

CORRESPONDENTS

J. B. B., of Fla.—The rust on the interior of your iron pipes may look very formidable, but it cannot in any manner injure the health of persons using the water.

W. C., of Ill.—Exhaust steam from an engine may be used to advantage in steaming timber, whether the object be to render the same temporarily flexible, or to more rapidly season and kiln dry it.

C. S. G., of S. C.—Car seats have been made adjustable in the manner you propose for carriages.

C. S., of N. Y.—There is nothing new in the application of a governor to control a single valve to vary the cut-off. We have seen a common slide valve operated in that way by more than one contrivance.

D. R., of N. C.—Your almanac is undoubtedly correct, and the rule given in Haswell must consequently be considered only approximately accurate.

L. V. B., of Ky.—We know no means of making elastic tubing perfectly gas tight. We use such a tube in our office to supply a movable burner, but it leaks sufficient to produce a strong smell of gas at times.

G. P., of Va.—You will oblige us by giving diagrams of your wheel and boats.

S. M. & Co., of O.—Address Nicholas Vivian, Consulting Engineer, Pittsburg, stating particulars.

R. L. S., of N. Y.—Yes. The summits of the highest mountains even in the torrid zone are always covered with ice and snow.

W. B., of Mass.—wishes to know what is used for staining pine in imitation of black walnut? We have never heard of any such staining.

J. W. N., of Ind.—The printing of pictures or maps on handkerchiefs is a very old idea. We can remember when our heart was made glad, twenty-five years ago, by a present of a cotton handkerchief costing 25 cents, with the verses "Mary had a little Lamb," printed thereon in blue colors around the engraving, characteristic of the subject of the verses.

H. W., of Pa.—There is nothing new in the device you propose for a decanter stopper. It is old and well known. The inquiry in regard to the blind slot we cannot answer without a preliminary examination.

J. R. V. O., of Cal.—Your plan of operating paddles of steamboat wheels, so as to cause them to dip into, and leave the water edgewise by means of a series of cogged gearing, would not save the waste of power against which you complain. The friction attendant upon this great amount of gearing would more than counterbalance the proposed advantages. We cannot encourage you to apply for a patent on it.

T. B., of Ky.—We understand you to inquire whether a person who owned a right, under the original grant, can re-construct a machine to take the place of one which was burned after the patent had been extended? We should say he could not. He could repair the old machine until it was worn out, but if he had the misfortune to lose it by fire, we do not think, under the former decision of the United States Courts that a new machine could be built.

A. R., of Ill.—There has been some delay in the examination of cases in the agricultural department of the Patent Office in consequence of the absence of Chief Examiner Lawrence. His return will undoubtedly cause a prompt disposal of your case, and we hope you will soon receive your Letters Patent.

E. M. K., of O.—The device you propose as a substitute for the crank is the oldest contrivance known to us for the purpose, and has been re-invented times almost without number. It is wholly useless for all practical purposes, and can no more compete with the simple crank in efficiency than the feeblest star can outshine the sun.

W. S., of N. Y.—The area of a circle is the amount of surface in square inches, feet, or the like, which it covers, the square of the diameter is the area of a square which would just enclose the said circle, and the cube is the solid contents of a box which would contain a sphere of that diameter. Study any of the common books on mathematics. The Patent Office Report for 1856 will probably be out in September.

L. H. M., of Ind.—What have you invented? Give us some point to aim an answer at.

W. S. G., of O.—We have never known of a wheel precisely like yours; still there is no particular feature of novelty about it. Weighted buckets suspended as you describe are old, and so are the corrugated and V shaped buckets, but we have never seen the two features combined. It may be a matter of some difficulty to obtain a patent for you; but if it can be shown that any special advantage results from the combination of these particular features independent of the merits of the two features separately considered, you are in our opinion entitled to a patent. If there is any chance at all for a patent, we can get it for you.

D. W. H., of Ind.—We have read your lengthy communication in which you describe plans for navigating canals by steam, and for parallel railways with stationary steam power. It is our opinion that neither of these proposed schemes will ever be adopted, for we consider them impracticable, and should advise you to confine your researches to simple details. A complete revolution in the present modes of canal and railway construction and operation cannot meet with favor, as you will see upon more mature reflection.

Money received at the Scientific American Office on account of Patent Office business for the week ending Saturday, Aug. 1, 1857:—

B. F. S., of Vt., \$30; N. A. F., of R. I., \$55; J. L., of Wis., \$25; R. P., of Mich., \$35; D. F., of N. Y., \$31; C. H. E., of Wis., \$25; J. C., of N. Y., \$15; J. L. H., of N. H., \$10; J. F. & E. W., of N. Y., \$25; F. B. H., of N. Y., \$25; J. E., of Ohio, \$30; L. S., of Miss., \$30; E. M., of

Conn., \$30; N. N., of Ill., \$25; B. & R., of N. Y., \$35; A. H., of Conn., \$30; J. M. C., of N. Y., \$30; R. C., of —, \$15; J. G., of N. H., \$15; C. M. S., of Ind., \$30; L. F. H., of N. J., \$30; W. F., of N. Y., \$55; G. G., of Ill., \$30; S. P. M., of Ohio, \$30; N. H., of Conn., \$30; B. B., of Conn., \$15; P. S., of N. Y., \$40; N. G. A., of Ill., \$33; S. G., Jr., of N. Y., \$250; C. P. C., of Brazil, \$300; S. J. B., of N. Y., \$250.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Aug. 1, 1857:— J. E., of Ohio; M. B. Jr., of Mass.; D. T., of N. Y.; S. L. H., of N. H.; C. H. E., of Wis.; R. P., of Mich.; J. L., of Wis.; N. H., of Conn.; P. S., of N. Y.; C. M. L., of N. H.; J. C., of N. Y.; N. N., of Ill.; B. & E. of N. Y.; S. L., of N. Y.; C. P. C., of Brazil; E. A., of Mass.; R. E., of Me.; C. C., of Va.; C. A. R., of Miss.

BACK NUMBERS OF THE PRESENT VOLUME.—Almost every mail brings letters of inquiry from our patrons for certain numbers of the SCIENTIFIC AMERICAN, which we are unable to supply. To save subscribers the trouble of writing for such numbers as we have not got, we append a list of the numbers which are entirely exhausted in Vol. 12:—1, 2, 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 27, 30, 31, 35, 33, 39. Those numbers that are not specified above we can supply, and shall be happy to do so to those who have missed them.

Important e INFALLIBLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was prepaid has expired, and the publishers will not deviate from that standing rule in any instance.

PATENT LAWS AND GUIDE TO INVENTORS.—This pamphlet contains not only the laws but all information touching the rules and regulations of the Patent Office. Price 12 1/2 cents per copy. A Circular, giving instructions to inventors in regard to the size and proper construction of their models with other useful information to an applicant for a patent, is furnished gratis.

INVENTORS SENDING MODELS to our address should always enclose the express receipt, showing that the transit expenses have been prepaid. By observing this rule we are able, in a great majority of cases, to prevent the collection of double charges. Express companies, either through carelessness or design, often neglect to mark their paid packages, and thus, without the receipt to confront them, they mulct their customers at each end of the route. Look out for them.

GIVE INTELLIGIBLE DIRECTIONS.—We often receive letters with money enclosed, requesting the paper sent for the amount of the enclosure but no name of State given, and often with the name of the postoffice also omitted. Persons should be careful to write their names plainly when they address publishers, and to name the post office at which they wish to receive their paper, and the State in which the postoffice is located.

Subscribers to the SCIENTIFIC AMERICAN who fail to get their papers regularly will oblige the publishers by stating their complaints in writing. Those who may have missed certain numbers can usually have them supplied by addressing a note to the office of publication.

FOREIGN SUBSCRIBERS.—Our Canada and Nova Scotia patrons are solicited to compete with our citizens for the valuable prizes offered on the next volume. [It is important that all who reside out of the States should remember to send 25 cents additional to the published rates for each yearly subscriber—that amount we are obliged to pre-pay on postage.]

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within fourteen years can obtain a copy by addressing a letter to this office stating the name of the patentee, and date of patent when known, and enclosing \$1 as fee for copying.

Terms of Advertising. Twenty-five cents a line each insertion. We respectfully request that our patrons will make their advertisements as short as possible. Engravings cannot be admitted into the advertising columns. All advertisements must be paid for before inserting.

AMERICAN AND FOREIGN PATENT SOLICITORS.—Messrs. MUNN & CO., Proprietors of the SCIENTIFIC AMERICAN, continue to procure patents for inventors in the United States and all foreign countries on the most liberal terms. Their experience of twelve years' standing, and their facilities are unequalled by any other agency in the world. Consultation may be had with the firm between nine and four o'clock daily, at their principal office, 128 Fulton st., New York. Our branch offices are corner of F and Seventh sts., Washington, D. C.; Nos. 55 Chancery Lane, London, E.C.; and 3 Rue de Valenciennes, Brussels. Circulars of information concerning the proper course to be pursued in obtaining patents through our Agency, the requirements of the Patent Office, etc., may be had gratis upon application to the principal or either of the branch offices. Communications and remittances should be addressed to MUNN & CO., No. 128 Fulton st., New York.

TWENTY-NINTH ANNUAL FAIR of the American Institute at the Crystal Palace in the city of New York. The Managers announce that the Palace will be opened for the reception of goods from Monday, the 7th, until Tuesday, the 15th of September, 1857.—Heavy goods and articles from a distance will be received and stored in the Palace on and after the 1st of July. No article entered after the 15th of September can compete for the premiums. Gold, silver and bronze medals, silver cups and diplomas, will be awarded on the report of competent and impartial judges. Ample steam power will be provided to put in operation machinery of every description. Circulars containing full particulars can be had by applying at the office of the Institute, No. 351 Broadway. Communications in relation to the 29th Annual Fair, addressing W. M. B. LEONARD, Corresponding Secretary, will meet with immediate attention. CHAS. A. WHITNEY, Chairman. JOHN W. CHAMBERS, Secretary. 48 2

WATER WHEELS.—VANDEWATER'S PATENT.—Patented July 17, 1835. The following letter was received by a gentleman who had written to parties using my wheel, for information in regard to its merits, etc. Louden, Pa., March 10, 1857. JOHN HERTLYER, Esq.—Dear Sir: Yours of 4th inst. is now before us. We can but answer your inquiries by sending you Vandewater's card, and can say to you that his wheel will do all he promises therein. We are using three under six foot head, taking 135 inches of water, giving entire satisfaction. We have three more under eleven foot head, which are doing their work well, and would not exchange them for the Wertz, or any other wheel now in use. With these happy remarks we remain, Yours, most truly, H. EASTON. (Signed) JOHN HERTLYER, Miller. To Mr. John Hertyer, Springfield, Ohio. State and county rights for the above mentioned wheels for sale by the patentee. Also wheels of any size put up at the shortest notice, and warranted to give good satisfaction. Address, HENRY VANDEWATER, Albany, N. Y. 1\*

INCORUSTATION IN STEAM BOILERS.—A late patent for removing and preventing incrustation in steam boilers. It has been thoroughly tested, and in every instance has given full satisfaction, by removing all old scale, and preventing the formation of new, keeping the boilers entirely free from incrustation without injury to the iron. Satisfactory proof of its good effects will be given to any wishing to purchase. For sale in individual or state rights. Address Messrs. SPENNER, ARMAN & SPENCER, Lancaster, Pa., sole agents for the United States. 45 4\*

PEARSON CROSBY'S PATENT RE-SAWING MACHINES.—The Crosby patent re-sawing lumber, having been re-issued April 23, 1857, and having purchased the right to the same for the State of New York and Northern Pennsylvania, the subscriber is prepared to sell rights to the machines in the greater portion of the above named territory, and also to furnish the public with these machines. Having re-built my machine manufactory—which was destroyed by fire on the 9th of Feb. last—I continue to manufacture and have on hand for sale, Woodward's Patent Planing Machines, from \$60 to \$1,500, and of a quality unequalled by any other manufacturer. Also the separate parts of the machine, namely, planing knives, side tool, side cutter heads, cylinders, &c., as well as the above named Crosby re-sawing Machines. JOHN GIBSON, Planing Mills, Albany, N. Y. 45 13\*

OHIO MECHANICS' INSTITUTE, Cincinnati.—Fifteenth exhibition of Arts and Manufactures. We desire to call the attention of Manufacturers, Mechanics, Artists, Inventors and others to the above Exhibition, which will be opened in Cincinnati on Thursday, Sept. 10th, and continue daily until the 30th, in a commodious fireproof building, which has been erected for the purpose. It is desirable that those intending to exhibit articles should give early notice to J. B. HEICHL, the Clerk of the Institute, who will promptly give any information that may be desired. By order of the Committee. C. F. WILSTACH, Chairman of the Committee. 45 2

WANTED.—A second-hand Locomotive Steam Boiler, of about thirty horse power, capable of working at 75 lbs. pressure. Address, stating dimensions and price, D. POWERS & SONS, Lansingburgh, N. Y. 45 3\*

PECK'S PATENT DROP PRESS.—The best machine in use for stamping jewelry, ornaments, tin ware, swaging iron, &c. A supply of all sizes on hand and made to order by the patentee, MILO PECK, New Haven, Conn. State rights for sale. 45 8\*

IRON AND BRASS FOUNDERS.—Three patentable inventions for sale. One a mold from which a number of clean metal castings can be taken. Address THOMAS HODGSON, Beach Place, Brooklyn, N. Y. 45 3\*

SECOND-HAND Steam Engine and Boiler for sale.—One 8 horse Upright Steam Engine, Boiler 30 inches diameter, 25 feet long, nearly new, and in good running order. For particulars address L. B. MATHER, West Norwalk, Fairfield co., Conn. 45 3\*

SOMETHING USEFUL for Machinists and operative of machinery.—Simmons' Decimal Chart for finding the size of wheels and pulleys for any required number of revolutions per minute—a great saving of time and lengthy calculations—sent free for \$1. D. G. SIMMONS, 255 West 27th st., New York. 45 1\*

THE SECRET of preserving the teeth and keeping them white as ivory, without the use of a brush, will be sent to ladies and gentlemen sending me one dollar by mail, on receipt of which I will return you a recipe for a cheap dissolving powder consisting of one article, which can be obtained at any apothecary, and by its application to your teeth at a certain time cleans them, without a brush or water. When once known, if you value your teeth as a blessing, you would not part with the information for any consideration. Address S. BALDWIN, Box 13, Laconia P. O., N. H. 1\*

\$3000 ANY PERSON having this amount can purchase the right for the United States of one of the best inventions of the age. A. C. FUNSTON, Frankford road and Master, Philadelphia. 47 2\*

FISHERMEN.—If you wish to catch any kind of fish as fast as you can pull them out, get Gardner's secret Art for Catching Fish, sent for \$1. N. R. GARDNER, Peace Dale, R. I. 47 4\*

NEW INVENTION.—Simple and patentable Reaping Machine for sale. For particulars address W. L. MITCHELL, Oneoc, Ill. 47 2\*

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WOODWORTH PLANING MACHINES of superior style and workman-hip, of various sizes, and the latest improvements. Also Steam Engines and Boilers, Sash and Blind Machinery, Lathes, Planers, Drills, Belting, and all kinds of Machinists' Tools on hand, and for sale at the Machine Depot, 163 Greenwich st., New York. A. L. ACKERMAN. 45 8

CRYSTAL PALACE.—This splendid edifice is now under the auspices of the American Institute. Samples of the productions of our country in Agriculture, Manufactures, and the Arts, will be received for public inspection. All information relative thereto will be given at the Palace by addressing W. M. B. LEONARD, Corresponding Secretary and Agent. 45 1

A WALLET safe against pickpockets or loss sent free for \$1. DICKINSON & BATE, Hudson, Mich. 47 4\*

STEAM ENGINES FOR SALE.—One of 8, one of 12, and one of 15 horse-power. H. A. CRANE, cor. 29th st. and 11th ave. 44 6\*

E. G. CUSHING'S Unequalled Straw and Stalk Cutter.—For finished work, or the right of territory, address the inventor, Dryden, Tompkins county, N. Y. 44 10\*

L. B. GOODWIN'S celebrated Patent Central Vent Water Wheel, for wheel or the right of territory, address W. L. WRIGHT, Dryden, N. Y., or E. C. RAMHALL, 190 Fulton, N. Y. 44 10\*

WANTED.—300 Active Young Men, at a salary of \$100 per month. A capital of only \$5 r. required. Full particulars given to all who incl. see a stamp and address N. R. GARDNER, Peace Dale, R. I. 44 5

CAST STEEL WIRE DRAWING at the Union Works, Paterson, N. J. Orders solicited and carefully filled by CHAMBERLIN & CO. 43 13\*

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INGERSOLL'S IMPROVED HAY PRESS.—The best portable Hand Power Press in use for the purposes of Baling Hay, Straw, Broom Corn, Husks, Hair, Hides, Moss, Hemp, Bags, Wool, Cotton, &c. Prices from \$50 to \$300. Also an improved press for ornamental composition work. Price \$50 and \$65. Also Ingersoll's Patent Tree Saw, for sawing down trees. This is a perfectly portable machine, and has been thoroughly tested during the past winter. Price \$75. All orders filled promptly. Also State and County rights for sale. Circulars containing full information sent on application to the FARMER'S & MECHANIC'S MANUFACTURING CO., Green Point, Kings co., L. I. 44 4\*

WOODWORTH'S PATENT PLANING MACHINES of every kind and all prices. A large assortment on hand, and I am prepared to construct any machine to order from ten days to two weeks, and guarantee each machine to be perfect in its construction, and give purchasers entire satisfaction. The patent has expired, and will not be renewed. I make this business exclusive, manufacturing nothing but the Woodward's Machines, and for that reason can make a better article for less money; and with my fifteen years' experience I fully guarantee each machine to come up to what I am willing to recommend, that is, that each machine shall be more than equal to any other manufactured for the same price. JOHN H. LESTER, 5 Pearl st., Brooklyn, N. Y., three blocks above Fulton Ferry. 35 1\*

STEAM PUMPS, Boiler Feed Pumps, Stop Valves, Oil Cups, Cocks, Steam and Water Gages, sold by JAMES O. MORSE & CO., No. 79 John street, New York. 41 13

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MACHINE.—The BELTING, Steam Packing, Engine Hose.—The superiority of these articles manufactured of vulcanized rubber is established. Every belt will be warranted superior to leather, at one-third less price. The Steam Packing is made in every variety, and warranted to stand 300 degs. of heat. The hose never needs oiling, and is warranted to stand any required pressure; together with all varieties of rubber adapted to mechanical purposes. Directions, prices, &c., can be obtained by mail or otherwise, at our warehouse NEW YORK BELTING AND PACKING COMPANY, John H. Cheever, Treasurer, No. 6 Dey street, N. Y. 40 1\*

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STEAM ENGINE, Steam Boilers, Steam Pumps, Saw and Grist Mills, Water Mills, Rice Mills, Quartz Mills for gold quartz, Sugar Mills, Water Wheels, Shuffling and pulleys. The largest assortment of the above in the country, kept constantly on hand by W. M. BURTON, 102 Front st., Brooklyn, N. Y. 46 1\*

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WOODWORTH PLANERS, STEAM ENGINES, &c.—Twenty-seven years' experience enables me to furnish Woodward Planers for surfacing one or both sides, planing and matching, rabbeting, leading, or for moldings or clapboards, in any variety of beautiful construction and great power. Ample evidence of the superiority of my machines will be furnished from parties that have other machines in the same mill. Every machine will be accompanied, if desired, with a written warranty. As some parties have been supplied with machines of another make when they supposed they were getting mine, I would advise that purchasers should buy none unless my name is on in full. Matters of steam engines, machinists' tools, cotton and woolen, sash, blind and door machinery, leather larding, &c., furnished at the manufactory at Matteawan, N. Y., or at 62 Courtland street, N. Y. S. B. SCHENCK, Agent. 39 1\*

THE BEST PLANING MACHINE IN THE World.—Patented Nov. 21, 1854 and Nov. 13, 1855. These patents were obtained for improvements upon the celebrated Woodworth Planing Machine. They received a Gold Medal at the last exhibition of the Massachusetts Charitable Mechanics' Association. Machines of all kinds and sizes constantly on hand, which are warranted to give entire satisfaction, and to be superior to any now in use. For further information address the patentee, JAMES A. WOODBURY, No. 1 Scollay's Building, Court st., Boston, Mass. 42 13\*

OIL! OIL! OIL!—For railroads, steamers, and for machinery and burning.—Pease's Improved Machinery and Burning Oil will save fifty per cent, and will not gum. This oil possesses qualities vitally 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 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, pronounced it "superior to any other that have ever used for machinery." For sale only by the inventor and manufacturer, F. S. PEASE, 61 Main st., Buffalo, N. Y. N. B.—Reliable orders filled for any part of the United States and Europe. 40 1\*

NEW HAVEN MFG. CO.—Machinists' Tools, Iron Planers, Engine and Hand Lathes, Drills, Bolt Cutters, Gear Cutters, Chucks, &c., on hand and finishing. These Tools are of superior quality, and are for sale low for cash or approved paper. For cuts giving full description and prices, address, "New Haven Manufacturing Co., New Haven, Conn. 40 1\*

HARRISON'S 30 INCH GRAIN MILLS.—Largest Patent.—A supply constantly on hand. Price \$200. Address New Haven Manufacturing Co., New Haven, Conn. 40 1\*

THE TEN SOUTHERN STATES.—The right to manufacture and sell a valuable article, (patent issued June 30, 1857,) in the above named States, is now offered for sale at 395 Broadway, corner Walker street, New York. R. S. JENNINGS, Patentee. 45 4\*

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SCREW BOLTS with Square, Carriage or Counter-sunk heads, bolt ends, square head wood screws, set screws, machine screws, ratchet & breast drills, standard-steel and shrinkage rules for sale, by CHAS. MERRILL & SONS, 556 Grand st., New York. 46 5\*

MECHANICS AND MANUFACTURERS.—Tennessee Exhibition. The Third Annual Fair of the Mechanics' Institute of Tennessee will be held at Nashville in October next. Exhibitors from all the States will be permitted to enter articles and compete for the first premiums. For particulars address W. M. STOKES, President, or H. K. WALKER, Secretary. 45 5