48,976

48,915 48,941

48,928 48,807 48,828

48,818

48,829

48,912

48,780 48,823 48,904

48.786

48,957

48,965

48,933

48,951

48,963

48,852

48.967

48,801 48,905

48,903 48,969

48,962

49,003

48,931

48.781

48,953

# An Un-to-date Catalogue of Chemical Technology

JUST READY

TF A Classified Catalogue of Books on Chemical Technology and General Chemistry arranged under the following heads: Acids, Alkulies, and Salts; Beverages, Brewing, Cider, Distillation, Fermentation, Liquors, Preserving, Vinegar, Wine; Brick, Ceramics, Glass, Porcelain, Pottery; Cement and Concrete; India Rubber, Gutta Percha, Glue, Ink; Leather Manufacture; Olls, Fists, Waxes, Paints and Varnishes; Paper Manufacture, Fibres; Perfumery; Soap and Canelles; Sugar, Starch; Flour, Baking, Bread, Confectionery; General Reference and Receipt Books. General Chemistry, Chemical Arithmetic, Calculation, Tables, etc.; Chemical Analysis; Inorganic Chemistry; Pryanic Chemistry; Blectro-themistry; Addenda; sent free to any one in any part of the world who will send his address.

HENRY CAREY BAIRD & CO. 810 Walnut St., Philadelphia, Pa., U. S.



 $T^{
m HIS}$  BOOK of over 200 pages (5 ½ x 8) contains complete working plans of more practical systems than were ever before condensed into the same space. The simple time-saving confusionpreventing ideas, which hundreds of successful business and profes sional men have found practical by actual test, are here clearly described and illustrated in every detail. For months the experts of "The Business Man's Magazine" have been gathering the information contained in this book,



THIS BOOK FREE TO SUBSCRIBERS

They have inspected the systems of the most progressive manufac turers, wholesalers, mail order houses, professional men, and public service corporations; they have clipped the best system articles in business periodicals. From this vast store of brains they have selected those systems proved best by test; these they bave boiled down that you may have, ready for instant use, the simple systems that will make your every effort more productive -that will economize your time.

We will give you a copy of the book with your subscription to

#### The Business Man's Magazine AND

The Book-Keeper



more practical business ideas than any other magazine in the world. Every issue is filled with money making—money-saving—ideas for every business man. Its contributors are successful business men who tell you of the methods that have helped to make them successful. For more than seven teen years it has helped to create a higher standard in business methods, more economical ways of doing your every-day work.

Regular departments in "The Business Man's Magazine" each one edited by a specialist-in addition to the special articles which describe the systems used by the leaders in every lineare departments devoted to Advertising-Salesmanship-Account ing-Business Systems-Shorthand-Business Law-Factory Organization. The entire field of business is covered—not a department is neglected—there is not a man in business who cannot gain many ideas of value in his own business from a

Take this ad. to your newsdealer, or send us \$1.00 for a year's subscription to "The Business Man's Magazine," mention this paper, and we will give you a copy of the book "Tabloic

Add 60 cents for Foreign Postage.

The Book-Keeper Publishing Co., Ltd. 24 W. Fort Street, Detroit, Mich.



#### MUD FORGET IT WEED'S TIRE GRIPS

Positively Stops Slipping or Skidding They Make Bad Roads Good Send for Booklet "S"

WEED CHAIN TIRE GRIP COMPANY 28 Moore St., New York City



980 USE GRINDSTONES? If so we can supply you. All sizes mounted and unmounted, always kept in stock. Remember, we make a specialty of selections stones for all special purposes. Sent for catalogue "I" The CLEVELAND STONE CO. 2d Floor, Wilshire, Cleveland, O.



COPYRIGHTS &C

# Scientific American.

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

48,843 48,925 48,836 48,857Co. 48.896 to Medicine or remedy for diseases of the kid-neys and bladder, Van Vleet-Mansfield Drug Co. 48,899 48,901

neys and bladder, Van Vleet-Mansheld Drug Co.
Medicine, proprietary, Dr. Kilmer & Co., 48,790 48.792 to
Medicine, worm, Curtis and Brown Manufac-turing Co.
Medicines, certain proprietary, Dr. Kilmer & Co.
Milk, condensed, St. Charles Condensing Co.
Molasses, Eastern Refining Co.
Nets, silk hair, A. H. Woolley & Co.
Oil, castor, Baker Castor Oil Co.
Oils, petroleum burning, Gulf Refining Co.,
Oils, betroleum lubricating, Gulf Refining
Co.

Oils, petroleum burning, Gulf Refining Co.

48,782 to
Oils. petroleum lubricating, Gulf Refining
Co.
Ointment, Dr. Kilmer & Co.
Ointments, National Food Co.
Oilves, C. Gulden
Ornaments, metal, C. F. Runipp & Sons.
Paint, liquid, Natural Liquid Paint Co.
Paints, varnishes, colors, fillers, surfacers, stains, and enamels, Thomson Wood Finlshing Co.
48,833,
Paper holders and cutters, roll, Champion
Paper Cutter Co.
48,947,
Paper holders and cutters, roll, King Manufacturing Co.
Paper holders and cutters, roll, Linited
States Paper Cutter Co.
48,964,
Pills for the cure and alleviation of diseases and disorders of the liver, Van VicetPills, May apple, J. Q. Phillips
Plows, listers, cultivators, and harrows,
Morrison Manufacturing Co.
Preparation for the treatment of certain named diseases, E. E. Sutherland Medi-

Pillis, May apple, J. Q. Phillips
Plows, listers, cultivators, and harrows,
Morrison Manufacturing Co.
Proparation for the treatment of certain
named diseases, E. E. Sutherland Medicine Co.
Proservos, jams. jellies, butters, and marmalados, vegetable and fruit, R. C.
Williams & Co.
Razors, H. Clauss
Remedies for certain named diseases, Brown
Mfg. Co.
Remedy, corn, Fowler Medicine Co.
Remedy for anemia and nervous diseases, C.
J. Uricl
Remedy for certain named diseases, Capudine Chemical Co.
Remedy for certain named diseases, Capudine Chemical Co.
Remedy for certain named diseases, Capudine Chemical Co.
Remedy for coughs and ailments of the
throat and lungs, Van Vleet-Mansfield
Drug Co.
Remedy for diseases of women, Gerstle
Medicine Co.
Remedy for the cure of rheumatism, Van
Vleet-Mansfield Drug Co.
Remedy, proprietary, Dr. Kilmer & Co.
Remedy, proprietary, Dr. Kilmer & Co.
Ralve, Aid-Ant Remedy Co.

48,966 48.917

Salve, Aid-Ant Remedy Co.

Salve, Pile, Van Vleet-Mansfield Drug Co...
Salves, Wi-da-me Company
Screw drivers and screw driver holders,
Patterson, Gottfried & Hunter
Seeds, Albert Dickinson Co...
Shovel Works
Sik piece goods, Na Kau Trading Corporation
Sizing stretuethening compound, Papyrhesion

tion
Sizing strengthening compound, Papyrhesion Co.
Solders, newspaper metals, and Babbitt metals, Mechanical Metal Mfg. Co...
Stove polish, Fritz Schult Jun. Aktiengesellschaft 

non-intoxicating beverages, Bovril, LimIted
Tea, Acker, Merrall & Condit Co.
Tobacco. smoking and chewing, J. A. Clark
Tonic, J. J. McCrohan
Tonic, malt, McAvoy Brewing Co.
Trunks, J. F. Parkhurst & Son Co.
Typewriting machines and parts therefor,
Oliver Typewriter Co.
Vacuum tubes. X-ray tubes, and parts
thereof, C. H. F. Muller
Wagons. Auburn Wagon Co.
Washing preparation in a dry or powdered
form, W. M. Williams
Watch mainsprings, American Waltham
Watch Co
Water, natural, W. B. Matthews.
Wheelbarrow wheels. Kilbourne and Jacobs
Mannfacturing Co.
Whisky, J. Cartum
Whisky, M. Lange
Whisky, Moeb Bloom & Co. 48,960 48,813 Whisky, M. Lange
Whisky, Loeb Bloom & Co.
Whisky, Loeb Bloom & Co.
Whisky, Melini & Earkin
Whisky, P. J. Bowlin Liquor Co.
Whisky, Van Vleet-Mansfield Drug Co.
Whisky, Woodner & Co.
Whisky, Woodner & Co.
Whisky, Houck & Dieter Co.
Whisky, Straus Brothers Co.
Whisky, Straus Brothers Co.
Whisky, Straus Brothers Co.
Wikky, Webs, and webbings, Fletcher Manufacturing Co.
Wines, Rosenblatt Co. 48,825 48,826 48,827 48,837 48,842 48,849

#### PRINTS.

"Every One to Their Own Taste," for flour, Piqua Flour Co. .....

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 Conditions

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.



THE 'BEST''LIGHT Produces a powerful. white, steady light, brighter than electricity or acetylene, cheaper than kerosene and absolutely safe.

nd absolutely safe.

Makes and burns its own gas at a cost of 2c per week.

Io Grease, No Smoke, No Dirt, No Odor

Over 100 different styles—every lamp warranted.

Agents Wanted.

THE BEST LIGHT CO., 87K. 5th St., Cantes, Obio.





"STANDARD"

🗣 Two-Speed Automatic Coaster Brake Hub Makes wheeling a delight, eliminates the drudgery. Do not waste money on experiments when you can buy a perfect attachment all in one hub our little booklet relis all about it and is malied free. Write to-day.

THE STANDARD COMPANY

## Sheet Metal Pattern Draftsmen

diritie to fit themselves for better paying positions should send for 200-page handbook (FREE) describing our Shiret Medial Pattern Drafting course, and over 60 other senses, inc. Electrical, Mechanical, Steam and Civil Engineering, Heating, Ventilating and Plumbling, Architecture, Mechanical Drawling, Structural Bratting, Techlopoly, Textiles, etc. American School of Correspondence, Chicago, Ill.

WRITE FOR ESTIMATE ON ANY ARTICLE
YOU WANT MANUFACTURED
STAMPINGS, MODELS, EXPER. WORK
WRITE FOR FREE BOOKLET
THE CLOBE MACHINE & STAMPING CO.
970 Hamilton St., Cleveland, O.

and Bottlers' Machinery. THE VILTER MFG. CO., 899 Clinton St., Milwaukee, Wis.

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

RUBBER Expert Manufacturer Fine Jobbing Work PARKER, STEARNS & SUTTON, 228-229 South St., New York

EXPERIMENTAL WORK Scientifically and accurately executed. Models and small machinery perfected. STENDICKE & VOLKMER, 61 Fulton Street. Telephone 5655 John.

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

WORKING and PATENT DRAWINGS. G. M. Mayer, M.E., 1131 Monadnock Bl., Chicago, Ilt.

THE NATIONAL MODEL WORKS.
Best equipped Model Works in the United States.
85-87 Fifth Avenue, CHICAG.



MODELS dies, boxes, metal stampings, patent articing on aluminum. U. S. Novelty Co., Lily Dale, N. Y.

#### **Experimental & Model Work** Cir. & advice free. Wm. Gardam & Son. 45-51 Rose St.N. Y

CEMENT BOOKS. How to Use Portland Cement, 50c.; idewalk Construction, 50c.; Reinforced Concrete Construction, slonier Cement and Stret Construction, 50c.; Hollow Concret Building Construction, 50c. Postuait on receipt of price. Audre CEMENT AND ENGINEERING NEWS, Chicago, III.

NOVELTIES & PATENTED ARTICLES MANUFACTURED BY CONTRACT, PUNCHING DIES, SPECIAL MACHINFR E.KONIGSLOW STAMPING & TOCL WORKS, CLEVE LAND.

## Magical Apparatus. Grand Book Catalogue. Over 700 engravings 25c. Parlor Tricks Catalogue, free.

MARTINKA & CO., Mfrs., 493 Sixth Ave., New York,

MASON'S NEW PAT. WHIP HOISTS
save expense and liability incident to Elevators.
Adopted by principal storehouses in New York & Boston Manfd. by VOLNEY W. MASON & CO., Inc. Providence, K. I., U. S. A.

elegraphy Circular from Wonderfol and market from Sarthway (2014) OANT (2014)

WE manufacture METAL SPE-CIALTIES of all kinds. to order; largest equipment: lowest pric-es. Send sample or model for low estimate and best expert advice FREE THE EAGLE TOOL CO., Dept. A, Cincinnat, O.



#### ARTESIAN

Wells, Oll and Gas Wells drilled by contract to any depth from 50 to 5000 feet. We also manufacture and furnish everything required to drill and complete same. Fortable Horse Power and Mounted Steam Drilling Machines for 100 to 120 feet. Write us stating exactly what is required and send for illustrated catalogue. Address PREICE WELL ENGINEERING AND SUPPLY CO. 136 LIBERTY STREET, NEW YORK, U. S. A.

#### THE EUREKA CLIP

The most useful article ever invented for the purpose. Indispensable to Lawyers, Editors, Students, Bankers, Insurance Companies and business men generally. Book marker and paper clip. Does not mutilate the paper, Can be used repeatedly. In boxes of 100 for 25c. To be bad of all booksellers, stationers and notion dealers, or by mail on receipt of price. Samplecard, by mail, free, Mandactured by Consolidated Safety Pin Co., Box 121. Bloomfield. N. J.



#### GOVERNMENT POSITIONS

50.830 Appointments
were made to Civil Service places during the past year.
Excellent opportunities for young people. Each year
we instruct by mall hundreds of persons who pass these
examinations and receive appointments to life positions
at \$840 to \$1200 a year. There is a great demand for
Patent Office eligibles. Write for our Civil Service Announcement, containing dates, places for holding examinations, and questions recently used by the Civil Service. Commission. vice Commission. COLUMBIAN CORRESPONDENCE COLLEGE, - Washington, D. C.

BIG OPPORTUNITIES



NAME PLATES—STEEL STAMPS EMPLOYEE CHECKS, KEY TAGS & BADGES. J. ROBBINS MFG. CO. 58 KNEELAND ST. SEND FOR CATALOGUE .... BOSTON, MASS.

Are you interested in Patents, Model or Experimental work? Our booklet entitled

WHAT WE DO—HOW WE DO IT will be sent to you on request.
KNICKERBOCKER MACHINE WORKS, Inc.,
8-10-12 Jones Street. New York.

ALL KINDS E WILLARD STORAGE BATTERY CO. CLEVELAND.

MACHINERY AND SPECIAL PARTS new devices developed; successful experimental work done speedily; skilled labor; good facilities; good value for your money.

J. R. ENGELMAN MFG. CO.

4 Hudson St. near Penn. Depot, Jersey City

# LEARN WATCHMAKING We teach it thoroughly in as many months as it formerly took years. Does away with tedious apprenticeship. Money earned while studying. Positions see

cured. Hasy terms. Send for catalog. ST. LOUIS WATCHMAKING SCHOOL, St. Louis, Mo.





# "FOLLOW THE FLAG"

There is nothing more assuring to the traveler than his knowledge of the fact that he is traveling on a firm roadbed upon which is laid the

heaviest of steel rails, made true in all their curves, and that the train which carries him is of the highest standard of excellence known to railroads and is being guided to its destination by experienced minds. These are the conditions which become apparent to the frequent traveler on the Wabash Line and which have made that line justly famous.

The aggressive management, at all times alert to the needs of the public, carry passengers in through cars between

#### ST. LOUIS and CHICAGO

Kansas City, Omaha, Toledo, Detroit, Niagara Falls, Buffalo, New York, Boston, St. Paul and Minneapolis

AND BETWEEN

Chicago and Pittsburg, Buffalo, New York and Boston

C. S. CRANE, G. P. & T. A., St. Louis, Mo.