

ELECTRICAL ENGINEERING TAUGHT BY MAIL.

Write for our Free Illustrated Book.

**CAN I BECOME AN ELECTRICAL ENGINEER? ''

We teach Electrical Engineering, Electric Lighting, Electric Railways, Mechanical Engineering, Steam Engineering, Mechanical Drawing, at your home by mail. 'institute indersed by Thes. A. Edison and others.

ELECTRICAL ENGINEER INSTITUTE, Dept. A, 240-242 W. 28d St., New York.

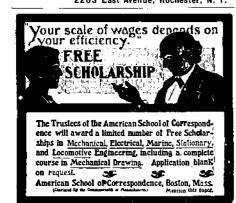
PSYCHRATIS

THE VERNON ACADEMY will tell you all about it

FREE OF CHARCE

The new discovery of Prof. Albert Vernon, the marvel of the Century. A thousandfold more powerful than HYPNOTISM. A knowledge of the wonderful resources of this science will unfold to you the secrets of success and make clear and plain all that has seemed so mysterious and that has been attributed to supernatural agency or hypnotism during past ages. You may have a wenderful, cemprehensive 100-page book by this gifted man by sending your name to us at once. Write today. It is absolutely FREE. Address VERNON ACADEMY OF MENIAL SCIENCES,

2203 East Avenue, Rochester, N. Y.



\$1,000 A YEAR FOR LIFE. SIX PER CENT. GUARANTEED.

A thorough investigation will convince you that \$12.50 per month invested for six years in the Monteauma Plantation will give you an annual income of \$1,000 for life. It will convince you that the enterprise is not a speculation, but a solid, conservative investment. The plantation 6.000 acres, is being planted to rubber and sugar. The Company's Financial Strength—The Mexican Coffee and Rubber Growers' Association manages the plantation for 25 years. The mercantle agreesies say that it bas a capital of \$5,000,900, assets \$4,000,000, and owns steamboats. Each Member Only One Vote Impossible to Freeze Out—The plan is the perfection of co-operation. Chicage Title and Trust Co., Trustees—This well-known institution belds the title to the land and acts as a depository for the purchasers' money. Pointers on Profits—Sir Thomas Lipton says: "For sure, large and permanent returns, nothing equals a well-managed tropical plantation." Russell Sage says a rub-per plantation is better than a bank. Write for literature, mentioningthis paper. MONTEZUMA PLANTATION, 1107 Ashland Block, Chicago.

THE NEW BRISTOL COUNTER



Registers an accurate account of work done on printing presses, grain tallies, weighing, measuring and other automatic machines. Counts up to 1,000 000 and repeats automatically. Simple, accurate, durable. Special counters to order. To Send for circular.

C. J. BOOT, Bristol, Conn. U. S. A.

REBUILT MACHINERY and SUPPLIES at Bargain Prices Largset Machinery Depot on earth. We huy buildings and plants: among others we bought the World's Fair, the Omaha Exposition, the Chicago Post Office, and other structures. We rebuild machinery of all kinds, and sell with binding guarantees. Boilers from \$\frac{1}{2}\text{up}\$; Engines from \$\frac{3}{2}\text{up}\$; etc. We carry complete stock of General Supalits, such as BELTING, SHARTING, HANGERS, PILLEYS, IRON PIPE, IRON ROOFING, HARD PLINIBING MATERIAL, etc. Will send free, our 250-page Catalog No. 323 Constantly buying entire stocks at Sheriffs and Receivers' sales. Chicago House Wrecking Co. W. 35th & Iron Sts., Chicago, III.



DESIGNS.

Badge, etc., I. Matsumuto	34,124
Bath tub, sitz, F. A. Wells 34,144,	34,145
Bin cover, J. Algots	34,146
Buckle, belt, C. Vehring	34,126
Caster yoke blank, B. P. Kenyon	34,140
Chair bottom, S. Kurek	34.152
Chisel, firmer, J. Swan	34,139
Cutter head, A. E. Edwards	34,141
Dish, G. Vogt	34,130
Dish, covered, G. Vogt	34.129
Eye protector, O. C. Earl	34,131
Garnet machine arch, J. K. Proctor	34,142
Hinge, H. T. Bush	34,135
Hot air furnace, J. H. Laux et al	34,149
Last, darning, B. C. Shiells	34,132
Lock case, L. H. Wales	34,134
Mantel, C. B. Atkin	34,150
Mantel, fireplace, C. B. Atkin	34,151
Necktie band holder, Z. Guzik	34,127
Package tie button, J. Benner	34,128
Seed case, Drohen & Hackett	34,153
Sink, siphon jet slop, S. D. Baker	34,143
Stove or range lid, J. C. Bartlett	34,148
Stove or range lid crosspiece, J. C. Bartlett.	34,147
Watch charm, W. S. Bickley	34,125
Wheel hanger, wagon, L. A. Erickson	34,138
Whip stock W M Wayment	
Whip stock, W. M. Weygant	34,133
Wrench, bicycle, E. Mercier	$34,137 \\ 34,136$
wrench member, w. S. waru	34,136

TRADE MARKS.

Ale, beer and porter, Frank Jones Brewing Apparel, certain named wearing, H. Car-hartt

Flour, wheat, Seville Packing Company.

53,964.
Flour, wheat, Wm Lindeke Roller Mills.
Food, stock, J. E. Robinson.
Garments, holder for certain named, Royal
Wardrobe Co.
Hair tonic, Young & Garvey.
Heating apparatus, Richmond Stove Company
Linen goods, certain named, York Street
Flax Spinning Co.
Lubricants, Petrolite Lubricant Co.
Medical and pharmaceutical preparations,
R. Groppler
Medical compound, certain named, Fierheller
& Tuckett
Medicinal mud and mineral water, natural,
Indiana Springs Company
Medicines certain named. Dr. Richards DysMedicines, certain named. Dr. Richards Dys-

Co.

Medicines, certain named, Dr. Richards Dyspepsia Tablet Association.

Medicines for certain named diseases, Martin H. Smith Co.

Needles, Thuringische Nadel- & Stahlwaaren Fabrik Wolff Knippenberg & Co., Actien-Gesellschaft.

Ribbons, Sir and Sir inter, 11. Solution Company
Soda and baking powder, baking, Church & Dwight Co.
Soda, saleratus, and sal soda, baking, Church & Dwight Co.

LABELS.

"Anti Bacilli," for a medicinal ointment or paste, B. F. Bye...
"Blackhawk Brand," for canned sugar corn, Waterloo Canning Co...
"Chase City Lithia Water," for mineral water. Chase City Mineral Water Co...
"Chase City Mineral Water Co.," for mineral water, Chase City Mineral Water Co...
8,164, "Chase City Mineral Water Co.," for mineral water, Chase City Mineral Water Co.

S.164,
"Chinaman's Secret," for a washing compound, R. M. Ferguson.
"Chloride Calcium Water," for mineral water, Chase City Mineral Water Co...
"Golumbian Brand," for canned sugar corn, Waterloo Canning Co...
"Grill's La Palma Grand," for cigars, Schmidt & Co.
"Kaw Valley Sugar Corn," for canned sugar corn, Lawrence Canning Company.
"Kaw Valley Tomatoes," for canned sugar corn, Lawrence Canning Company.
"Lewis' Hair Grower," for a hair preparation, J. T. Lewis.
"Lorraine Export," for bottled beer, P. J. Setwaz!
"Magnetic Tonic," for a medicine, Worlds Electro-Medical Institute.
"Napoleon Brand," for canned sugar corn, Waterloo Canning Co...
"Old Guard Brand," for canned sugar corn, Waterloo Canning Co...
"Old Guard Brand," for canned sugar corn, Waterloo Canning Co...
"Olympia Cottons," for cotton piece goods, Walker Bres. & Co...
"Penn," for smoking and chewing tobacco, Penn Tobacco Co.
"Perfectly Pure," for whisky, P. McIntyre.
"Frima Vuelta," for cigars, Schmidt & Co.
"Restora," for mineral water, E. W. Zoel-ler Pattle," for a medicinal preparation,

"20th Century Doll," for dolls, W. C. Schoenemann
"Waterloo Brand." for canned sugar corn,
Waterloo Canning Co...."
"Window Shine," for a glass cleaner, W. N.

PRINTS.

"Chase City," for mineral water, Chase City Mineral Water Co....."
"Lucca Olive Oil," for olive oil, Zucca & Co.
"The Ensign," for publications, etc, E. C.
McClain 305

The Deadly Faucet!

From it comes the germ-laden mater carrying with it all the elements of disease, but if you use

Property of the specification and drawing of any patent in the foregoing list, or any patent in the same since 1863, will be furnished from this office for 10 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York.

The Berkefeld Filter

thewater will be thoroughly purified in passing through the cylinders of Intusor for any of the inventions named in the fore passing through the cylinders of Intusor for any of the inventions named in the fore for solid matter. Fasy to clean. Yields a gallon of pure water in 4 minutes.

RERKEFELD FILTER CO., 2 Cedar St., New York.

RERKEFELD FILTER CO., 2 Cedar St., New York.

Teach by Mail

PHYSIOLOGICAL EXERCISE

without any apparatus whatever, and requiring but a few minutes' time in your own room just before retiring. By this condensed system more exercise can be obtained in ten minutes than by any other in two hours, and it is the only one which does not overtax the heart

and it is the only one which does not overtax the heart
It is the only natural, easy and speedy method for obtaining perfect
the the physical development and elasticity of mind and body.
If you will follow my instructions for a few weeks, I will promise
you such a superb muscular development and such a degree of vigorous
health as to ferever convince you that intelligent direction of muscular
effortis just as essential to success in life as intelligent mental effort.
Pupils are of both sexes ranging in age from theen to eighty-six, and
all recommend the system. Since no two people are in the same physical condition, individual instructions are given in each case.
Write at once, mentioning SCENTIFIC AMERICAN, for full information and endorsements from many of America's leading citizens.

ALOIS P. SWOBODA, 57 Washington St., Chicago

My Original and

35,953

35,957 35,966

35,950

35,952

35,951 35,970 35,984

35,963 35,967

35,986

35.979

35,978

35,971

35,976

35,975

35,960 35,980 35,944 35,946 35,972 35,985

35,962

35,961

8,157

8,155

8,162 8,175

8,171 8,170

8,174

8,173

8,158 8,167

8,161

8,179

8,176 8,154

8,168 8,172

8,160 8,180

8.153

8,177

IF YOU SHOOT ARIFLE, Pistol or Notitue, you'll make a Buil's Eye by sending three 2c. stamps for the Ideal Hand-book "A." 126 pages FREE. The latest Encyclopedia of Arms, Powders, Shot and Bullets. Mention Scientific American. Address IDEAL MFG. CO., New HAVEN, CONN., U. S. A.

KAISER MOUSTACHE
TRAINE TRAINE

New Rapid Seller. No competition.
Agents, Sh a DAY. Samples 50 cents.
Bohner Mrk. Co., 42 State St., Chicago. Ill.



WANTED To purchase or manufacture on a royalty, patented machine tools of new design, or now on the market, for which there is a legitimate demand at a fair profit. Addres Lock Box 21. Station B, Cleveland, Ohio.



DICKERMAN'S **DURABLE DESKS**

Don't buyuntil you get our catalogue-100 pages of money saving values. AMERICAN STORE STOOL CO., 33 Howard St., New York

8,178 | Why Make Rubber Stamps?

Our "New York" Rubber Stamp Vulcanizers received the only medal awarded any Vulcanizer, World's Fair, Chicago. Simple process. Large profits. Circulars free. Barton Mfg. Co., Dept. A, 338 B'way, New York, U.S.A.



THE WILLIAMS Pneumatic Pulley Double the grip of an ordinary pulley.

M. F. WILLIAMS & SONS. ST. LOUIS. MO., U. S. A



Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly condiential. 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.

DRIVING A PLEASURE
Adding your horse with an IMPERIAL BUT,
giving 100 per coul runse leverage than any other.
Avy July you could not most dynamic horse. PeriAve runse for longuage lolling. Will prevent size polimetati. z reeder, \$1. In fir s cickel plate, \$2. sperial Rit and Snap Co., 14th Street, Racine, Wis.

MORAN FLEXIBLE JOINT
for Steam, Air or Liquids.
Made in all sizes to stand any desired
pressure.
Moran Flexible Steam Joint Co., Inc'd,
149 East 3d St. LOUISVILLE, EX.





I have invented, patented and own a device to supersede all previous collars for machinery shafting on account of its superior safety, simplicity and security. The collar has no set serew which often projects and causes accidents, no countersunk serew to weaken the collar. The shaft and can be put on or taken off without removing other parts of the machinery. It thus saves ten times the sold the parts of the machinery. It thus saves ten times the collar sample in four pieces to clasp around the shaft and can be put on or taken off without removing other parts of the machinery. It thus saves ten times the sold safety, simplicity and security, and only needs to be introduced to become universally used. It cannot slip at all and has a grip on the shafting the full surface of its circumference. I want to sell the patent rights.

Apply to W. H. DAVIS, P. O. Box 305, Montreal, Can.

DE MACHINES, Corliss Engines, Brewers' and Bottlers' Machinery. THE VILTER MFG. CO., 829 Clinton Street, Milwaukee, Wis.

Buy a Lawn Mower Grinder. We have one that will sharpen horse and hand movers and do it right.
C. R. ZACHARIAS, Asbury Park, X. J.

MODELS DUNION MODEL WORKS

SALE IN EUROPE, particularly in France, of patented American Machines and Industrial Apparatus, and of patented American inventions. L. Simce, Civil & Mechanical Engineer, Trayes, France.

1/2 H. P. GAS ENGINE CASTINGS Materials and Blue Prirts. Write for Catalogue 9. PARSELL & WEED, 129-131 W. 31st Street, New York.

WANTED Twelve good floor hands used to large work and six good planer hands. Write stating experience to P. O. BOX 1042, Philadelphia, Pa.

TYPE WHEELS MODELS LEXPERIMENTAL WORK, SMALLMCHIERY NOVELINES ETC. NEW YOR'S STERIOL WORKS NOW MASSAULS! N.Y.

PARTNER WANTED to introduce new patented improvement in pumps. Full investigation courted. See description of investion on page 134 of this issue. ADOLPH MICHTER, 1234 First Ave., N. Y.

SHORTHAND BY MAIL. Pioneer home course, Catalogue and First Lesson Free.
Potts Shorthand College, Box 33, Williamsport, Pa

D'AMOUR & LITTLEDALE MACHINE CO. PATTERN AND MODEL MAKERS.

TO PATENTEES AND INVENTORS, W. & R. Leggott, Limited, General and Builders' Brassfounders, Silens Works, Bradford, England, would purchase outright or make on commission any good appliance for interior of buildings, specially door and window fittings. W. & R. LEGGOTT, Ltd. Silens Works, Bradford, England.

ANY BICYCLE RIDER may and ALL RE-PAIRERS do need our 1901 A. & J. Hanger. If you have a used-up tanger to replace, if you have frames with odd-size o brackets; if you want a higher gear; Write us and find out all about the A. & J. Hanger. We send the complete set all ready to go into your frame. No bother brazing or re-enameling. We can fit frame. No bother brazing or resonancing. We can fit any frame. THE AVERY & JENNESS CO., 36 W. Washington St., Chicago, Ill.

Sand us your address and we will showyour how to make \$3 a day and the locality where you live. Send us your address and we will show you the locality where you live. Send us your address and we will splain the business fully, remember we guarantee a clear profit of \$3 for every day's work, absolutely sure. or \$3 for every day's work, absolutely sure. Write at once BOYAL MANUFACTURING CO., Box 354, Detroit, Mich.

L. HOLDEN LA SOUTH BROADST, PHILADELPHIA PA. REGEALED ICE MACHINES SEE FIRST PAGE SCIENTIFIC AMERICAN SEPT. 2. 1899.

SMOKERS why fumble in trying to make a short puff? This Patent Nickel Plated Cigarette Maker with safety hook and pouch attachment saves time and to-bacco and makes a perfect cigarette. Sent push-pair to any address on receipt of 20c. J. B. PUPENHALEN, 225 Dearborn St., Roem 412, Chicago, Ill.



LYON & HEALY'S BRASS BAND



the great Jules Levy as the best in the world. Big Catalog, 400 illustrations, FREE. Positively the lowest prices on Band Instruments, Uniforms and Supplies of all kinds. Also contains Music and Instructions for New Bands. Lyon & Healy, Manufacturers, 38 Adams st., Chicago. (Lyon & Healy and the largest music house in the world—Editor.)

