

put to practical use the immense power that flows past our city. Mr. McKay thinks a wharf of this kind would give the greatest strength, with most warehouse capacity, and present the least obstruction to the ebb and flow of the tide.

Mr. A. D. Bishop submitted a plan which may be described as simply a succession of stone pillars, resting on piles, placed in position by means of a floating derrick. The cost of the construction of a pier 100 feet long, over this foundation, is estimated by Mr. Bishop at \$35,000, and the cost of a pier of the same sort (granite), 45 by 400, \$400,000.

Facts for the Ladies.

I purchased my Wheeler & Wilson Sewing Machine in May, 1858, and have used it constantly, ever since, in making all kinds of garments worn in the family, with no repairs of any sort whatever. I have never broken but on needle, and that not until I had used the machine more than seven years and the eleven needles remaining of the original dozen are all in good working order. I cannot see why my machine will not last ten years longer without repairs. MRS. C. A. ROGERS.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per line will be charged.

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4.00 a year. Advertisements 1c. a line.

The entire Right of the best Wrench ever Patented, for sale. For Drawings, address J. F. Ronan, 36 Orchard st., Boston, Mass.

John Dane, Jr., 61 and 63 Hamilton st., Newark, N. J., builds screw, power, screw, and foot presses, lathes, improved jewelers' rolls, watch & jewelers' machinery, new inventions perfected, and any work to order.

Manufacturers of Small Wares, composed of wood, leather, and metal, send address to Novitas, Richmond, Va.

Parties manufacturing Alcohol Paint Burners, address Lock Box 22, Camden, N. J.

Hollingsworth's Patent Fruit, Paint, and Oil Can Soldering apparatus makes better and cheaper cans than any other known method. Address, for circular, Robert J. Hollingsworth & Co., Baltimore, Md.

A new 20-Horse Power Steam Engine, fitted with "Metaline." No oil or other lubricator required. For sale by Franklin E. Bradshaw, 61 Broadway, Room 27, New York.

B.—For the best Oil Cups, or shafting and machinery, address H. Moore, 41 Center st., New York.

The best Faucets are made by H. Moore, 41 Center st. Send there for circulars.

40,000 to 60,000 good tempered clay brick per day, made by "Winn's Portable Steam Brick Machine." Responsible parties furnished machines on trial. Address Wright & Winn, Lock Haven, Pa.

Fitts' "Patent Chronometer Governor Valves," are manufactured by the Union Water Meter Co., Worcester, Mass.

Automatic 10-spindle Drill—5,000 to 20,000 holes per day in casters, etc. Hardware machines a specialty. Ferracute Machine Works, Bridgeton, N. J.

\$15 for the best Saw Gummer out. Address The Tanite Co., Stroudsburg, Pa.

Spools of all kinds, and spiral shade tassel molds made by H. H. Frary, Jonesville, Vt.

Dickinson's Patent Shaped Carbon Points and adjustable holder for dressing emery wheels, grindstones, etc. See Scientific American, July 24th, and Nov. 20, 1869. 61 Nassau st., New York.

Peck's patent drop press. Milo Peck & Co., New Haven, Ct.

Pictures for the Parlor—Prang's latest Chromos, Hart's Seasons. Sold in all Art Stores throughout the world.

Wm. Roberts & Co., Designers and Engravers on Wood, 36 Beekman st., New York, would respectfully announce that they are now prepared to receive orders from Manufacturers, and others, for engraving of machinery, views of stores, factories, trade marks, etc., etc.

Carpenter Planes, the best quality, made by Tucker & Appleton, Boston. Send for list.

Of Washing Machines, there is nothing to be compared with Doty's.—Weekly Tribune, Dec. 15, 1869.

For Sale—The Right for the six New England States of L. Bertsche's self-tasting caster, the best caster ever used. Address L. Bertsche, 8th Ward, Allegheny City, Pa.

Scientific American.—Back Nos., Vols., and Sets for sale. Address Theo. Tusch, City Agent, Sci. Am., 37 Park Row, New York.

A Superintendent wanted in a large wood-working and machine shop, in the State of New York. Address, in own handwriting, stating references, past experience, salary expected, etc. An interest in the business will be offered to the right person, if it is desired. Address "Superintendent," P. O. Box 773, New York city. The Editor of this paper will vouch for the responsible character of the establishment needing the above service.

For foot-power engine lathes address Bradner & Co., Newark, N. J. Machinists and others using Fine Tools, send for illustrated catalogue. Goodnow & Wightman, 23 Cornhill, Boston.

Tempered Steel Spiral Springs for machinists and manufacturers. John Chatillon, 91 and 93 Cliff st., New York.

One 60-Horse Locomotive Boiler, used 5 mos., \$1,200. Machinery from two 500-ton propellers, and two Martin boilers very low. Wm. D. Andrews & Bro., 414 Water st., New York.

Kidder's Pastilles.—A sure relief for Asthma. Price 40 cents by mail. Stowell & Co., Charlestown, Mass.

Pat. paper for buildings, inside & out, C. J. Fay, Camden, N. J.

For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Keuffel & Esser, 71 Nassau st., N. Y., the best place to get 1st-class Drawing Materials, Swiss Instruments, and Rubber Triangles and Curves.

For tinners' tools, presses, etc., apply to Mays & Bliss, Plymouth, st., near Adams st., Brooklyn, N. Y.

Glynn's Anti-Incrustator for Steam Boiler—The only reliable preventative. No foaming, and does not attack metals of boiler. Liberal terms to Agents. C. D. Fredricks, 587 Broadway, New York.

To ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's manufacturing news of the United States. Terms \$4.00 a year.

Cold Rolled—Shafting, piston rods, pump rods, Collins pat. double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa. For mining, wrecking, pumping, drainage, and irrigating machinery, see advertisement of Andrews' Patents in another column. Winans' boiler powder, 11 Wall st., N. Y., removes incrustations without injury or foaming 12 years in use. Beware of Imitations.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; besides, as sometimes happens, we may prefer to address correspondents by mail.

SPECIAL NOTE—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at \$1.00 a line, under the head of "Business and Personal."

All reference to back numbers should be by volume and page.

A marine clock from Baltimore was received at this office some weeks ago. Who sends it, and for what purpose?

W. W. R., of N. J.—The substances which will generate heat, by simply coming in contact, are so numerous that it is hard to select what to recommend you. Sulphuric acid and water when mixed in the right proportions will produce a higher temperature than you mention. So will water and quicklime. Sulphuric acid acting upon chlorate of potash also creates a high degree of heat. But perhaps you mean substances that will by coming in contact, or by slight friction, produce a high degree of heat, without any chemical change. If that is your meaning, we know of no such materials.

O. S. M., of Va.—We agree with you that the method proposed to avoid the slow poisoning of workmen in paint-manufactories, has theory to support it. The trouble would be to get the workmen to submit to the temporary inconveniences the plan entails. It has often been found that attempts to promote the sanitary condition of workmen, that they generally prefer a remote risk to present inconvenience, though the latter be but slight.

C. P. T., of Mo.—We long ago discovered how rash it was to give an opinion as to the cause of a boiler explosion without being able to inspect for ourselves the state of affairs. The *ex parte* statements you send us are not enough on which to base an intelligent opinion. This much, however, we will say: It was not the generation of gas—unless steam be considered as a gas—that burst the boiler.

J. L. C., of Ill.—We should be glad to encourage you in the construction of your magnetic perpetual motion, but we cannot do so conscientiously, neither do we think the subject of such value as to warrant giving space to its discussion in our columns. This decision may seem harsh to you, but we must regard the general interests of our readers as paramount to the personal sympathy we feel in your case.

H. M., of N. Y.—The center of motion in a wagon wheel, so far as the parts of the wheel are related to each other, is in the axle; so far as the parts are related to the surface upon which the wheel rolls, the wheel has no center of motion. Whether we consider the relation of the parts of the wheel to each other, or to the surface upon which it rolls, it has no fixed center.

G. L. V.—Electricity has not only been thought of but actually tried as a motive force for car brakes, and also as a means of simultaneously unlocking mechanism on each car of a train, the mechanism through the power of springs or other means, to apply the brakes. There is nothing new or patentable in your invention, unless it may be some details of construction.

D. R. V., of Va.—Your friend is right. The discovery of the law called Mariotte's law—namely, that the volumes of gases are inversely as the pressures to which they are submitted—has been attributed to the English physicist, Boyle, and this law has therefore been called by some writers, Boyle's law.

A. F. S., of Texas.—The contraction of the spaces between the buckets of turbine wheels, so that the area of section at the point of discharge is less than that where the water is received, would undoubtedly result in loss of power.

D. E. W., of Mass.—The pigment called green verditer is a mixture of carbonate of copper and carbonate of lime. Blue verditer is also a carbonate of copper, or a mixture of the hydrated oxide of copper with hydrate of lime.

Q. D. O.—The cement known and quite commonly sold under the name of marine glue will unite leather, and it resists the action of water. We do not think, however, it will unite belting so as to obviate the necessity of rivets.

E. N. C., of N. H., describes the method of burning marl by the use of wood to manufacture lime. It is very expensive of fuel, and he wishes to learn of a better method. Can any of our correspondents supply this information?

D. R. P., of Fla.—Natural amalgams of mercury with silver are found in Sweden, Hungary, Spain, and other places. Dana describes a mass in the museum at Santiago, in Chili, which weighs 21.75 pounds.

R. L., of Cal.—You cannot submit stearine to a heat sufficient to distil it over without decomposing it. The products will be margaric acid, margarone, and a variety of hydrocarbons.

T. W., of Iowa.—Both the subjects to which you call attention have been recently discussed at length in these columns. We therefore decline to reopen them at present.

A. W., of Tenn.—The standard gallon contains 58372.2 grains of distilled water at 39° F. with the barometer at 30 inches.

J. K., of Mass.—The carbon used in galvanic batteries is that known as gas carbon, and is obtained from gas works.

D. V., of Mo.—We believe the sails of vessels are universally named after the mast, yard, or stay upon which they are stretched.

J. M. M., of La.—What are called Green stones are mixtures of felspar and hornblende, or of felspar and augite.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

MEDICAL COMPOUND.—George C. Furber, Yreka, Cal.—This invention and discovery relates to a new and useful composition for medicinal purposes.

THERMOMETER.—John Kendall, New Lebanon, N. Y.—The object of this invention is to render thermometers more convenient and serviceable in dairies, and for many other uses, and it consists in forming the scale and plate in a single piece, with flanged edges, in combination with a removable band, for protecting the bulb of the thermometer.

PREPARING DENTISTS' GOLD.—Richard S. Williams, New York city.—This invention relates to a new and useful improvement in the mode or process of preparing dentists' gold, for filling decayed teeth, whereby such gold is rendered much more useful than it has hitherto been, and it consists in subjecting the gold, after it has been rolled to the desired thickness, to the action of a solution of aqua regia, whereby the surface is thoroughly cleaned of all foreign particles of matter, and the gold rendered adhesive.

LOOPING HOOK FOR SEWING MACHINES.—M. A. Keables, now temporarily residing at Ontario, Canada.—This invention relates to improvements in looping hooks, and consists in attaching them to the arm of the oscillating shaft, by which they are worked, on a pivot, so that they can vibrate thereon in a vertical plane, to allow the point to be raised by the action of the thread at the moment of the escape of the loop, to facilitate the same, and in providing a spring to restore it, afterward, to the required position, and hold it there.

TRACTION ENGINE.—Thomas F. Hall, Omaha, Nebraska.—This invention relates to a new traction engine, or construction of vehicle, of that class in which an endless belt of traction plates surrounds an inner frame, and travels around the same while propelling the entire apparatus.

STOVES.—C. E. Warring, Poughkeepsie, N. Y.—This invention relates to improvements in stoves, and consists in a detachable coal magazine, or base-burning attachment for heating stoves, adapted for application to stoves of any kind, having an opening at the top.

BALANCE SLIDE VALVE.—Wm. Dillon, Wheeling, W. Va.—This invention relates to improvements in balanced slide valves, and consists in suspending the valve by long adjustable rods, from a diaphragm in the top of a dome, placed upon the steam chest, the same diaphragm being made of flexible substance, and sustaining the same pressure as the valve does.

TOOL FOR DRIVING GLAZIERS' POINTS.—Alfred Woodworth and Edwin W. Warren, Cambridge, N. Y.—This invention relates to improvements in machines or tools for driving glaziers' points, and consists in a hand-tool having a vertical receptacle for the points, and a spring device, arranged to strike the lowest point in the receptacle, and force it out through a slot thread, the said spring driver being provided with a retracting paul, which trips the device and re-engages with it self-actingly.

QUILTING FRAME.—John Angus and John P. Angus, Mindenville, N. Y.—This invention relates to improvements in quilting frames, and consists in a combination of a roller for the lining, a roller for the top, another roller for both the lining and top, and a stretcher bar, all so arranged that the bats may be applied as the lining and top are wound on to the latter roller from the others, after which, both the top and lining, together with the bats are wound back on to one of the other rollers, to be quilted.

CLOTHES DRYER.—A. H. Patch, Hamilton, Mass.—This invention relates to improvements in apparatus for suspending clothes, for drying them, and consists in long bars, for hanging the clothes, suspended from cords, working over pulleys attached to the ceiling of the room, or a horizontal supporting beam, and thence passing to and over pulleys attached to the wall or a post, and down the same, to a convenient position for attaching to pins or hooks for holding the bars in a low position for convenience in hanging the clothes on them, or in a high position for drying, where they will be out of the way.

SEAL LOCKS.—Gustave Ulmann, Ivry-sur-Seine, France.—This invention relates to improvements in seal locks, for mail bags, and other like uses, for guarding against the same being opened without giving evidence of the fact, and it consists of a hollow block of metal, for the reception of the hasp or bolt to be secured, and a spring bolt to be inserted, passing through the hasp, and catching, by its spring, behind shoulders, which prevent it from being drawn back; also, of a plate, perforated, for attachment to one side for securing the seal, the said plate having a bolt or stud through which the locking bolt also passes, and by which it is held, and, also, of a disk and perforating stud, which, when in the locked position, prevents the removal of the locking pin, or bolt, without perforating the seal.

TONGUE HOLDER FOR DENTISTS' USE.—Francis M. Osborn, Port Chester, N. Y.—This invention relates to improvements in tongue holders, such as used by dentists, to prevent the tongue of the patient from interfering with the filling of the teeth, or other operations thereon, and consists in a cone or bell-shaped cup of india-rubber, or other substance, and a deep, wedge-shaped slot in one side, which is mounted on a handle, and adapted for placing on the tongue, forcing it back, and holding it as required. It also consists in the application to the handle of projections, adapted to engage with the front teeth of the lower jaw, and hold the cup against the efforts of the tongue to thrust it out of the mouth.

LOCKING DEVICE FOR TRAPS.—Jasper E. Corning, Rye, N. Y.—This invention relates to improvements in devices for locking the doors of wire and other animal traps, having doors swinging in vertical planes, and consists in the application to rods on the door, which assume vertical, or nearly vertical positions when the door is closed, and to fixed vertical rods, arranged to be parallel, or nearly so, with the said rods on the door, when the latter is closed, of locking rings, which will drop to the bottom and hold the door against swinging open until the rings are raised, which may be done most readily by turning the traps bottom-side up, and allowing them to fall to the top of the trap, where they are retained by the aforesaid rods, attached to the doors after the latter are opened.

PUMP.—Anson Balding, Wheeling, West Va.—This invention has for its object to produce a constant stream of water from a pump cylinder by the operation of a single double-acting hollow piston, which receives water into its chamber alternately through orifices in its upper and lower disks, according as the piston moves up or down, and discharges the same through its hollow piston rod; the water having been filtered previous to its introduction to the cylinder.

GLUE.—Nelson S. Whipple, Detroit, Mich.—This invention has for its object to furnish an improved glue for use upon wood, crockery, glass, marble, leather, metals, etc., which shall be simple in preparation, and will hold the parts to which it may be applied firmly in place, and which shall have a much greater adhesive power than any glue heretofore made.

REGISTER AND VENTILATOR.—Alfred Watson, Jersey City, N. J.—This invention has for its object to furnish an improved register for regulating the admission of warm or cold air in warming or ventilating buildings, which shall be so constructed as to greatly diminish the time and labor required for "fitting" the register, and consequently materially lessening the cost of manufacture.

STEEL BOWS FOR CARRIAGE TOPS.—J. F. Fowler, Alliance, Ohio.—This invention relates to a new and useful improvement in bows for the tops of carriages, buggies, etc., whereby they are made more durable, and are made to present a lighter and more elegant appearance than bows made in ordinary manner.

SIDE SADDLE.—William Hill, New York city.—This invention relates to a new and useful improvement in side saddles, whereby beauty, simplicity, and cheapness are secured, and it consists in combining in one piece the seat piece, "spring piece" and "jockey" of the tree covering.

BRIDLE BIT.—Henry C. Thompson, Mount Sterling, Ky.—This invention consists in the combination of two bits, one passing through a slot made nearly centrally of the other, the two bits being bound together by straps, in such manner that one may slide upon the other, and the joint bit elongated by drawing the bridle-rein rings, one of which is at the extremity of one of the bits, and the other of which is at the opposite extremity of the bit, away from each other, so as to increase the leverage upon the horse's mouth, while, at the same time, the curb-rein rings and cheek pieces are drawn toward each other, and compressed tightly against the horse's cheeks, by which means an unruly animal is the more easily controlled.

STEAM VALVE.—George Leckenby, Western, Mo.—This improved valve consists of a circular case with valve seat for attachment to the steam cylinder, having the ordinary live steam ports, in which case is a hollow cylindrical valve, receiving the live steam around the shaft which is hollow, and supplying it through the rim to the live steam ports, and receiving the exhaust therefrom into a passage leading from the rim to the motion shaft, by which it is discharged.

DREDGING MACHINE.—Ralph R. Osgood, Troy, N. Y.—This invention relates to a new mechanism for operating the scraper or scoop of a dredging machine, and for regulating the position of the same. The invention consists first in the use of double friction clutches, whereby the rigid shank of the scraper can be drawn in and out at will.

IRONING MACHINE.—William Jones, Oskosh, Wis.—This invention relates to a new and useful improvement in a machine for ironing clothes, whereby that tedious and laborious operation is rendered easy and agreeable, and it consists in the arrangement of a hollow self-adjusting steam heated roller, operating in combination with other solid rollers, and a table and revolving apron.

TUNING PIN FOR PIANOFORTES.—Julius M. B. Anig, New York city.—This invention has for its object to improve that class of tuning pins for pianofortes, which are operated by means of screws and worm wheels, and more particularly to strengthen such pins and to lessen the cost of their construction.