

Engineering TAUGHT BY CORRESPONDENCE

Our system of training by mail has helped thousands held down in poor positions to rise to better salaries and situations. Your chance to rise is just as good as others. Write for our free illustrated book, "Can I Become An Electrical Engineer?" We teach by mail, Electrical Engineering, Mechanical Engineering, Steam Engineering, Mechanical Drawing, Electric Lighting, Electric Railways, ELECTRICAL ENGINEER INSTITUTE, Dept. A, 240 West 23rd St., New York.

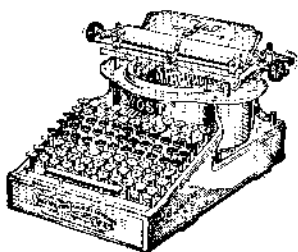
BLISS ELECTRICAL SCHOOL
214 G Street, N. W., Washington, D. C.
Offers a theoretical and practical course in ELECTRICITY complete in one year. Students actually construct Dynamom, Motors, etc. Tuition year opens September 28. Send for Catalog.

THE STATE UNIVERSITY OF IOWA
SCHOOL OF APPLIED SCIENCE, Iowa City, Iowa.
High grade courses in ENGINEERING. Numerous technical courses in special branches. Adequate equipment. University environment. Location unsurpassed. Expenses low. Address G. E. MACLEAN, President.

The Remington does not overwork the operator—the operator cannot overwork the Remington.

Work is easy on the Remington Typewriter for both the operator and the machine

Remington Typewriter Co., 327 B'way, N. Y.



The Light Running YOST is easy to operate. Its Beautiful Work is easy to read. Our Unusual Catalogue is easy to understand.

Why not send for the UNUSUAL CATALOGUE and learn of the BEAUTIFUL WORK done by the LIGHT RUNNING YOST? Sent free.

YOST WRITING MACHINE CO., 245 B'way, New York

KENT POCKET METERS
Automatic Volt-Ammeter

is designed and calibrated especially for testing batteries on gasoline automobiles and launches and for any other use of like capacity. Accurate and substantial. Amperage reading made simply by pressing button. The most convenient and complete battery tester on the market.

Volt-Ammeter \$6.00. Amperemeter \$5.00.
Atwater Kent Mfg. Works, 110 N. 5th St., Philadelphia, Pa.

MILLS FOR ALL MATERIALS.

OUR BUSINESS IS TO MAKE MACHINERY FOR GRINDING GRAIN, CRUSHING ROCKS AND PULVERIZING ALL HARD SUBSTANCES. WE HANDLE ALL KINDS OF MATERIALS FROM COTTON SEED TO COALS AND HERES BY AN UNEXCELLED PROCESS IF YOU WANT ANY KIND OF A MILL OR GRINDING MACHINE, COME TO US AND YOU WILL GET THE BEST AND STILL SAVE MONEY.

DEAL WITH US ONCE AND YOU WON'T CHANGE.

SPROUT, WALDRON & CO. MUNCY, PA.

50 Years' Experience

PATENTS

Trade Marks, Designs, Copyrights, Etc.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through MUNN & Co. receive Special Notice, without charge, in the

Scientific American

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.

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

Toy gun, R. M. Painter	765,786
Trap, R. N. Wynne	765,869
Trolley, W. O. Miller	765,850
Trolley, J. M. Olinger	765,852
Trolley wire clip, A. E. Holaday	765,974
Truck, car, E. Packham	765,989
Trunk harness, B. W. King, Jr.	765,895
Tubes, etc., manufacture of, B. F. McTear	765,673
Tubular boiler, C. Bioly	765,616
Turbine, G. M. Andersson	765,761
Turbine, I. Benjamins	765,800
Turbine, steam, M. D. Kalbach	766,044
Type casting and setting machine, G. A. Goodson	765,775
Type casting and setting machine, J. C. Fowler	765,965
Type writer actuating mechanism, W. G. Spiegel	765,799
Type writer attachment, J. A. G. Arnold	765,804
Type writer copy holder, D. M. Sells	766,120
Type writing machine actuating mechanism, electromagnet, E. K. Curtis	765,960
Type writing machine carriage feeding mechanism, J. Smith	765,861
Valve, Mattheck & Grafflin	766,053
Valve device, C. H. Watters	765,867
Valve piston and connection, triple, Geltz & Hosack, reissue	12,245
Valve, puppet, H. Dock	765,727
Valves, means for operating pneumatic, W. Lintner	765,743
Vapor generator, J. Stubbers	766,122
Vehicle curtain, R. Wall	765,693
Vehicle lighting apparatus, J. A. Little	765,979
Ventilator, F. J. Prochaska	766,063
Violin, J. D. Loppentien	766,048
Wagon brake, J. J. Schofield	765,800
Wagon, dump, H. C. Tripp	766,123
Wall section for house building, portable, E. C. Mahoney	765,630
Washing machine, E. G. Ellis	765,918
Washing machine, H. A. Bierley	766,097
Watch repairing tool, combination, M. W. Sayyidah	766,067
Water, purifying, Jewell & McGee	766,146
Water tube boiler, R. Gray	765,830
Weather strip, metal, H. E. Kenny	765,844
Weeder, wheel, S. Fuller	766,031
Weighing machine, automatic, E. G. Thomas	766,004
Weighing mechanism, automatic, A. H. Phillips	765,676
Wheel, See Double helical spur wheel.	
Whiffletree coupling, S. J. Davis	765,820
Whiffletree hook, A. R. Ottermann	766,114
Whin sections, means for uniting, M. O. Felker	765,826
Whin stock loop connection, M. O. Felker	765,824
Whipping device, draft animal, J. Brooner	766,136
Whistle, steam, Anderson & Ayres	766,129
Wick, lamp, H. G. James	765,976
Window, H. E. Brown	765,870
Window, G. E. Gale	765,828
Window, R. H. Wunder	765,949
Window frame and sash, A. Rasner	765,857
Wiring system, house, J. W. A. Richardson	765,904
Worsted preparing and spinning machine, F. P. Shaw	765,713
Woven fabric, T. B. Dornan	765,961
Wrench, H. L. Bordwell	765,912
Wrench, W. N. Greer	766,145

DESIGNS.

Pin, clasp, H. W. Fishel	37,055
Rubber fabric, sheet, D. B. Martin	37,057
Spoons, forks, or similar articles, handle for, F. Habensack	37,056

TRADE MARKS.

Baking powder, J. H. Parrish	43,058
Beer, A. Schneider	43,056
Belting, certain named, C. L. Ireson	43,068
Car couplings, buffers, draft gears, and parts thereof, Gould Coupler Co.	43,072
Cigars, A. Caruncho	43,052
Coffee, green, E. de la Garza y Cia.	43,053
Coffee made from bananas, Banana Coffee and Food Co.	43,054
Corn cure, N. Chennam	43,061
Corn shellers, A. H. Patch	43,071
Corset covers, Maline Mills Co.	43,059
Duck and dress goods, Lowell Weaving Co.	43,049
Feed, certain named, Washburn-Crosby Co.	43,059
Fencing wire, Pacific Steel and Wire Co.	43,060
Mineral waters, Hyattso Mineral Water Co.	43,055
Oils, lubricating, Crew Levick Co.	43,066
Ointment, Joseph D. Brown Chemical Company of Baltimore City	43,063
Painters' supplies, certain named, Benjamin Moore & Co.	43,065
Paints for certain named purposes, Columbia Refining Co.	43,064
Paper, grease and moisture proof, R. S. Elliot	43,067
Salves, G. F. Fuerth	43,062
Slicers and kraut cutters, vegetable, E. C. Atkins & Co.	43,070
Thread, sewing, William Paton, Limited	43,051
Washing fluid, J. E. Fisher	43,060
Watches, C. F. York	43,048
Yeast, J. H. Marquardt	43,057

LABELS.

"Cinch Rubber Heels," for rubber heels, F. W. Whittcher	11,269
"Colonial Art Finishes," for finishing material, Chicago Wood Finishing Co.	11,279
"Dorothy Dix," for cigars, H. Sommer	11,275
"Dr. Straube's Hien-fong-Essence," for medicine, German-American Hien-fong Co.	11,272
"Erin Brand," for handkerchiefs, A. B. Heine & Co.	11,268
"Imperial Vaginettes," for suppositories, J. S. Falck	11,273
"Island Brand," for candy, E. Nevegood	11,277
"Miami," for baking powder, Miami Baking Powder Co.	11,278
"Paynes Healing Powder," for healing powder, Payne Drug Co.	11,274
"Sa-go-la Mountain Sage Tonic," for medicine, Rocky Mountain Sage Tonic Co.	11,270
"Speckled-Hen," for candy, Henn & Speck Co.	11,276
"Ticknor's Magic Capsules," for medicine, G. Ticknor	11,271

PRINTS.

"A Delightful Sweet to Eat," for milk chocolate, Huyler's	1,033
"Adler Clothes for fall and winter," for men's winter apparel, David Adler & Sons Clothing Co.	1,031
"Foy's Vest Pocket Foot Hook," for foot hooks, J. Foy	1,032
"Gold Medal Iowa Sorghum," for sorghum, Farrall & Co.	1,034
"Golfonella," for ladies' head gear, J. Rosenfeld	1,029
"Gustav Eisenkramer's Grand Darklight Cleaning Fluid," for cleaning fluid, G. Eisenkramer	1,035
"Pleased Customer," for men's clothing, G. V. Smith	1,030
"Pyramid Natural Cements Plaster," for cement plaster, United States Gypsum Co.	1,036

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.

SPECIAL MANUFACTURING.
DIES AND STAMPINGS TO ORDER.
SPECIAL MACHINERY—MODELS—EXPERIMENTAL WORK
DROP FORGING DIES AND DROP FORGINGS.
HARDWARE SPECIALTIES—MANUFACTURED TO ORDER—SAMPLES OR DRAWINGS FOR ESTIMATES. WRITE FOR OUR BOOKLET.
THE GLOBE MACHINE & STAMPING CO.
370 HAMILTON ST., CLEVELAND, OHIO.

ICE MACHINES. Corliss Engines, Brewers' and Butchers' Machinery. THE FILTER MFG. CO., 890 Clinton St., Milwaukee, Wis.

CHEMICAL EXAMINATIONS OF ALL KINDS.
R. H. C. STIEFEL, Bissell Block, Pittsburgh, Pa.

MODELS & GEARS. CATALOGUES FREE. UNION MODEL WORKS 193 CLARK CHICAGO.

MODELS & EXPERIMENTAL WORK. Inventions developed. Special Machinery. E. V. BAILLARD, Fox Bldg., Franklin Square, New York.

SAVE MONEY and appear neat by wearing M. & M. Rubber Collars. They never wilt or turn yellow. Price 25 cents. Send for catalogue. Agents wanted. Address M. & M. MFG. CO., 9th Street, Springfield, Mass.

THERMO-PILES \$3.00 each. For electrolytic assays, charging storage batteries, etc. Walsh's Sons & Co., Newark, N. J.

MODELS CHICAGO MODEL WORKS
ESTABLISHED 1867. 179 E. MADISON ST. CHICAGO, ILL.
WRITE FOR CATALOGUE OF MODEL SUPPLIES.

BUILDERS of Special Machinery. Models Experimental work. Inventions developed. THE FENN-SADLER MACH. CO., Hartford, Conn.

MODEL AND EXPERIMENTAL WORK. Electrical and Mechanical Instruments. Small Machly. EDWARD KLEINSCHMIDT, 82 W. Broadway, New York.

SPLITDORF SPARK COILS
25 VANDEWATER ST. N.Y.

MECHANICAL MANUFACTURERS wishing to establish branch in New York City, can be represented by NATIONAL SUPPLY CO., 835 Broadway, N. Y.

DRYING MACHINES. S. E. WORRELL Hannibal, Mo.

TWENTY-FIVE DOLLARS CASH
For information about a machine to wash (outside only) 50,000 round light-weight 5 and 20-ounce bottles per day. Four girls to attend. Or one of 20,000 two attendants, daily. STEVE J. THOME, 458 Wabash Ave., Chicago, Ill.

Dies, Tools, Models and Special Machinery. HOEFT & MOORE, Chicago.

TYPEWRITER HEADQUARTERS
332 Broadway, New York, sell all makes under half price. Don't buy before sending for samples of writing, prices, exchange and unprejudiced advice. Immense stock for selection. Shipped for trial. Guaranteed first-class condition. Dealers supplied.

Manufacturers of **HARDWARE SPECIALTIES**
Contract Manufacturers and will market articles of merit
LORIMER MFG. CO., 153 S. Jefferson St., Chicago, Ill.

SETS OF CASTINGS OF MODEL ENGINES
SEND 10¢ FOR 128 PAGE ILL. CATALOGUE.
ALSO TOOLS.
GEAR WHEELS & PARTS OF MODELS
GOODNOW & WIGHTMAN BOSTON
Removed to 132 Milk Street.

BARAINS IN MARINE ENGINES.
3 1/2 H.P. to 30 H.P. 2 and 4 cycle. Single double, triple and 4 cylinder, auto marine and working engines. High and low speed. The best on the market for auto, speed or racing boats, launches, cruisers and auxiliary yachts. We also manufacture the only true Reversible Propeller Wheel, the best wheel in the world. Write for full descriptive catalog B. Agents wanted in every country.
Michigan Motor Co., Grand Rapids, Mich.

Eclipse Pocket Ammeter
For general battery testing. 0 to 30 amperes.
Flexible cord attached and contact spur in case, which is drawn back into case, when carried in pocket. Size of watch and very light weight. Can be used in any position. Particularly designed for Auto. use.
Price \$5.00.
ELDRIDGE ELECTRIC MFG. CO.
237 Main St., Springfield, Mass.

JEFFREY ELEVATING--CONVEYING--POWER
Transmission--Screening--Dredging--Coal Cutting
Drilling--Hauling--Washing Machinery.
For Catalogues address THE JEFFREY MFG. CO. COLUMBIA, OHIO, U.S.A.
NEW YORK CHICAGO

Trains arrive and leave by

ELGIN TIME

The Elgin Watch is as indispensable to the traveler as it is to the great railroad systems. Every Elgin Watch is fully guaranteed. All jewelers have Elgin Watches.

"Timemakers and Timekeepers," an illustrated history of the watch, sent free upon request to

ELGIN NATIONAL WATCH CO., Elgin, Ill.

Roof Leak?
Makes Roofs Last Ten Years Longer

Will Make Your Old Roof Absolutely Waterproof and Look Better Than a New One and Save the Price—Will Add Ten Years to the Life of Any Roof—Guaranteed

Liquid Samples and Book Showing Various Uses Sent Absolutely Free on Request

It is useless to go to the expense of putting on a new roof when you can make the old one good as new in point of service, have it look better and save the price. ROOF LEAK will do it. Guaranteed. It will make an old leaky roof absolutely waterproof. It will add ten years to the life of any roof, new or old. It stops and prevents rusting in tin or iron roofs and arrests and prevents decay in shingle roofs.

ROOF LEAK is put up in heavy liquid cement form and is applied as received. You will be surprised to learn how cheap you can make your old roof new or make your new roof last a lifetime. It will not crack in winter or soften in summer, and is highly FIREPROOF.

ROOF LEAK has been made and sold since 1898 and is increasing in popularity and use at an enormous rate. It is being used on the houses, barns and granaries of the farmers of the land, and on the beautiful homes and cottages of our cities. The roofs of mills, elevators, store buildings, factories, depots, roundhouses, hotels, churches and schoolhouses throughout the length and breadth of the land are being beautifully made whole and durable by ROOF LEAK. Has been adopted by the U. S. Marine Hospital service, prominent railroads and steel works. It gives equally good service on tin, iron, felt or shingles. When you buy it you have the assurance that you are not only saving the price of a new roof but that you are getting a roof that will last longer, look better and be better than anything else you could get. It has been tried and stood the test.

There is but one ROOF LEAK and is sold in our original kits bearing our signature and trade-mark, not sold in bulk. Anyone having a roof that he wants to set ten years more service from without the expense of a new roof should write at once for liquid samples and interesting book showing various uses, all of which will be sent absolutely free on request. Write to-day and save the price of a new roof or insure the prolonged life of roofs in good condition.

Ellicott Varnish Co. 156 Fulton St., Chicago 263 Pearl St., New York
MANUFACTURERS OF FINE VARNISHES

MENNEN'S BORATED TALCUM TOILET POWDER

A Positive Relief

PRICKLY HEAT, CHAFING, and SUNBURN, and all afflictions of the skin.

Removes all odor of perspiration. Delightful after Shaving. Sold everywhere, or mailed on receipt of 25c. Get Mennen's (the original). Sample Free. GERHARD MENNEN COMPANY, Newark, N.J.

YOUR EYE RIGHT HERE!

Now let us send you the Free Book telling all about it. We will also send you ten of our fifty-cent sample pens for using upon your handwriting.

Conklin's SELF-FILLING PEN
"The Pen That Fills Itself"

Dip pen in any ink well or any ink, press lever and operation is over. As a matter of cleanliness, comfort and convenience don't you see it to yourself to learn more about this perfect pen? If you will let us send you our beautiful new illustrated catalogue, it will make you a CONKLIN enthusiast.

The Conklin Pen Co., 117 Madison Ave. Toledo, Ohio
Represented in Great Britain by American Agencies, Ltd., 38 Shoe Lane, Farringdon St., London, E. C. in Australia by Rae, Munn & Gilbert, 47 Market St., Melbourne.