SEARCHES OF THE RECORDS

Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS, MUNN & CO., areat all times ready to make examinations as to titles, ownership, or assignment of patents. Fees moderate.

INVITATION TO INVENTORS

Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged

MUNN & CO. wish it to be distinctly understood that they do not speculate or traffic in patents, under any circumstances; but that they dovote their whole time and energies to the interests of their clients.

COPIES OF PATENT CLAIMS

MESSRS. MUNN & CO., having access to all the patents granted since the rebuilding of the Patent Office, after the fire of 1836, can furnish the claims of any patent granted since that date, for \$1.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by compotent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance after knowing the nature of the inventionand being informed of the points on which an opin licited. Forfurther particulars address MUNN & CO., No. 37 Park

ASSIGNMENTS OF PATENTS

The assignment of patents, and agreements between patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park Row, New York.

It would require many columns to detail all the ways in whi Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the Rights of Patentees, will be cheerfuly

Communications and remittances by mail, and models by express (prepaid) should be addressed to MUNN & CO. No. 37 Park Row, New



D. A. W., of Pa.—If you will read "stables" instead of 'tables," you will have a correct solution to your inquiry ab Hercules

N. W., of Ohio.—The simplest plan that we know of for determining the quantity of carbonic acid in any specimen of air is to pass the air through lime-water, when the carbonic acid enters into combination with the lime, and is precipitated in the form of carbonate of lime. Whether a simple plan can be devised remains

J. O. B., of Mo .- Your suggestion to run the Atlantic telegraph through the higher latitudes so as to have shorter sea stretches has been very fully considered. Some of our best electricians are of opinion that the resistance of 3,000 miles of wire will be too great for any insulating coating which it is proposed to use, and that consequently the cable will not last long.

L. M., of Mass.—Perhaps our readers have had enough of the metrical system for the pres

H. B., of N. Y.—You will find illustrations of spectro scopes on pages 20 and 229, of Vol. V., new series, SCIENTIFIC AMERICAN. We are not aware that the facts of this new science have yet

been collected in any book. A. E.. of Mich.—We know of no paper exclusively for telegraphers. The SCIENTIFIC AMERICAN aims to publish every thing new in the progress of this thaumaturgic art.

F. G., of N. Y.-A water-tight cement is made by mixing equal parts of red and white lead with sufficient boiled linseed

W. H. N., of Pa.—The best article on inks that we know of is in "Ure's Dictionary of Atts and Sciences," For receipts see Vol. IX., new series, Scientific American,

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, April 27, 1864, to Wednesday, May 4, 1864:—
D. H., of N. Y. \$25; A. S., of N. Y., \$20; P. B., of N. Y., \$20; R. S.

C., of N. Y., \$41; J. A. K., of Mo., \$20; T. O., of Mass., \$20; R. & Y., of N. Y., \$69; I. C. C., of Ohio, \$20; J. M., of N. Y., \$20; W. C. S., of of N. Y., \$69; I. C. C., [cf Ohio, \$20; J. M., of N. Y., \$20; W. C. S., of N. Y., \$20; G. E. H., of Maine, \$20; G. R. H., of M., \$20; E. C. A., of N. Y., \$10; D. M., of N. Y., \$45; W. C. E., of N. J., \$16; S. L. K., of N. Y., \$16; J. A. II., of Wis., \$22; J. L. & Co., of Iowa, \$432; D. & D., of Ohio, \$25; E. H. M., of N. Y., \$25; S. S. J., of Ohio, \$16; A. R., of III., \$30; F. & M. of Mich., \$16; T. J. B., of Tenn., \$20; J. B. K., of III., \$25; E. B. C., of R. I., \$25; J. McC., of Ohio, \$15; E. S. A., of III., \$25; C. A., of C. A., of N. Y., \$16; A. Ill., \$25; E. B. C., of R. I., \$25; J. McC., of Ohio, \$15; E. S. A., of the same of the sa

\$25; G. H. M., of Ohio, \$26; E. S., of N. Y., \$16; W. W. L., of Ill., \$16; J. J. R., of Ohio, \$11; W. J. W., of Ohio, \$16; E. T., of Pa., \$16; J. B. W., of N. J., \$11; A. S., of N. Y., \$16; S. J. M., of N. Y., \$26; A. R., of N. Y., \$44; Z. S. S., of N. Y., \$25; H. W. K., of N. Y., \$20; A. R., of N. Y., \$44; Z. S. S., of N. Y., \$25; H. W. K., of N. Y., \$20; J. T., of N. Y., \$16; J. G., of N. Y., \$20; C. H. B., of N. Y., \$41; E. M., of (Conn., \$20; M. G., of N. J., \$16; F. J. B. H., of N. Y., \$16; P. S. B., of N. Y., \$20; H. P., of V. Y., \$20; E. R. C., of N. J., \$20; C. B., of N. Y., \$20; H. P., of V. \$20; E. R. C., of N. J., \$20; C. B., of N. Y., \$20; P. E., of N. Y., \$20; W. F., of Conn., \$20; J. A. D., of N. Y., \$45; H. W., of N. Y., \$25; J. L. W., of N. Y., \$25; B. F. M., of Wis., \$26; W. S. N., of Mass., \$25; G. D., of Conn., \$16; I. N. S., of Ill., \$25; S. £. T., of Ohlo, \$21; C. A. M., of Ill., \$15; B. F. C. of Mich. \$16; A. R., of Iowa, \$25; T. C. L., of Mass., \$28; W. H. S., of Conn., \$25; D. K., of Pa., \$21; H. B. W., of Iowa, \$16; S. S. H., of Maine, \$25; D. K., of N. J., \$41; S. G., of N. J., \$16; D. K., of Pa., \$15; J. W., of N. Y., \$33; A. W. T., of Ill., \$20; C. M., of N. Y., \$25; E. L. W., of Pa., \$15; C. S. B., of Mass., \$16; J. T. L., of N. Y., \$16; E. C. A., of N. Y., \$12; J. S., of N. Y., \$474; C. G. H., of Kansas, \$28; D. F. W., of Mo., \$16; H. & B., of Conn., \$25; B. M. B., of N. Y., \$25; A. B., of N. J., \$25. B., of N. J., \$25.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, stating the amount and how it was sent, whether by mail or express

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, April 27, 1864, to Wednesday, May 4,

D. H., of N. Y.; D. R. M., of N. Y.; Z. S. S., of N. Y.; J. A. M., of N. Y.; G. DeM., of N. Y.; H. & F. J. L. B., of Ohio (2 cases); C. W. B., of Conn.: W. M., of Mass.; P. C. C., of Cal.; B. F. C., of Mich.; G. H. M., of Ohio; H. L., of Mich.: H. W., of N. Y.; F. G. F., of Ill.; G. H. M., of Ohio; H. L., of Mich.: H. W., of N. Y.; F. G. F., of Ill.; J. B. K., of Ill.; I. N. S., of Ill.; W. G. N., of Mo.; J. L. W., of N. Y.; J. R., of Iowa; C. H. S., of Mass.; S. & T., of Ohio; J. J. R., of Ohio; J. G., of Pa.; D. & D., of Ohio; T. C. L., of Conn.; T. B. McC., of Del.; L. H., of Cal.; E. H. M., of Cal.; B. F. M., of Ill.; C. T. F., of N. Y.; D. K., of Pa.; E. G. A., of Ill.; E. B. C., of R. I.; J. H. B., of Pa.; R. & Y., of N. Y.; R. R., of N. Y.; C. H. B., of N. Y.; J. S., of N. Y. (cases); J. W., of N. Y.; R. S. C., of N. Y.; C. N., of N. Y.; C. G. H., of Kansas; S. Z. H., of M. J.; H. & B., of Conn.; D. C. & L. G. R., of Nebraska; C. M., of N. Y.; W. H. S., of Conn.; B. M. B., of N. Y.; A. B., of N. J.; E. C. A., of N. Y.

RATES OF ADVERTISING.

TWENTY-FIVE CENTS per line for each and every insertion, pay able in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published. we will explein that ten words average one line. Engravings will not be admitted into our advertising columns and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.

ORDNANCE OFFICE.

WAR DEPARTMENT, WASHINGTON, May 1, 1864.

SEALED PROPOSALS will be received at this office until Monday the 23d day of May, 1864, for the delivery at the following arsenals Cavalry Accountements, United States Cavalry pattern, as herein after specified.

At the New York Arsenal, 25,000 sets.

At the St. Louis Arsenal, 5,000 sets.

At the New York Arsenal, 25,000 sets.

At the St. Louis Arsenal, 10,000 sets.

At the Frankfort Arsenal, 10,000 sets.

At the Alleghany Arsenal, 10,000 sets.

These Accoutrements are to be made in strict conformity with the regulation pattern, which can be seen at the above named places. Each set is to consist of one Sabre-belt and plate complete; one Carbine-Sing with swivel complete; one Sabre-knot; one Carbine-Sing with swivel complete; one Sabre-knot; one Beit-holster for Army size revolver, and one Cap-pouch with cone pick. All of which are to be made of the best materials and workmanship. The Sabre-belt, Sabre-knot, and Carbine-sling are tobe of Buit Leather Blacked, and the Cartridge-boxes, Belt-holster, and Cap-pouch of Pure Oak ranned Leather.

It is to be distinctly understood that this Department is to have the privilege of inspecting the work done under any contract it may award, in all stagesof its progress; especially, to examine the stock before cutting. They are to be subject to the final inspection at the Arsenal, where delivered, before being received by the Government. None are to be accepted or paid for but such as are approved upon inspections.

None are to be accepted to paid for our such as all approved appearing the period of the people number contracted for; the first delivery to be made on the 20th day of June.

Failure to make deliveries at a specified time will subject the contractor to a forfeiture of the number he may fail to deliver at that time.

be made on the zith day of such Failure to make deliveries at a specified time will subject the contractor to a forfeiture of the number he may fail to deliver at that time.

The Accourrements must be boxed in the usual manner; the boxes to be charged cost, to be determined by the inspector.

Bidders will state explicitly the Arsenal, •rArsenals, where they propose to deliver, and the number of sets they propose to deliver at each place, if for more than one.

No bids will be considered from parties other than regular manufacturers, and such as are known to this Department to be fully competent to execute in their, dayn shops the work proposed for Should any party obtaining a contract •effer Accourrements other than those made in his own shops, they will be rejected, and the contract rendered null and void.

Bidders will enclose with their bids the written acknowledgments of their sureties over their own signatures.

Each party obtaining a contract will be obliged to enter into bond with approved sureties for its faithful execution.

Upon the award being made, succossful bidders will be notified, and furnished with forms of contract and bonds.

The Department reserves the right to reject any or all bids if not deemed satisfactory.

Proposals will be addressed to "Brigadier-General George D. Ramsay, Chief of Ordnance, Washington, D. C.," endorsed "Proposals for Cavalry Accourrements."

Brigadier-General, Chief of Ordnance.

SCALY BOILERS.

WINANS' ANTI-INCRUSTATION POWDER effectually cleanses dirty Boilers without injury or loss of time. A thousand references. Send for circular to H. N. WINANS', 11 Wall street, New York. 20 4*

THE COLD-IRON BAR CUTTERS ARE INVALU-ABLE in Machine Shops. They will cut off four inch, round or square bars. For circulars or machines address CRESSON & HUB-BARD, 1,509 Pennsylvania avenue, Phuadciphia.

Planers, address J. A. FAY & CO., Worcester, Mass. 1

WANTED.—TO PHRCHASE TWO SECOND-HAND LATHES, One to swing from 30 to 35, bod 16 to 22 feet; the other swing 12 to 16; 4 to 6 feet bed; withor without screw-cutting gear. Address LOCKWOOD BROOKS, Tathara's Lead Works, & Beekman street. New York.

PATENT COMMISSION HOUSE, SNYDER & WAL-TER, 229 Broadway, New York. Valuable Patent Rights sold for cash on commission. Consignments respectfully solicited. Ad-dress SNYDER & WALTER, 229 Broadway, New York Refer to H. D. Smith. Chemical Bank, New York: Sheppard Seward & Co., 214 Pearl street, New York: End John McKewan, Importer, 55 Maiden Lane, New York.

BAIRD'S PRACTICAL AND SCIENTIFIC BOOKS.

THE PRACTICAL METAL-WORKER'S ASSISTANT; comprising Metallurgic Chemistry, and the Arts of Working all Metals and Alloys; Forging of Iron and Seel, Hardening and Tempering, Melting and Mixing, Casting and Founding, Works in Sheet Metal, the Processes dependent on the Ductility of the Metals; Soldering and the most Improved Processes, and Tools employed by Metal Workers, with the Application of the Art of Electro-Metallurgy to Manufacturing Processes. By Oliver Byrne. A new revised and Improved edition, with additions by John Seeffern, William Clay, William Fairbairn, and James Napier. With five hundred and ninety-two engravings. 682 pages, 8vo. Price SIX DOLLARS.

THE PRACTICAL DRAUGHTSMAN'S BOOK OF INDUSTRIAL DESIGN, and Machinist's and Engineer's Drawing Companion; forming a complete course of Mechanical Engineering and Architectural Drawing. From the French of M. Armengaud the elder, Professor of Design in the Conservatoire of Arts and Industry, Paris, and MM. Armengaud the younger, and Amounux, Civil Engineers, Re-written and arranged, with additional matter and plates, selections from, and examples of, the most useful and generally employed mechanism of the day. By William Johnson, Assoc. Inst. C. E. Editor of "The Practical Mechanic's Journal." Illustrated by 50 folio and 5 quarto steel plates and 50 wood-cuts. A new edition, quarto. Price SEVEN DOLLARS AND FIFTY CENTS.

A PRACTICAL TREATISE ON MECHANICAL ENGINEERING; composition Metallurge Moulding Costing Tools Workshop.

and 5 quarto steel plates and 50 wood-cuts. A new edition, quarto. Price SEVEN DOLLARS AND FIFTY CENTS.

A PRACTICAL TREATISE ON MECHANICAL ENGINEERING; comprising Metal'urgy, Moulding, Casting, Porging, Tools, Workshop Machinery, Mechanical Manipulation, Manufacture of Stean Engine &c., &c. With an Appendix on the Analysis of Iron and Iron Ores By Francis Champin, C.E., President of the Civil and Mechanical Engineers' Society, &c., &c. To which are added, Observations on the Construction of Steam Boilers and Remarks upon Furnaces used for Smoke Prevention: with a Chapter on Explosions. By Robert Armstrong, C.E. Revised, with Notes, by John Bourne. Rules for Calculating the Change Wheels for Serveys on a Turning Latthe, and for a Wheel-cutting Machine. By J. La Nicea. The Management of Steel, including Forging, Hardening, Tempering, Anneaing, Shrinking, and Expansion. And the Caseba dening of Iron. By George Ede. 8vo. Illustrated with 29 plates of Boilers Steam Engines, Workshop Machinery, Change Wheels for Serews, &c., &c., and 100 wood engravings. 8vo. Price SIX DOLLARS.

THE HAND-BOOK FOR THE ARTISAN, MECHANIC, AND EN-

wood engravings. 8vo. Price SIX DOLLARS.

THE HAND-BOOK FOR THE ARTISAN, MECHANIC, AND ENGINEER. By Oliver Byrne. Illustrated by Il. large plates and 185 wood engravings. 8vo. Price FIVE DOLLARS.

CONTENTS.—Grin-cling Cutting Tools on the Ordinary Grindstone; Sharpening Cutting Tools with Artificial Grinders; Production of Plane Surfaces by Abrasion; Production of Conical Surfaces by Abrasion; Production of Conical Surfaces by Abrasion; Production of Spherical Surfaces by Abrasion; Glass Cutting; Lapidary Work; Setting, Cutting, and Polishing Flat and Rounded Works; Cutting Faucets; Lapidary Apparatus for Amateurs; Gem and Glass Engraving; Seal and Gem Engraving; Cameo Cutting; Glass Engraving; Varnishing, and Lackering; General Remarks upon Abrasive Processes; Dictionar, vof Apparatus se Materials and Processes for Grinding and Polishing commonly employed in the Mechanical and Useful Arts.

BYRNE, THE PRACTICAL MODEL CALCULATOR for the Engraving of the Engraving of the Engraving of the Engraving of the Mechanical and Useful Arts.

Polishing commonly employed in the Mechanical and Useful Arts.

BYRNE, THE PRACTICAL MODEL CALCULATOR for the Engineer, Mechanic, Manufacturer of Engine Work, Naval Architect, Miner, and Millwright. By Giver Byrne. I vol. 8vo., nearly 800 pages. Price THREE DOLLARS AND FIFTY CENTS.

The principal objects of this work are: to establish model calculations to guide practical mue and students; to flustrate every practical rule and principle by numerical calculations, systematically arranged; to give information and data indispensable to those for whom it is intended, thus surpassing in value any other book of the character; to economize the labor of the practical man, and to render his every-day calculations, easy and comprehensive. It will be found to be one of the most complete and valuable practical books ever published.

RAILWAY PROPERTY A TREATURE OF THE PROPERTY A TREATU

RAILWAY PROPERTY. A TREATISE ON THE CONSTRUCTION AND MANAGEMENT OF RAILWAYS; designed to afford useful knowledge, in the popular style, to the helders of this class of property; as well as Railway Managers, Officers, and Agents. By John B. Jervis, late Chief Engineer of the Hudson River Railroad, Croton Aqueduct. &c. One vol. 12mo, cloth. Price ONE DOLLAR AVERTY CENTS.

A TREATISE ON SCREW PROPELLERS AND THEIR STEAM ENGINES. By J. W. Nystrom. Thustrated by 32 large drawings, 8vo, cloth. Price FOUR DOLLARS AND FIFTY CENTS.

cloth. Price FOUR DOLLARS AND FIFTY CENTS.

THE MANUFACTURE OF IRON in all its various branches. Including an Essay on the Manufacture of Steel. Illustrated by 150 on gravings. Third edition, 8vo, cloth. Price SIX DOLLARS.

QUESTIONS ON SUBJECTS CONNECTED WITH THE MARINE STEAM ENGINE, and Examination Papers; with 'llints for their Solution. By Thomas J. Main, Professor of Mathematics, Royal Naval College, and Thomas Brown, Chief Engineer, R.N. 12mo, cloth. Price ONE DOLLAR AND FIFTY CENTS.

Junion. By Thomas J. Main, Professor of Mathematics, Royal Naval College, and Thomas Brown, Chief Engineer, R.N. 12mo, cloth. Price ONE DOLLAR AND FIFTY CENTS.

PRACTICAL EXAMINATOR ON STEAM AND THE STEAM ENGINE. By Wm. Templeton. 12mo. Price ONE DOLLAR.

TREATISE ON A BOX OF INSTRUMENTS AND THE SLIDE RULE; being a Gulte to the Gager, Engineer, Seaman, and Student. By Thomas Kentish. Hiustrated by numerous engravings. 12mo, cloth. Price ONE DOLLAR.

TURNER'S (THE COMPANION; containing Instructions in Concentric, Elliptic, and Eccentric Turning. Hiustrated by steel plates, of various chucks. tools, instruments, and patterns. 12mo, cloth. Price ONE DOLLAR.

STRENGTH AND OTHER PROPERTIES OF METALS. Reports of Experiments on the Strength and other Properties of Metals for Cannon. With a Description of the Machines for Testing Metals, and the Classification of Cannon in service. By Officers of the Ordnance Department U. S. Army. By authority of the Secretary of War. Hinstrated by 25 large steel plates. In I vol. quarto. Price TEN UOLLARS.

The best treatise on cast-iron extant.

TABLES SHOWING THE WEIGHT OF ROUND, SQUARE, AND FILAT BAR IRON, STEEL, &c., by Measurement. Cloth. Price FIFTY CENTS.

STATISTICS OF COAL; including Mineral Bituminous Substanged milling and Commercial Distribution and amount of Production and Consumption on the American Continent. With Incidental Statistics of the Iron Manufacture. By R. C. Tayjor. Second edition, revised by S. S. Haldenan. Einstrated by five Maps and many Wood Engravings. 8vo, cloth. Price SIX DOLLARS.

BOOKS. Sent by mail free of Postage. My New CATALOGUE, complete to April 12th, sent free of postage to any one who will favor me with his address.

HENRY CAREY BAIRD, Industrial Publisher, 406 Walnut street, Philadelphia.

ARMY SUPPLIES,

OFFICE OF ARMY CLOTHING AND EQUIPAGE,
602 BROADWAY, NEW YORK, April 29th, 1864.
SEALED PROPOSALS WILL BE RECEIVED AT
Othis Office until 12 o'clock, M., on Monday the 9th of May next, for
furnishing by contract, at the Depot of Army Clothing and Equipage
in this city,—

Cavalry Trousers.

Cavalry Trousers.

Veteran Reserve Corps Jackets, Sky Blue.
Knit Shirts.
Service Chevrons.
Mosquito Bars.
Haversacks.
Baversacks.
Samples or specifications for which can be seen at this office. Bidders will state the quantity they wish to furnish, and how soon they can complete the delivery of the quantity they bis for. They will submit, with their proposals, a sample of the article they propose to A proper guaranty must accommons.

furnish.

A proper guaranty must accompany all properals for the faithful performance of a contract,
The United States reserves the right to reject any part or the whole of the blus is may be deemed for the interest of the service.
Proposals should be endowed "Proposals for turnishing there insert the articles bld for") and addressed to

A GENTS WANTED.—TO SELL SEWING MACHINES and other useful articles. Machine has an established reputation, and is the cheapest and most practical one in the market. Forfull particulars address Franklin Sewing Machine Co., Boston, Mass 20 10*

PATENT IMPROVED SOLID EMERY WHEELS, FOR Cutting, Grinding, and Polishing. No Metal-worker should be without them. Orders promptly filled. Smyrna Emery by the Kec, warranted Pure. New York EMERY WHEEL COMPANY, 21 Beek. mpg, street, New York.

PETTEE'S IMPROVED ENVELOPE.—CAUTION.—
The public are hereby cautioned against purchasing, making, vending, or using Envelopes made under or by virtue of any letters patent, alleged to have been recently granted for supposed inventions, which are infringements on the patent issued blarch 224, 1889, to 8. Pettee, and assigned to and now owned by George 8. Stimble. All infringements will be proceeded against. L. J. SPANGLER, Sole lessee.

WANTED—A Situation by a person who has an experience of 25 years in the management and construction of Railway Machinery and Marine Engines; has had entire charge of the Machinery Department of several important Railroads; also that of a line of Steamers; can produce the most satisfactory references as to character and ability. Letters addressed to "Machinery," care of C. W. COPELAND, Consulting Engineer, No. 122 Broadway New York, will meet with prompt attention.

THE MANAGEMENT OF STEEL.

THE MANAGEMENT OF STEEL.

APPLETON & CO., NOS. 443 AND 445 BROADWAY,
publish this day, THE MANAGEMENT OF STEEL. Including
Forging, Hardening, Tempering, Annealing, Shrinking, and Expansion. Also the Case Hardening of Iron. By GEO. EDE. Employed
by the Royal Gunipactories' Department, Woolwich Arsenal. First
American from second London edition. I vol., 12mo., 59 cents.

"Steel being one of the most valuable metals, and requiring great
care in the forging, hardening, tempering, annealing, and management of it in general, I think, after having had twenty years' good
practice, experience, and study combined, I am now able to give a
little information to those who have not had so much to do with it as
I have."—(Extract from the work.
Sent free by mail on receipt of price.

"SHUT YOUR MOUTH."

FOR SALE.—ONE SECOND-HAND BELLOWS, ALL RON, viz:—Cylinder, 36-inch diameter, 42-inch stroke, Piston Rod and Head Iron, Ring Packing; 2 Heads and outlet Valve-Seats, with connecting Rod, Cross Head, and Guide Rods, or Plates. Price \$250 Purchaser must examine them before buying. J. S. M. PECKHAM.

19 3*

GUM-ELASTIC CRUTCHES.—STATE RIGHTS FOR

OM-BLASTIC CRUTCHES.—STATE RIGHTS FOR ing a soft and elastic support to the arm, and enabling the werer to walk with more comfort than can be derived from any other crutch For particulars address J. HARTMAN, 123 Pine street, Philadelphia 194*

TOR 75 CENTS, THE JANUARY, FEBRUARY, Mareh, April, and May Nos. of the ILLUSTRATED PHRENO-LOGICAL JOURNAL sent by return post; or a year for \$2. To secure the Pictorial Double Numbers, with Physiognomy, Ethnology, Phrenology, Physiology, Psychology, and all the portraits of distinguished men, send at once to FOWLER & WELLS, No. 389 Broad way, New York.

REYNOLDS' TURBINE WATER WHEELS.—COM-

PETENT men are employed to measure stream, make plans and put in flumes, wheels, and gearing. TALLCOT & UNDERHILL NO. 170 Broadway, New York.

WATER WHEELS.—OVER 900 OF WARREN'S Woolen, Grist, and Saw Mills, &c. For circular, address A. WARREN, Agent, American Water Wheel Company, 31 Exchange street, Boston, Mass.

Prof. Horsford, of Harvard University, says:—"It works very well, and is got up very neatly." It magnifies 25 diameters. Price? 5. Cents. Also, "THE BOWEN MICROSCOPE" for 55 cents, or four for \$1. One "King" and one "Bowen" Microscope for \$1. All mailed free of postage. Address F. D. BOWEN, Box 220, Boston, Mass. 19 4*

MANUFACTURERS OF STEAM ENGINES, WITH M the link motion, variable out off of the most approved construction; also Lathes, Mill-gearing, Shafting, Hapgers and Machine ry in general. Address M. & T. SAULT, New Haven, Conn. 19 tf

ELF-FEEDING HAND SAWING MACHINE, TALPEY'S PATENT—Invaluable to Carpenters and Builders. One
man caneasilydo the work of three, with less waske of stuff, and in
a far better manner. It is pronounced by hundreds, who are using
them, to be the greatest wood-working machine ever invented. Send
for a Circular. HOAG & HAMPSON, 96 Maiden Lane, New York.

A N EXPERIENCED DRAUGHTSMAN AND MACHINIST wants a situ u1 on as Master Mechanic or Draughtsman in a Railroad or Machine Shop. Address X., Box 435, Detroit, Mich.

TO MANUFACTURERS OF WAGON AND CARRIAGE Axles.—For sale, the right to use a recently patented machine. For turning axles. Will do as much work as twelve engine lathes Address A. B. LAWTHER, Providence, R. I.

UNITED STATES GOVERNMENT MUSKET AND under contracts the above barrels, which are forged out of the very best Marshal and other imported iron. They never fall to pass Government inspection. Address P. L. HAIN, Wernersville, Berks 284*

PORTABLE STEAM ENGINES—COMBINING THE maximum of efficiency, durability and economy with the minimum of weight and price. They are widely and favorably known, more than 300 being in use. All warranted satis factory or no sale Descriptive circulars sent on application. Address J.C. HOADLEY & CO. Lawrence, Mass.

HAMMERED AND ROLLED CAST STEEL FOR TOOLS, DRILLS, DIES, SPRINGS, CARBINES, also steel forged to any required shape, by the MONTAUK IRON AND STEEL CO.
Office, 16 Beekman Street, New York.

CIVIL AND MECHANICAL ENGINEERING.—F. W.
EVANS, Ancien Eleve de l'Ecole Imperial Centrale des Arts et
Manufactures, de Paris, gives particular attention to the construction
of Iron Roofs, and Stone, Iron and Wooden Bridges. 103 State street,
Ection, Mass.

MACHINERY AT PEACE PRICES.—A LOT OF BAR-REL and Keg Machinery for sale yery low, to close an estate. Address RUFU TYLER, Administrator, 15 % Ausable Fork & Essey Co., N. Y.

"KING MICROSCOPE."-DOUBLE LENS.-

Philadelphia, April 27, 1864.

20 3*

tions.

It has been the design of the publishers to not only furnish, in convenient form for preservation, a synopsis of he PATENT LAW and PRACTICE, but to answer a great variety of questions which have been put to them from time to time during their practice of upwards of secenteen years, which replies are not accessible in any other form. The publishers will promptly forward the pamphlet by mail, on receipt of six cents in postage stamps.

Address MUNN & OO, Publishers of the Scientific American, No. 37 Park Row, New York.

E. H. BELLOWS, MANUFACTURER OF PORTABLE and Stationary Steam Engines, Worcester, Mass. 17 10*

A LCOTT'S CONCENTRIC LATHES - FOR BROOM, Hoe, and Rake Handles, Chair Rounds, &c.—Price \$25; and all other kinds of Wood-working Machinery, for sale by S. C. HILLS, No. 12 Platistreet, New York.

GALVANIZED IRON.—GALVANIZING DONE WITH despatch and castings furnished if desired, either Malledde or Gray iron. Address, WILCOX & HALL, Middletown, Conn. 16 12cow

"SHUT YOUR MOUTH."

CATLIN'S BREATH OF LIFE.
THE BREATH OF LIFE; OR MAL-RESPIRATION AND ITS
EFFECTS UPON THE ENJOYMENT AND LIFE OF MAN.

"No person on earth who reads this little work will condemn it. It is only a question bow many millions may look through it and benefit themselves by adopting its precepts—[The. Author"
"To keep the mouth closed is good for the lungs; good for the nostrils, through which you are then obliged to breathe; good for the teeth, good for the troat, good for character—in fact good for every thing. This is no joke. This is serious truth. Reader try it."

1 Vol. 870. 25 plates. Fancy covers 30 cents.

At Wholesale and Retail, by

JOHN WILEY, 535 Broadway. POR SALE.—ON ACCOUNT OF FAILURE IN THE shop reprietor's health he offers for sale his Foundry and Machineshop at low rates. A desirable location with agonalbusiness, Address F. M. ROBINSON, Conneautvilla, Crawford county, Pa. 16 3°

NGINEERS AND MACHINISTS ARE SCIENTIFI-CALLY prepared for allthe duties of Marine Engineering for the United States Navy or Merchant Service. Address, with a stamp, HARRIS, 350 North 10th stre t Philadelphia, l'a.

THE BEST IS ALWAYS THE CHEAPEST.—WE manufacture a Wind-mill for pumping water that has been thoroughly tried during the last 4 years. For simplicity and durability we challenge competition. It is no vague chimera, but a practical and thoroughly-tried machine, first-class in every respect. Will pump from wells 10 to 150 feet deep. Price, without pump, No. 1, \$100; No. 2, \$130. E. W. MILLS & CO., Marcellus, N. Y. 18 3*

PECK'S PATENT DROP PRESS FOR FORGING PUR POSEA.—All sizes manufactured by MILO PECK & CO., New 9 12*

WM. CLEVELAND HICKS, CIVIL AND MECHANI CAL Engineer, 480 Broadway, New York.

STEAM ENGINES AND BOILERS OF EVERY DE SCRIPTION; Shafting; Pulleys and Machinista Tools, for Sale by C. GAY, 29 Doane strept, Boston, Mass. 9 20*

DRAFTING INSTRUMENTS FOR ENGINEERS, SURSURVEYORS, Architects, Machinists, and Schools, Engineers' and chalins, Chesterman's Metallic and Steel Tape-measures, for sale, wholesale and retail, by JAMES W. QUEEN & CO., 924 Chestnut street. Philadelphia. Priced and illustrated catalogues gratis.

MESSIEURS LES INVENTEURS.—AVIS IMPORT-

VALUABLE WORK FOR INVENTORS PATENTEES AND MANUFACTURERS.

The publishers of the Scientific American have just prepared with much care, a pamphlet of information about Patents and the Patent Laws, which ought to be in the hands of every inventor and patentee, and also of manufacturers who use patented inventions. The character of this useful work will be better understood after reading the following synopsis of its contents:—

The complete Patent Law Amendment Act of 1861—Practical Instructions to Inventors, how to obtain Letters Patent, also about Models—Designs—Caveats—Trade-marks—Assignments—Revenue Tax Extensions—Interferences—Infringements—Appeals—Reissues of Detective Patents—Validity of Patents—Abandoment of Inventions—Best Mode of Introducing them—Importance of the Specification—Who are entitled to Patents—What will prevent the granting of a Patent—Fabents in Canada and European Fatents—Shedulic of Patent Rees; also a variety of miscellaneous items on patent law questions.

PAGE'S PATENTED LIME KILN WILL BURN 300 bushels lime perday, with three cords wood or 1% tun coal hard or soft. Address C. D. PAGE, Cleveland, •hio. 1712*

CHIMER & MILLER, AGRICULTURAL AND COM-MISSION Dealers, Hillsboro, Ill., give personal attention to the introduction and sale of all kinds of Machinery. Business solicited and references given.

HACKLE, GILL, COMB CARD PINS, &c., &c., promptly supplied by J. W. BARTLETT, 442 Broadway, New York. Refers to leading Flax, Linen and Cordage Mach'y Manufrs 12 tf

N ERVOUS DISEASES AND PHYSICAL DEBILITY arising from Specific causes in both sever-new and walkly Arising from Specific causes in both sexes—new and reliable reatment, in Reports of the Howard Association—sent in sealed letter nyelopes, free of charge. Address Dr. J. SKILLIN HOUGHTON, loward Association, No. 2 South Ninth street, Philadelphia, Pa. 14 12*

MERICAN NEEDLE COMPANY, 442 BROADWAY,
New York, J. W. Bartlett, Needle manufacturers for all the Sewing Machines. Bartlett's Burnished Hand Needles Hackle pins, &c.
13 tf

ROUND AND SQUARE MATCH MACHINES. Woolen Cards, Rag Pickers, &c., Manufactured by RICHARD 10 13*

MPORTANT TO RAKE MANUFACTURERS.—CO-LUMBUS COLEMAN, Marion avenue, Allegheny City, Pa., con-tinues to fill orders for Steel Rake Teeth, adapted to the latest im-proved Horse Rakes.

JAMES HORNER & CO., MANUFACTURERS OF CAST
Steel and Files. Orders solicited for all kinds, shapes and sizes
Office and Warehouse, 28 Cliff street, New York. 76m*

A NDREWS & KALBACH WATER WHEELS.—I AM prepared to furnish these wheels of all sizes. They yield about 85 per cent useful effect, as per report of test of Turtone Wheels at Philadelphia, March, 1869, on a very rough model, and have proven themselves very durable and desirable for all purposes. For particulars, apply, stating heighth of head and work to be done, to THEODORE H. RISDON, Mount Holly, New Jersey.

ABORATORY OF CHEMISTRY.—CONSULTATIONS
Factories, Drawings of Apparatus, Information on every kind of Chemical fabrications, such as Soaps, Candles, Oils, Inks, etc. Analyses and Commercial Essays.

Address Prof. H. DUSSAUCE, Chemist, New Lebanon, N. Y.

I RON PLANERS, ENGINE LATHES, DRILLS AND other machinists' tools, of superior quality, on hand and finishing, for sale low. For description and price address NEW HAVEN, MANUFACTURING COMPANY, New Haven, Comp.

MESSIEURS LES INVENTEURS.—AVIS IMPURI-ANT Les inventeurs non familiers avec le langue Anglaise, et ij prefereraient nous communiquer leurs inventions en Français, uvent nous addresser dans leur langue natale. Envoyez nous un sein et une description concise pour notre examen. Toutes com-unications seront revies en confidence. MUNN & CO., Scientific American office, No. 37 Park I W New York ;

© 1864 SCIENTIFIC AMERICAN, INC

THE CHEAPEST MODE OF INTRODUCING INVENTIONS.

INVENTORS AND CONSTRUCTORS OF NEW AND seful Contrivances or Machines, of whatever kind, can have their exercises illustrated and described in the columns of the SCIEN TIFIC AMERICAN on payment of a reasonable charge for the en-

No charge is made for the publication, and the cuts are furnished to the party for whom they are executed as soon as they have been used. We wish it understood, however, that no second-hand or poor engravings, such as patentees often get executed by inox-perienced artists for printing circulars and handbills from, can be admitted into these pages. We also reserve the right to accept or reject such subjects as are presented for publication. And it is not our desire to receive orders for engraving and publishing anybut good Inventions or Machines, and such as do not meet our approba-tion in this respect, we shall decline to publish.

For further particulars al liess-

MUNN & CO.,
Publish (160f the SCIENTIFIC AMERICAN, No. 37 Park Row, New York City.

OIL! OIL! OIL

For Railroads, teamers, and for machinery and Burning.

PEASE® Improved I ngine and Signal Oil, indorsed and recommended by the hitlest authority in the United States. This Oil possesses qualities v.dally essential for lubricating and burning, and found in no other oil. It is offered to the public upon the most reliable, thorough and practical test. Our most skillful engineers and machinists pronounce it superior to and cheaper than any other, and the only off that is in all cases reliable and will not gum. The "Scientific American," after several tests, prenounces it "superior on you other they have ever used for machinery." For sale only by the Inventor and Manufacturer, F. S. PEASE, No. 61 Main street, Buildio, N. Y.

N. B.—Reliable orders filled for any part of the United States and Canada.

BAIRD'S PATENT

INCRUSTATION PREVENTER, AND REMOVER, FOR STEAM BOILERS in either Salt or Fresh Water.—No invention connected with Steam Power combines so many advantages as this. THE RECONDY IN FULL ALONE, From its use, repays the cost of the preventive. Certificates from Engineers and owners of Steam Boilers, at sea and on shore, can be seen at the officeof JAS. F. LEVIN, 23Central Wharf, Boston, Mass.

FOREIGN LABOR.

INVITE THE CORRESPONDENCE OF MANUFACTURERS wanting Miners, Rollers, Puddlers, Machinists, Molders, Steel, Edge-Tool, File, Saw and Cutlery Makers, and Manufacturers of Hardware generally, as I am now prepared to enter into Contracts for the supply of such Labor. I have made such arrangements through my agent in Great Britain as will enable me to furnish any reasonable number of men that may be required.—JOHN WILLIAMS Editor Hardware Reporter, 80 Beekman street, New York.

HOLSKE & KNEELAND, MODEL MAKERS. PAT-ENT Office Models, Working Models, and Experimental Ma-chinery, made to order at 100 Walker street, between Center and Elm, New York. Refer to Munn & Co., SCIENTIFIC AMERICAN Office.

GUILD & GARRISON'S CELEBRATED STEAM O UILD & GARKHSON'S COLLEGERATED STEAM
Tymps—Adapted to every variety of pumping. The principal
styles are the Direct Action Excelsior Steam Pump, the improved
Balance Wheel Pump, Duplex Vacuum and Steam Pumps, and the
water Propoler, an entirely new invention for numping large quantities at a light lift. For sale at Nos. 55 and 57 First street, Williamsburgh, and No. 74 Beekman street, New York.

GUILD, GARRISON & CO.

WHEELER & WILSON'S HIGHEST PREMIUM SEW-ING MACHINES and Foote's Patent Umbreda Stands, 505 17 32*

WANTED.—AMERICAN OR ENGLISH IMPROVE-MENTS in machinery for manufacturing cotton or wool, old or new, patented or unpatented. CHARLES A. SHAW, Biddeford, Maine.

GROVER & BAKER'S HIGHEST PREMIUM ELAS-TIC Stitch Sewing Machines, 495 Broadway, New York.

DAVING OF FUEL TO PARTIES USING STEAM.—
DAMPER REGULATORS.
Guaranteed to effect a great saving in fuel and give the mos perfect regularity of power. For sale by the subscribers, who have established their exclusive right to manufacture damper regulators using diaphragins of flexible vessels of any kind. CLARK'S PATENT STEAM AND FIRE REGULATOR COMPANY, NO. 5 Park Place, New York

BARTLETT'S NEW COOLER AND REFRIGERATOR.
COMBINED.—Paton; to be sold in States or Counties, to enable
The or Iron Workers to manufacture and supply their own trade, and
save transportation. Terms will be low. J. W. BARTLETT, Patentee,
442 Broadway, New York. Model coolers furnished purchasers. 19th

CHLORATE OF ZINC FOR BURNETTIZING TIMBER APure Article For sale by BOYD BROS., 159 Front street, 13 12*

UN AND PISTOL SCREWS.—COMSTOCK, LYON & CO., Manufacturers (Office, 74 Beekman street, New York, are always prepared to furnish Gun and Pistol Screws to sample Screws to fit the U.S. Musket, Sewing Machine Screws, and Mala Screws generally, of the best quality, at short notice.

Bur Beamtung fur beutiche Erfinder.

Die Unterzeichneten haben eine Anteitung, die Erfindert.
Die Unterzeichneten haben eine Anteitung, die Erfindern das Berhafen angibt, um sich ibre Patente zu sichern, herausgegeben, und verabsolen sollte graits an dieselben.
Erfinder, welche nicht mit ber englischen Sprache belannt find, können fore Mitthellungen in der deutschen Sprache machen. Sizzen von Erladungen mit furzen, deutsich geschreidenen Beschreibungen bestede mach nabbreistren an Auf ber Office wird beutich gefproden.

Dart Row, Rew-Jart.

Bafelb if ju baben .

Die Fateni-Dejeke der Fereinigten Sigaten.

Alle Auteul Mejene und gerenden gerengen andern Mindeleungen fur ben Gefahrer, um fich Patente ju fichen, in ten Ber. St. fogoli als in Europa. Ferner Auszuge aus ben Patent-Geften frember gant ben barauf bezugliche flatsfolige; ebenfalls nüsite Mint. Mint. Mint. Mint. Se Berner und folde welche katentiven wollen.