

ARMY SUPPLIES.

OFFICE OF ARMY CLOTHING AND EQUIPAGE, 502 BROADWAY, NEW YORK, April 23rd, 1864.

SEALED PROPOSALS WILL BE RECEIVED AT this office until 12 o'clock, m., on Monday the 2d of May next, for furnishing by contract, at the Depot of Army Clothing and Equipage in this city,--

- Cavalry Boots, pegged, 9s. to 15s. Cavalry Boots, sewed, 6s. to 11s. Boots, pegged, No. 4s. Boots, pegged, 9s. to 15s. Negro Brogans, 8s. to 15s. Engineer's Overalls. Cavalry Gaiters. Woolen Stockings. Worsted Lace, Yellow, 1 1/2 inch and 1 1/4 inch. Worsted Lace, S. B., 1 1/2 inch and 1 1/4 inch. Packing Boxes.

Samples or specifications of which can be seen at this office. Bidders will present a sample of the articles which they propose to deliver, and state the quantities they wish to supply, and how fast they can make deliveries.

A proper guaranty must accompany all proposals for the faithful performance of a contract. The United States reserves the right to reject all bids deemed objectionable.

Proposals should be endorsed "Proposals for furnishing (here insert the articles bid for)" and addressed to LT.-COL. D. H. VINTON, Dy. Qr. Mr. Genl.

THE "KING MICROSCOPE."--DOUBLE LENS.--Prof. Horsford, of Harvard University, says: "It works very well, and is got up very neatly." It magnifies 25 diameters. Price 75 cents. Also, THE BOWEN MICROSCOPE for 45 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\*

WANTED--AN ACTIVE BUSINESS MAN, WITH capital, to take an interest in a first class mechanical manufacturing business, five years established. For particulars apply to DICKERMAN & CO., 46 Seacoast street, Boston, Mass. 1\*

BARTLETT'S NEW COOLER AND REFRIGERATOR COMBINED.--Patent to be sold in States or Counties, to enable Tin 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. A practical model furnished to purchasers. 19 1/2\*

MANUFACTURERS OF STEAM ENGINES, WITH the link motion, variable cut off of the most approved construction; also Lathes, Mill-gearing, Shafting, Hangers and Machinery in general. Address M. & T. SAULT, New Haven, Conn. 19 1/2\*

UNITED STATES AUCTION SALE.--S. H. DRAPER, Auctioneer.--SIMEON DRAPER will sell, by order of the Secretary of War, on Saturday, April 30th, 1864, at 12 1/2 o'clock, at the New York Arsenal, Governor's Island, N. Y. the following Ordnance Stores:--140 375 pound, 15, 12, 18, 24, and 32 Powder and 9 and 10 inch Shot; 407 94 pound, 12, 24, and 42 Powder and 8 and 10 inch Shells; 725 pounds Old Iron (scraps). Terms of sale, cash on delivery of the property. S. CRISPIN, Captain of Ordnance Commanding, New York Arsenal, April 18th, 1864. 18 2

THE CELEBRATED CRAIG MICROSCOPE, COMBINING Instruction with Amusement, is mailed, prepaid, for \$2 25; or with 6 beautiful Mounted Objects for \$3; with 24 Objects, \$5; by HENRY CRAIG, 180 Centre street, New York.

SELF-FEEDING HAND SAWING MACHINE, TALPEY'S PATENT.--Invaluable to Carpenters and Builders. One man can easily do the work of three, with less waste of stuff, and in a far better manner. It is pronounced by hundreds, who are using them, to be the greatest wood-working engine ever invented. Send for a Circular. HOAG & HAMPSON, 95 Maiden Lane, New York. 18 5\*

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BAKER'S ONE DOLLAR BAROMETER OR Weather Indicator sent by express on receipt of \$1. Agents wanted. BENJAMIN MOORHOUSE, Providence, R. I. 18 2\*

AN EXPERIENCED DRAUGHTSMAN AND MACHINIST wants a situation as Master Mechanic or Draughtsman in a Railroad or Machine Shop. Address X., Box 435, Detroit, Mich. 18 4\*

TO MANUFACTURERS OF WAGON AND CARRIAGE Axles.--For sale, the right to use a recently patented machine, for turning axles. It does as much work as twelve engine lathes. Address A. B. LAWTHORPE, Providence, R. I. 18 4\*

UNITED STATES GOVERNMENT MUSKET AND Carbine Barrels.--I am constantly manufacturing to order and under contract the above barrels, which are forced out of the very best material and other imported iron. They never fail to pass Government inspection. Address P. L. HAIN, Wernersville, Berks county, Pa. 18 4\*

THE EVANS & BURGESS PATENT WATER FRONT FORGE is the best for using, light or other hard coal now known to the public. Will save 30 per cent of fuel over any other forge now in use. Besides will so protect the workmen from the gas and heat as to remove all objections whatever. They are being extensively adopted in many of the first armories and workshops in the country. Please send for a circular and price list. G. W. BIGELOW, sole proprietor, 28 Whitney ave., New Haven, Conn. 17 3\*

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 200 being in use. All warranted satisfactory or no sale. Descriptive circulars sent on application. Address J. C. HODLEY & CO. Lawrence, Mass. 17 1/2\*

PATENT IMPROVED SOLID EMERY WHEELS, FOR Cutting, Grinding, and Polishing. No Metal-worker should be without them. Orders promptly filled. Smyrna Emery by the Keg, warranted Pure. NEW YORK EMERY WHEEL COMPANY, 51 Beekman street, New York. 17 3\*

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. 16 1/2\*

A MOST VALUABLE PATENT FOR BLASTON SALE. Address, CHARLES SUCKOW, Box 4487, Buffalo, New York. 16 4\*

CIVIL AND MECHANICAL ENGINEERING.--F. W. EVANS, Ancien Eleve de l'Ecole Imperiale 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, Boston, Mass. 16 10\*

MACHINERY AT PEACE PRICES.--A LOT OF BARREL and Keg Machinery for sale very low, to close an estate. Address RUFUS TYLER, Administrator, Ausable Forks, Essex Co., N. Y. 5\*

WOODWORTH PLANERS--IRON FRAMES TO Plane 18 to 24 inches wide, at \$120 to \$150. For sale by S. C. HILLS, No. 12 Platt street, New York. 16 1/2\*

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--Re-issues of Defective Patents--Validity of Patents--Abandonment of Inventions--Best Mode of Introducing them--Importance of the Specification--Who are entitled to Patents--What will prevent the granting of a Patent--Patents in Canada and European Patents--Schedule of Patent Fees; also a variety of miscellaneous items on patent law questions.

It has been the design of the publishers to not only furnish, in convenient form for preservation, a synopsis of the 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 seven 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 & CO., Publishers of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York.

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

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ENGINEERS AND MACHINISTS ARE SCIENTIFICALLY prepared for all the duties of Marine Engineering for the United States Navy or Merchant Service. Address, with a stamp, J. HARRIS, 355 North 10th street Philadelphia, Pa. 18 3\*

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SHIMER & MILLER, AGRICULTURAL AND COMMISSION Dealers, Hillsboro, Ill., give personal attention to the introduction and sale of all kinds of Machinery. Business solicited and references given. 18 1/2\*

HACKLE, GILL, COMB CARD PINS, &c., &c., promptly supplied by J. W. BARTLETT, 442 Broadway, New York. Refer to leading Flax, Linen and Cordage Mach'y Manuf'rs 12 1/2\*

NERVOUS DISEASES AND PHYSICAL DEBILITY, arising from Specific causes in both sexes--new and reliable treatment, in Reports of the Howard Association--sent in sealed letter envelopes, free of charge. Address DR. J. SKILLIN HOUGHTON, Howard Association, No. 2 South Ninth street, Philadelphia, Pa. 14 12\*

AMERICAN NEEDLE COMPANY, 442 BROADWAY, New York, J. W. Bartlett, Needle manufacturer for all the Sewing Machines. Bartlett's Burnished Hand Needles, Hackle pins, &c. 12 1/2\*

ROUND AND SQUARE MATCH MACHINES, Woolen Cards, Rag Pickers, &c., Manufactured by RICHARDSON & CO., Athol Depot, Mass. 10 13\*

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THE BELLEVUE STEREOSCOPE, WITH SLIDING FOCUS and Field Piece, accommodating all eyes, recently noticed in the SCIENTIFIC AMERICAN is mailed, prepaid, for \$3; or with 12 Assorted Views, \$6, by HENRY CRAIG, 335 Broadway, New York. 12 8\*

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WM. CLEVELAND HICKS, CIVIL AND MECHANICAL Engineer, 430 Broadway, New York. 3 1/2\*

STEAM ENGINES AND BOILERS OF EVERY DESCRIPTION; Shafting; Pulleys and Machinists' Tools, for Sale by S. CRYST, 29 Doane street, Boston, Mass. 9 20\*

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ANDREWS & KALBACH WATER WHEELS.--I AM prepared to furnish these wheels of all sizes. They yield about 35 per cent useful effect, as per report of test of Turbine Wheels at Philadelphia, March, 1860, on a very rough model, and have proven themselves very durable and desirable for all purposes. For particulars, apply, stating height of head and work to be done, to THEODORE H. RISDON, Mount Holly, New 17 5\*

LABORATORY OF CHEMISTRY.--CONSULTATIONS on Chemistry applied to Arts and Manufactures, etc., Plans of 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. DUSSAUBE, Chemist, New Lebanon, N. Y. 15 8\*

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LES INVENTEURS.--AVIS IMPORTANTS Les inventeurs non familiers avec la langue Anglaise, et qui preferent leurs communications leurs inventions en Francais, peuvent s'adresser dans leur langue natale. Envoyez nous un dessin et une description concise pour notre examen. Toutes communications seront regues en confiance. MUNN & CO., Scientific American office, No. 37 Park Row, New York

THE CHEAPEST MODE OF INTRODUCING INVENTIONS.

INVENTORS AND CONSTRUCTORS OF NEW AND useful Contrivances or Machines, of whatever kind, can have their inventions illustrated and described in the columns of the SCIENTIFIC AMERICAN on payment of a reasonable charge for the engraving.

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 inexperienced 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 any but good Inventions or Machines, and such as do not meet our approbation in this respect, we shall decline to publish.

For further particulars address-- MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, No. 37 Park Row, New York City.

OIL! OIL! OIL! For Railroads, Steamers, and for Machinery and Spring PEASE'S Improved Engine and Signal Oil, indorsed and recommended by the highest authority in the United States. This Oil possesses qualities equally 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 oil that is in all cases reliable and will not gum. The "Scientific American," after several tests, pronounces it "superior to any other they have ever used for machinery." For sale only by the Inventor and Manufacturer, F. S. PEASE, No. 61 Main street, Buffalo, N. Y. N. B.--Reliable orders filled for any part of the United States and Canada. 14 12\*

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 ECONOMY IN FUEL ALONE, from its use, reaps the cost of the preventive. Certificates from Engineers and owners of Steam Boilers, at sea and on shore, can be seen at the office of JAS. F. LEVIN, 23 Central Wharf, Boston, Mass. 9 10\*

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HOLSKE & KNEELAND, MODEL MAKERS, PATENT Office Models, Working Models, and Experimental Machinery, made to order at 100 Walker street, between Central and Elm, New York. Refer to Munn & Co., SCIENTIFIC AMERICAN Office. 6 1/2\*

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IRON 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, Conn. 1 1/2\*

SAVING OF FUEL TO PARTIES USING STEAM.--DAMPER REGULATORS. Guaranteed to effect a great saving in fuel and give the most perfect regularity of power. For sale by the subscribers, who have established their exclusive right to manufacture damper regulators, using diaphragms of flexible vessels of any kind. CLARE'S PATENT STEAM AND FIRE REGULATOR COMPANY, No. 5 Park Place, New York. 24 28\*

THE CELEBRATED CRAIG MICROSCOPE, COMBINING Instruction with Amusement, is mailed, prepaid, for \$2 25; or with 6 beautiful Mounted Objects for \$3; with 24 Objects, \$5, by HENRY CRAIG, 335 Broadway, New York. 2 8\*

CHLORATE OF ZINC FOR BURNETTIZING TIMBER--A Pure Article. For sale by BOYD BROS., 159 Front street, New York. 13 12\*

GUN 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 Metal Screws generally, of the best quality, at short notice. 10 26\*

Zur Beachtung für deutsche Erfinder. Die unterzeichneten haben eine Uebersetzung, die Erfinder das Verbalen angibt, um sich ihre Patente zu sichern, herausgegeben, und verabschieden solche gratis an dieselben. Erfinder, welche nicht mit der englischen Sprache bekannt sind, können ihre Mittheilungen in der deutschen Sprache machen. Etym von Erfindungen mit kurzen, deutlich geführten Beschreibungen beliebe man zu adressiren an MUNN & CO., 37 Park Row, New-York. Auf der Office wird deutsch gesprochen. Befehl ist zu haben: Die Patent-Gesetze der Vereinigten Staaten

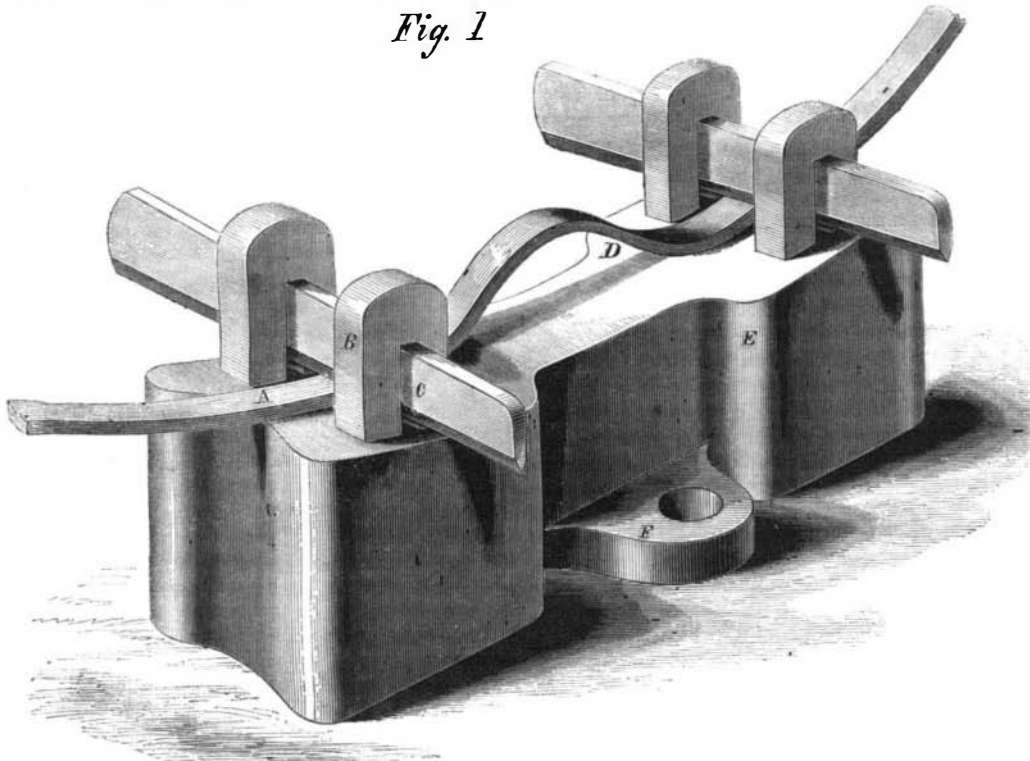
Die Patent-Gesetze der Vereinigten Staaten. Mit den Regeln und der Beschreibung der Patent-Office und Anleitungen für den Erfinder, um sich Patente zu sichern, in den Ver. St. (so wohl als in Europa). Ferner Aufzüge aus den Patent-Gesetzen Frankreichs und darauf beruhende Anweisungen; ebenfalls nützliche Mittheilungen über die Rechte der Erfinder. Preis 20 Cts. bei den No. 37 Park Row, New York.

**Improved Machine for upsetting Tires.**

We present our readers this week with a view of Dole's arrangement for upsetting tires for wagons or other wheels. The engravings represent the machine very perfectly. The operation is performed by inserting the tire, A, between two sets of lugs, B, provided with keys, C; the tire, having previously been formed with a bend in it as at D, is held tightly by the keys while the blacksmith sets the bend down, which being hot compresses the metal together and thus shortens the tire. The lugs, B, are made of wrought iron, and are formed into a loop at the bottoms, as in Fig. 2; they are set in the mold when the anvil or bed, E, is cast, and are kept in place by the casting surrounding them. By this method of con-

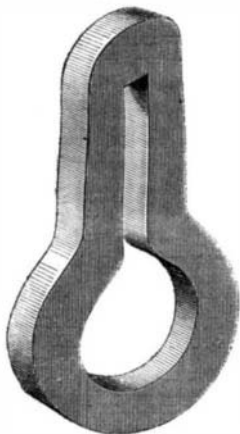
struction a very strong link is secured. The keys are of steel, and have V-shaped edges so that they bite into the metal of the tire and hold it in place firmly, and the anvil has lugs, F, by which it may be bolted down to a firm foundation. This is a very convenient

Fig. 1

**DOLE'S MACHINE FOR UPSETTING TIRES.**

with asphaltum and petroleum, both of which exist in large quantities. Immense beds of the former are found on the sea-shore in the vicinity of Santa Barbara, and is used largely in the construction of sidewalks, roofing, &c., at San Francisco. Some 18 miles west of Buena Vista Lake, an extensive deposit of asphaltum has been found, boiling up from numerous springs, being warm and in a fluid state when it comes to the surface, and of a dark and viscous color. During the last year another extensive spring has been discovered near Pyramid Lake. On the coast, petroleum springs are met with at Santa Cruz, and San Pablo, in Contra Costa county, 10 miles from San Francisco. The Conway Petroleum Association has bored several wells, one of which

Fig. 2



discharges considerable quantities of oil. In Santa Clara county, oil springs have been found near the Los Cates Creek."

**Migration of the Stump of a Tooth.**

A young lady, who was sent some months since to M. Delistie by one of his friends, had on the left side of the palate, on a line with the first molar, which was absent at one-third of an inch from the edge of the gums, a mass of substance regularly rounded off, blackish, of the size of a small pea, with regular edges. Several doctors had been consulted, and the affection looked upon by them as caries of the maxillary, had been submitted to different kinds of treatment, all of which had been of no avail. M. Delistie tried to find out by the help of a stylet what affection he had to deal with. This instrument hit on an uneven mass, which gave neither the crepitation of caries nor the roughness of a sequestrum. On pressing heavily all around he thought he felt it moving slightly, and introducing the two very slender points of a pincers for extracting stumps, to his great astonishment he drew out the root of a tooth nearly one-third of an inch in size. This root evidently came from the first molar; it had made its way through the maxillary bone, and had placed itself perpendicularly to the roof of the palate. The patient having been seen a fortnight afterward, was perfectly cured.—*Dublin Medical Press.*

**The Product of Petroleum.**

The *Buffalo Commercial Advertiser*, of April 15th, contains a very long "Oil Circular," by F. S. Pease of Buffalo, from which we gather the following statements:—

"The exports of petroleum from the United States for the year 1863 have been large—28,250,721 gallons, against 10,955,991 gallons in 1862. The product of the wells is set down at 2,000,000 bbls., or 80,000,000 gallons for the year, being 10,643,735 gallons more than in 1862. California seems to be well supplied

with asphaltum and petroleum, both of which exist in large quantities. Immense beds of the former are found on the sea-shore in the vicinity of Santa Barbara, and is used largely in the construction of sidewalks, roofing, &c., at San Francisco. Some 18 miles west of Buena Vista Lake, an extensive deposit of asphaltum has been found, boiling up from numerous springs, being warm and in a fluid state when it comes to the surface, and of a dark and viscous color. During the last year another extensive spring has been discovered near Pyramid Lake. On the coast, petroleum springs are met with at Santa Cruz, and San Pablo, in Contra Costa county, 10 miles from San Francisco. The Conway Petroleum Association has bored several wells, one of which

**A Furnace falling into a Coal Mine.**

A very startling occurrence happened recently, near Wolverhampton, England. When the charge was nearly ready for being drawn off, one of the three blast furnaces at Rough Hills, belonging to Messrs. Aston and Shaw, suddenly fell into ruins. The furnaces were put up on an old colliery, the crust of which is only about seventeen yards thick; and it is thought that the pillars in the bottom coal, which was found at this distance, had been taken from either beneath the furnace or else so near to it as to gradually draw it down, but it had previously exhibited no evidence of danger. Two men were sadly burnt by the accident.

HAIR-DRESSING.—Ladies will find the mode of plaiting eight strands, illustrated and described on page 244 of the SCIENTIFIC AMERICAN, current volume, a handsome way for dressing their braids.

THERE are one hundred and forty-nine shoe establishments and thirteen kid and morocco houses in Lynn, Mass. The internal tax on this department of manufactures amounted last year to \$252,759.

THE

**Scientific American,**

FOR 1864!

VOLUME X.—NEW SERIES.

The publishers of the SCIENTIFIC AMERICAN respectfully give notice that the Tenth Volume (New Series) commenced on the first of January. This journal was established in 1845, and is undoubtedly the most widely circulated and influential publication of the kind in the world. In commencing the new volume the publishers desire to call special attention to its claims as

**A JOURNAL OF POPULAR SCIENCE.**

In this respect it stands unrivaled. It not only finds its way to almost every workshop in the country, as the earnest friend of the mechanic and artizan, but it is found in the counting-room of the manufacturer and the merchant; also in the library and the household. The publishers feel warranted in saying that no other journal now published contains an equal amount of useful information; while it is their aim to present all subjects in the most popular and attractive manner.

The SCIENTIFIC AMERICAN is published once a week, in convenient form for binding, and each number contains sixteen pages of useful reading matter, illustrated with

**NUMEROUS SPLENDID ENGRAVINGS**

of all the latest and best inventions of the day. This feature of the journal is worthy of special note. Every number contains from five to ten original engravings of mechanical inventions relating to every department of the arts. These engravings are executed by artists specially employed on the paper, and are universally acknowledged to be superior to anything of the kind produced in this country.

The publishers of the SCIENTIFIC AMERICAN promise to present, as during preceding years, all the latest improvements in Steam Engineering, War Vessels, Ordnance—military and naval—Fire-arms, Mechanics' Tools, Manufacturing Machinery, Farm Implements, Wood-working Machinery, Water-wheels, Pumps and other Hydraulic Apparatus, Household Utensils, Electric, Chemical and Mathematical Instruments, Flying Machines and other Curious Inventions—besides all the varied articles designed to lighten the labor of mankind, not only in the shop and warehouse, but in every place where the industries of life are pursued.

From its commencement the SCIENTIFIC AMERICAN has been the earnest advocate of the rights of American Inventors and the

**REPERTORY OF AMERICAN PATENTS.**

In this important department, so vitally connected with all the great interests of the country, no other journal can lay any claim whatever, as in its columns there is published a weekly Official List of the "Claims" of all patents granted at the U. S. Patent Office.

**THE PRACTICAL RECIPES**

alone are oft-times worth more to the subscriber than the amount a whole year's subscription.

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Two volumes of the SCIENTIFIC AMERICAN are published each year, at \$1 50 each, or \$3 per annum, with correspondingly low terms to Clubs; \$1 will pay for four months' subscription. The numbers for one year, when bound in a volume, constitute a work of 832 pages of useful information, which every one ought to possess. A new volume commenced on the first of January, 1863.

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Canadian subscribers will please to remit 25 cents extra on each year's subscription to pre-pay postage.

**Munn & Co., Publishers.**

37 Park Row, New York.

FROM THE STEAM PRESS OF JOHN A. GRAY &amp; GREEN.