

TO CORRESPONDENTS.

N. C., of N. Y.—We shall write you in a few days in regard to the mill.

J. P. N., of N. Y.—We have been informed about the removal of the paddles of the Santa Claus, but are told that the boat moved faster and more steady with the curved blades. Now there can be no doubt but the defect was in the mechanical construction, not the principle. We are no advocates of them, however. In answer to your question, we must say that A, as you observe, will move towards C, but then it is just the same as the radial rudder, it would do the same. We still cannot see the benefit of a rudder made with double radius blades.

W. M., of—The boiler iron you speak of means its strength when cold. It is understood that its strength diminishes as it increases in temperature. This was presented in the reports made to Congress on the subject. The gas and the atmosphere, when united and ignited, produce an effect like gunpowder. You are perfectly right about the super-heated metal being so easily torn to pieces. The ratio of decrease in strength according to increase of heat in the metal, has been ascertained by experiment.

R. J. S., of Va.—We have never seen the same plan of wheels proposed for inclines, although cogs on the sides of the wheels have been used; but we believe that it is best to make very little provision for ascending steep inclines; the cheapest way in the end is to dig down the incline to as near a level as possible.

W. E., of Cincinnati.—We have just received the model of your invention and shall proceed with the application in a short time.

G. W. B., of N. Y.—Yours of the 6th May is received, and the advertisement will appear as soon as the patent is issued.

B. P. & P., of London.—Yours, per Franklin, of the 6th inst. is received. Shall remit the bill of exchange per first steamer.

F. G., of Boston.—We shall attend to your call without delay. The sketch will be furnished in time.

W. M., of Wisconsin.—We will answer your inquiry by letter as soon as we can attend to it.

O. P. S., of Ohio.—The amount would be \$8 for having the engravings prepared. As soon as the patent is issued you had better transmit the Letters Patent to us for that purpose. Your own experience speaks favorably of such a medium as the Scientific American through which to publish improvements.

F. E. H., of S. C.—We are in correspondence with a practical tanner, and hope to advise you in full in a few days.

W. & P., of N. Y.—Your engravings will appear in our next number.

S. R., of N. Y.—There is no prospect of using the Electro-Magnetic engine so as to compete with the steam engine. We have some very strong facts to back up this opinion.

W. C., of—We have been trying to get some information that would be profitable about the 'diapason scale,' but have not yet been able. We may soon.

J. C. V. D., of N. Y.—We will answer you about the raft and log soon. The question is not a complicated one by any means.

A. R. H., of N. J.—The malleable iron, we believe, is made by submitting the common cast iron to the heat of an air furnace in a melted state for some days, and skimming the impurities as they rise to the surface.

T. McG., of Mass.—All machinery is just means to communicate or transmit power from one point to another. A train of wheels gives out power in a curved line, the section of which is of the same form as a section of the cogs on one wheel. Young mechanics should pay great attention to the lines of direction generated by the motion of wheels, &c. Your ideas about employing air as a motive power will never answer, for this very reason, you wish to use compressed air, and it requires some other power to compress it, there can therefore be nothing but a positive loss sustained.

P. B. C., of Del.—Enough has been said about the Paine-Light to answer for some time. It will end as it began, in assertion.

R. J., of Geo.—The sulphate of iron (common copperas) is a very excellent disinfectant. Dissolve some of it in a pailful of water and throw it among the matters to be disinfected. The plaster of Paris is good, so is ground charcoal.

A. G., of N. Y.—There is no resemblance between your invention and the one to which you have alluded.

S. R., of Md.—You may depend upon it, that you can secure a patent, for your invention is both new and useful. We will do the business at a very reasonable rate. We never wish to overcharge. We profess to do business as it should be done. Our experience enables us to say, we know how it should be done.

T. A. W., of Ill.—The best thing you can do for your own benefit is to get an engraving of your invention published in the Scientific American; it will make money to you.

H. P., of New York.—Your penmanship is so bad that we cannot read your letter. We do not mean bad writing, but careless penmanship, for your handwriting shows practice. We also like short articles.

B. M. H., of Ind.—The dollar forwarded by you has been placed to your account on subscription. Volume 5 we can send in sheets for \$2. Those two numbers which you ordered we could not furnish unless you took a complete file.

C. M. D., of Ala.—We have not yet been able to obtain the exact information desired about the water rams.

S. D. H., of Va.—You will find, upon examination of the Scientific American, that we do not undertake the sale of patent rights; this branch of business we have never undertaken, perhaps for the want of proper time to attend to it. You had better send us your Letters Patent and we will publish an engraving of it, which will do much towards bringing it into notice. Your invention for invalids appears to be good, and worthy of a patent. We should think some physician in your section would take hold of it. The incline plane may be new, we have no means of deciding from the description given. The Railroad Gate is probably similar to Coffin's Patent, in 1849. You are advised to do nothing with it, it will not pay.

G. & Co., of Ala.—We wrote you a few days since through Messrs. Jno. G. Winter, Son & Co.; please let us hear from you in reply as soon as convenient, and we shall feel much obliged.

E. E., of Va.—Messrs. Jacob Little & Co. attended to your order promptly and satisfactorily.

J. C. L., of W. T., of N. Y.—We shall be happy to receive the articles from your pen: you are from the right school. You know what we like—short and comprehensive articles, and, if possible, everyone's own mirror. We have been very much and unfairly annoyed, lately, from the quarter to which you refer, and we sincerely wish that a change may shortly take place there. You may judge from this how we have oftentimes, for the interest of our clients, to restrain our feelings.

R. J., of Pa.—There is no earthly way of computing the power of a machine when the question of velocity is left out of sight. The idea of a horse-power means a unit of comparison, and that is weight and velocity: a horse drawing 200 lbs. at the rate of 220 feet per minute over a pulley.

S. K. B., of Mass.—We are not positive about the experiment showing the rotation of the earth. We will publish an engraving of it next week.

H. R., of Mass.—We could not advise you to make an application for a patent on the Bench Hook, as there is not sufficient novelty to warrant it.

E. A. N., of Ind.—Such a contrivance as you suggest was patented in 1849, by Richard Coffin, of Haverhill, Mass.; we should consider it essentially like yours: the gate opens on the approach of the cars, and closes immediately after they pass through. We doubt the practicability of such a contrivance.

S. C., of N. Y.—C. M. Saxton, No. 152 Fulton st., published Gillespie's work on Plank Roads: price, we believe, \$1.50; it is the best work up to this time.

N. G., of N. Y.—We do not see any advantage that could be gained by your arrangement of the levers on the locomotive. It would be of no advantage, we believe, but it is new.

B. G., of Mass.—The sketch of your contrivance for punching leather has been examined and believed not to possess novelty sufficient to warrant an application for letters patent; punching shafts, having spiral springs for throwing them back, have long been in use in different machines. A model of a machine now in this office, for cutting the ears of hoops, has the same essential characteristics as are exhibited in yours; guiderats are common, and any particular application could not be patented. We admit the compactness and utility of the arrangement, but believe it could not be patented.

E. S. H., of N. C.—We have forwarded your letter to one of the parties interested in the machine, who will no doubt respond to your inquiries.

W. H. G., of O.—There is no work published that specially treats of city and street architecture. We should have sent you a copy of Arnott's Architecture, but it could not be obtained in numbers, and the express fees upon a bound copy would cost you more than the book is worth.

Money received on account of Patent Office business since May 13:

W. J. McA., of Ga., \$20; B. & H., of N. Y., \$30; T. B., of N. Y., \$70; G. L. H., of Conn., \$20; D. & R. P., of N. Y., \$20; R. W. P., of Mass., \$30; R. M. W., of Va., \$60; E. D., of Ga., \$36; A. S. H., of N. Y., \$25; C. S. G., of Va., \$10; S. W. K., of Pa., \$58.

Specifications and drawings of inventions belonging to parties with the following initials, have been forwarded to the Patent Office since May 13:

J. B., of Mich.; T. B., of N. Y.; A. S. H., of N. Y.; D. & R. P., of N. Y.; D. W. E., of N. Y.

Back Numbers and Volumes.

In reply to many interrogatories as to what back numbers and volumes of the Scientific American can be furnished, we make the following statement: Of Volumes 1, 2, and 3—none. Of Volume 4, about 20 Nos., price 50 cts. Of Volume 5, all, price, in sheets, \$2; bound, \$2.75. Of Volume 6, all back Nos., at subscription price.

New Edition of the Patent Laws.

We have just issued another edition of the American Patent Laws, which was delayed until after the adjournment of the last Congress, on account of an expected modification in them. The pamphlet contains not only the laws but all information touching the rules and regulations of the Patent Office. We shall continue to furnish them for 12 1-2 cts. per copy.

Patent Claims.

Persons desiring the claims 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 enclosing one dollar as fee for copying.

WILLIAM W. HUBBELL—Attorney and Counselor at Law, and Solicitor in Equity, Philadelphia, Penn.

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American and Foreign Patent Agency.

IMPORTANT TO INVENTORS.—The undersigned having for several years been extensively engaged in procuring Letters Patent for new mechanical and chemical inventions, offer their services to inventors upon most reasonable terms. All business entrusted to their charge is strictly confidential. Private consultations are held with inventors at their office from 9 A. M., until 4 P. M. Inventors, however, need not incur the expense of attending in person, as the preliminaries can all be arranged by letter. Models can be sent with safety by express or any other convenient medium. They should not be over 1 foot square in size, if possible. Having Agents located in the chief cities of Europe, our facilities for obtaining Foreign Patents are unequalled. This branch of our business receives the special attention of one of the members of the firm, who is prepared to advise with inventors and manufacturers at all times, relating to Foreign Patents. In the item of changes alone, parties having business to transact abroad, will find it for their interest to consult with us, in preference to any other concern.
 MUNN & CO.,
 128 Fulton street, New York.

LAW'S PLANER FOR PLANK, BOARDS, &c., is now attracting much attention on account of its effectiveness, the excellence of its work, its simplicity, and consequent economy. Machines are now in operation in Brooklyn, New York City, and at various points South and West. Rights of machines for sale by H. LAW, 23 Park Row. 35tf

WANTED.—A gentleman residing in Alabama is desirous of obtaining the services of a man of sound judgment and good morals, who has no wife—one who understands thoroughly the business of manufacturing chairs. No one but a man who can give the best of references as to qualifications need apply. Address (post-paid in all cases) to MUNN & CO., this office. 35 4

MECHANICS' INSTITUTE FAIR.—The attention of Mechanics, inventors, and artisans is especially called to the Polytechnic Exhibition, which will open at the rooms, cor. Bowery and Division st., on the 15th of May. Those who wish to exhibit models, machinery, &c., of mechanical skill, and those who would like to carry on, permanently, any mechanical occupation that would be in any way curious or attractive to visitors, are requested to call on the Actuary. Steam power will be provided. Well-lighted, warmed, and airy rooms can be had on liberal terms. As this Exhibition is permanent, an excellent opportunity is offered to skillful mechanics to bring themselves into notice. Articles may be sent in immediately and will be taken care of and insured. Z. PRATT, Pres.; T. C. DODD, Actuary. 34tf

MOUNT PROSPECT INSTITUTE, West Bloomfield, N. J. (6 miles from Newark).—The object of this Institution is to prepare lads for business in every department of active life; mathematics and the sciences receive particular attention; surveying and civil engineering is carefully attended to; students make frequent surveys, and prepare draughts and maps of their surveys, and draw plans of bridges, locks of canals, &c. Instruction is also given in linear, perspective, and mechanical drawing. Terms from \$160 to \$200 per year. The sessions commence on the first day of May and November.

WARREN HOLT, Principal and Proprietor. References—Geo. Gifford, Esq., 17 Wall st.; S. R. Parkhurst, Esq., 70 Broad st., N. Y.; Prof. James J. Mapes, Newark, N. J. 34 4

LEONARD'S MACHINERY DEPOT, 109 Pearl st. 60 Beaver, N. Y.—The subscriber is constantly receiving, and offers for sale, a great variety of articles connected with the mechanical and manufacturing interest, viz, Machinists' Tools—engines and hand lathes, iron planing and vertical drilling machines, cutting engines, slotting machines, bolt cutters, slide rests, universal chucks, &c. Carpenters' Tools—mortising and tenoning machines, woodplaning machines, &c. Steam Engines and Boilers, from 5 to 100 horse power. Mill Gearing, wrought iron shafting, brass and iron castings in side to order. Cotton and Woolen Machinery furnished from the best makers. Cotton Gins, hand and power, and power presses. Leather Banding of all widths, made in a superlative manner, from the best oak tanned leather. Manufacturers' Findings of every description—bobbins, reeds, shuttles, temples, pickers, card clothing, roller cloth, potato and wheat starch, oils, &c.
 P. A. LEONARD. 33tf

PATENT CAR AXLE LATHE.—I am now manufacturing and have for sale the above lathes: they will turn and finish six sets per day, weight 5,000 lbs., price \$600. I have also for sale my Patent Engine Screw Lathe, for turning and chucking tapers, cutting screws, and all kinds of common job work; weight 1,900 lbs., price \$225, if the above lathes do not give good satisfaction, the money will be refunded on the return of the lathe, if within six months.
 J. D. WHITE,
 32 13* Hartford, Conn.

IRON FOUNDERS MATERIALS—viz, fine ground and Bolted Black Lead, Soapstone, Lehigh, Charcoal, and Sea Coal Firing Dusts. Iron and brass moulders' Sand, Fire Clay, Fire Sand, and Kaolin in barrels; also best Scotch Fire Bricks, plain, cupola, and side arch shaped, for sale by G. O. ROBERTSON, Liberty Place, (between 57 and 59 Liberty st., N. Y. 36 6*

WOODWORTH'S PATENT PLANING MACHINES: 1851 TO 1856.—Ninety-nine hundredths of all the planed lumber used in our large cities and towns continues to be dressed with Woodworth's machines. Persons holding licenses from the subscriber are protected by him against infringement on their rights. For rights in the unoccupied counties and towns of New York and Northern Pennsylvania, apply to JOHN GIBSON, Planing Mills, Albany, N. Y. 23 700w*

WILSON'S PATENT SEWING MACHINE.—This unrivalled and universally approved machine can be seen in operation at No. 195 and 197 Broadway, Franklin House Buildings, third floor, room 21. The public are invited to examine its operation, where they will find the owners prepared to negotiate for the disposal of rights and machines. Apply to WM. S. LOVELL, agent. 35 3*

SCRANTON & PARSHLEY, New Haven, Conn., will have finished by the 10th of May, 12 Slide Lathes, with 8, 10, and 12 feet beds; these lathes swing 21 in., have back and screw gear, have over-head reversing pulleys, all hung in a cast-iron frame, with drill, chuck, centre, and follow rest. S. & P. will also have 12 upright drill presses ready to ship at the same time; they have also constantly on hand 5 and 9 feet power planers, the same as heretofore advertised in this paper. Hand Lathes and slide lathes constantly on hand. Cuts, with full descriptions and prices, of the above tools can be had by addressing as above (post-paid.) 33tf

A CARD.—The undersigned beg leave to draw the attention of architects, engineers, machinists, opticians, watchmakers, jewellers, and manufacturers of all kinds of instruments, to his new and extensive assortment of fine English (Stubbs) and Swiss Files and Tools, also his imported and own manufactured Mathematical Drawing Instruments of Swiss and English style, which he offers at very reasonable prices. Orders for any kind of instruments will be promptly executed by F. A. SIBENMANN, Importer of Watchmakers' and Jewellers' Files and Tools, and manufacturer of Mathematical Instruments, 154 Fulton st. 29 3m*

DICK'S GREAT POWER PRESS.—The public are hereby informed that the Mattewan Company, having entered into an arrangement with the Patentees for the manufacture of the so-called Dick's Anti-Friction Press, are now prepared to execute orders for the following, to which this power is applicable, viz.—Boiler Punches, Boiler Plate Shears, Saw Gummers, Rail Straighteners, Copying and Sealing Presses, Book and Paper Presses, Embossing Presses, Presses for Baling Cotton and Woolen Goods—Cotton, Hay, Tobacco, and Cider Presses; Flaxseed, Lard, and Sperm Oil Presses; Stump Extractors, &c. &c. The convenience and celerity with which this machine can be operated, is such that on an average, not more than one-fourth the time will be required to do the same work with the same force required by any other machine.
 WILLIAM B. LEONARD, Agent,
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CURLEY'S IMPROVED SAW GUMMERS.—For gumming out and sharpening the teeth of saws can be had on application to G. A. KIRTLAND, 205 South st., N. Y. 10tf

TO PAINTERS AND OTHERS.—American Anatomic Drier, Electro Chemical graining colors, Electro Negative gold size, and Chemical Oil Stove Polish. The Drier, improves in quality, by age—is adapted to all kinds of paints, and also to Printers' inks and colors. The above articles are compounded upon known chemical laws, and are submitted to the public without further comment. Manufactured and sold wholesale and retail at 114 John st., New York, and Flushing, L. I., N. Y., by QUARTERMAN & SON, Painters and Chemists 35tf

MACHINERY.—S. C. HILLS, No. 12 Platt Street, N. Y., dealer in Steam Engines, Boilers, Iron Planers, Lathes, Universal Chucks, Drills, Kases, Von Schmidt's, and other Pumps, Johnson's Shingle machines, Woodworth's, Daniel's and Law's Planing machines, Dick's Presses, Punches, and Shears; Mortice and Tenoning Machines, Bolt-making machinery; Best's patent Cob and Corn Mills; Burr Mill, and Grindstones, Lead and Iron Pipe, &c. Letters to be noticed must be post paid. 26tf

BAILEY'S SELF-CENTERING LATHE, for turning Broom and other handles, swelled work, chair spindles, &c.; warranted to turn out twice the work of any other lathe known—doing in a first rate manner 2000 broom handles and 4000 chair spindles per day, and other work in proportion. Orders, post-paid, may be forwarded to L. A. SPALDING, Lockport, N. Y. 21tf

FOREIGN PATENTS.—PATENTS procured in GREAT BRITAIN and her colonies, also France, Belgium, Holland, &c., &c., with certainty and dispatch through special and responsible agents appointed, by, and connected only with this establishment. Pamphlets containing a synopsis of Foreign Patent laws, and information can be had gratis on application to JOSEPH P. FIRSSON, Civil Engineer, Office 5 Wall street, New York. 24tf

RAILROAD CAR MANUFACTORY.—TRAFFY & FALES, Grove Works, Hartford, Conn. Passage, Freight and all other descriptions of Railroad Cars, as well as Locomotive Tenders, made to order promptly. The above is the largest Car Factory in the Union. In quality of material and in workmanship, beauty and good taste, as well as strength and durability, we are determined our work shall be unsurpassed. JOHN R. TRACY, 16tf. THOMAS J. FALES.

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STEAM ENGINES AND BOILER.—Several Steam Engines, now finishing, from five to fourteen horse-power; also one of 15 and one of 25. Having just enlarged my manufactory, I am now prepared to make all sorts of steam engines, from 2 to 50 horse-power, of the best materials in all their parts. One second-hand engine of 8 horse-power, two cylinders, in good order, for \$250, with new boiler, \$575. Also Galvanized Chain for chain-pumps. AARON KILBORN, No. 4 Howard st., New Haven, Conn. 32 19*