon brake, J. Luzniaky; Wagon, dumping, W. Rodenhausen; Walter, portable, G. F. Hill; Washbottle attachment, C. Moleter; Washing machine, C. Jackson; Washing machine, W. Neuner; Washing machine, W. J. Zuill; Washtub stand, C. Jackson; Watch, stem winding and setting, W. E. Porter; Watches, etc., winding and hand setting mechanism for, H. Root; Water closet bowl, A. P. Finkensleper; Water closet connection, E. L. Stallings; Water gage, J. Torok; Water heater, D. W. Cunningham; Water heater, A. F. Monesse; Water motor, L. C. Lewis; Wattmeters, operating alternating current mercury, R. C. Lampher; Weaner, calf, F. M. Batman; Weather strip, C. H. Tibbitts; Weather strip, metal, P. L. Hedberg; Weaving machine, E. Reuter; Well packer, oil, gas, and water, L. E. Robinson; Wells, installing, H. Frasch; Wheel, See Trolley wheel; Wheel, J. J. Kelly; Wheel rim, vehicle, E. C. Shaw; Whip socket, locking, J. T. De Moss; Windmill, J. Barker; Windmill governor, P. E. Anderson; Window bracket, J. W. Flynn; Window structure, R. Linkletter; Wines under pressure, apparatus for fermentation and decantation of sparkling, E. Charmat; Wire cloth rack, W. S. Maxey; Wire lathing, W. J. Herald; Wire working implement, C. J. Smith; Wool, apparatus for supplying liquid to, W. J. Murray; Wreck locator and life saver, combined, F. P. Brust; Wrench, G. C. Winslow; Zinc ores, reducing, A. H. Imbert.

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents, provided the name and number of the patent desired and the date be given. Address Munn & Co., 361 Broadway, New York. Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list. For terms and further particulars address Munn & Co., 361 Broadway, New York.

"CASTELL" Drawing, Copying and Ink Pencils. are the finest production of a house that has been manufacturing the highest grade lead pencils for 148 years; and has earned a reputation for excellence that has made the A. W. FABER famous all the world over. Sold by all stationers and dealers in artists' and drawing materials. Samples worth double the money will be sent you on receipt of 10c. A. W. FABER 49 Dickerson Street, Newark, New Jersey

WANTED-A-RIDER AGENT IN EACH TOWN and district to ride and exhibit a 1909 Model "Hanger" bicycle furnished by us. Our agents everywhere are making money fast. Write for full particulars and special offer at once. NO MONEY REQUIRED until you receive and approve of your bicycle. We ship to anyone, anywhere in the U. S. without a cent deposit in advance, freight prepaid, and allow TEN DAYS' FREE TRIAL during which time you may ride the bicycle and put it to any test you wish. If you are then not perfectly satisfied or do not wish to keep the bicycle you may ship it back to us at our expense and you will not be out one cent. We furnish the highest grade bicycles it is possible to make at a small profit above actual factory cost. You save \$5 to \$10 middlemen's profits by buying direct of us and have the manufacturer's guarantee behind your bicycle. DO NOT BUY a bicycle or a pair of tires from anyone at any price until you receive our catalogues and learn our unheard of factory prices and remarkable special offer to rider agents. YOU WILL BE ASTONISHED when you receive our beautiful catalogue and study our superb models at the wonderful low prices we can make for you. We sell the highest grade bicycles for less money than any other factory. We are satisfied with \$2.00 profit above factory cost. BICYCLE DEALERS, you can sell our bicycles under your own name plate at double our prices. Orders filled the day received. SECOND HAND BICYCLES. We do not regularly handle second hand bicycles, but usually have a number on hand taken in trade by our Chicago retail stores. These we clear out promptly at prices ranging from \$2 to \$5 or \$10. Descriptive bargains lists mailed free. TIRES, COASTER-BRAKES, single wheels, imported roller chains and pedals, parts, repairs and equipment of all kinds at half the usual retail prices. DO NOT WAIT, but write today and we will send you free by return mail our large catalogue, beautifully illustrated and containing a great fund of interesting matter and useful information; also a wonderful proposition as the first sample bicycle going to your town. It only costs a postal to get everything. Write it now. MEAD CYCLE COMPANY Dept. L 175 CHICAGO, ILL.

AMERICAN AERONAUT (For August-Illustrated) Articles by Henry Helm Clayton, Frank S. Lahm, Capt. T. S. Baldwin, Carl Dienstbach, Hon. Mrs. Assheton Harbord. Technical Criticism of the Curtiss Machine; Hubert Latham and his Monoplane; Rheims' Aero Races and the Frankfurt Exposition. Single copies 15 cents. PUBLICATION OFFICES, 1926 BROADWAY, NEW YORK

Engineering News (ILLUSTRATED) The Leading Engineering Paper of the World. For Civil, Mechanical, Mining and Electrical Engineers 100 to 125 pages, 9"x13", weekly. Send ten cents for sample copy. If you cannot locate desired engineering equipment write our "Readers Want" department. THE ENGINEERING NEWS PUBLISHING CO. 214 Broadway, New York

SEALED PROPOSALS. SEALED PROPOSALS will be received at the office of the Director of the Census, Washington, D. C., until 2 o'clock, P. M., August 9, 1909, and then publicly opened for furnishing all the labor, materials and work necessary for the construction in lots of 30, 75, 100, or 25 tabulating machines and delivering the same complete, free of all charges for transportation, at the Census Building, Washington, D. C. The right is reserved to accept or reject any or all bids in whole or part, to strike out any item or items in the specifications, and to waive any defects. For specifications, blue print drawings, blank proposals and full information address E. HAN A. DURAND, Director of the Census, Department of Commerce and Labor, Washington, D. C.

WANTED-DRAFTSMAN FOR DESIGN OF HEATING SYSTEMS at \$5.25 per diem. Bureau of Yards and Docks, Navy Department. An examination will be held at the Navy Yard, Washington, D. C., July 30, 1909, to fill the above position. For application and further information address "COMMANDANT," Navy Yard, Washington, D. C.

SOUTHERN STAMPING & MFG. CO. Manufacturers of special and patented articles. R. S., Nashville, Tenn.

ICE MACHINES Corliss Engines, Brewers and Butchers' Machinery. THE WILBERT MFG. CO., 529 Clinton St., Milwaukee, Wis.

MODELS & EXPERIMENTAL WORK. Inventions developed. Special Machinery. E. V. BAILLARD CO., 24 Frankfort Street, New York.

RUBBER Expert Manufacturers Fine Jobbing Work PARKER, STEARNS & CO., 288-290 Sheffield Av., B'klyn, N. Y.

MOORE Special Machinery, Dies, Tools, Models, Metal Specialties, inventions perfected. Indiana and Franklin Streets, Chicago, U.S.A.

MODELS & EXPERIMENTAL WORK Anything from a Watch to an Automobile Chas. E. Dressler & Co., Metropolitan Bldg., 1 Madison Ave., New York

DIE MODELS SPECIAL WORK TOOLS MACHINERY NATIONAL STAMPING AND ELECTRIC WORKS 153-159 S. Jefferson Street, Chicago, Ill.

HOEFT & COMPANY Die Makers, Model Makers, Machinery Builders, Punch Presses, Light and Heavy Stampings. 120 Michigan St., Chicago, Ill., U.S.A.

INVENTORS, MANUFACTURERS, METAL SPECIALTIES METAL NOVELTY WORKS CORP. NEW YORK CITY

New York Model and Experimental Works INVENTIONS DEVELOPED. SPECIAL MACHINERY 442 East 166th Street New York, N. Y.

Print Your Own Cards, circulars, book, newspaper, Press \$5, Larger \$10. Save money. Print for others, big profit. All easy, rules sent. Write factory for press catalog, type, paper, etc. THE PRESS CO., Meriden, Connecticut.

THE "BEST" LIGHT The perfect light for every purpose. Better than electricity - cheaper than kerosene. Makes it possible for every one to be independent and own their own light works. If you can afford kerosene lamps you can afford the "Best" Light. The saving in expense quickly pays its cost. Every lamp guaranteed. Catalog free. Agents wanted. Write to-day. The Best Light Co. 87 E. 5th St. Canton, O.

ALL INFORMATION on the French Ice Machine that appeared in the Scientific American of October 17, 1908, can be had by addressing THE GRISCOM-SPENCER CO. 90 West Street, New York City A. DeRAULT

NOVELTIES & PATENTED ARTICLES MANUFACTURED BY CONTRACT. PUNCHING DIES, SPECIAL MACHINERY, E. KONGSLOW STAMPING & TOOL WORKS, CLEVELAND, O.

THE BEST EQUIPPED SHOP For Mechanical and Electrical Manufacturing Special Machinery, Jigs, Tools, Repairs, Experimental Devices Designing and Commercializing a Specialty THE ROWLAND TELEGRAPHIC COMPANY, Baltimore, Md.

The Ball Transmission FOR Automobiles & Motor Boats NEW YORK GEAR WORKS. 56 GREENPOINT AVE., BROOKLYN, N. Y.