

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.

Half Interest for sale in established Machinery Depot, new and second-hand. Steam fitting connected. Small capital, with energy, required. Address T. V. Carpenter, Advertising Agent, Box 773, New York.

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4 00 a year. Advertisements 7c. a line.

After an exhaustive trial at American Institute Fair for 1870, Pratt's Astral Oil was pronounced the safest and best.

Safety Kerosene Lamps (Perkins & House's Patent). Explosion or breaking impossible; light equal to gas, and no odor. Families supplied and canvassers appointed, by Montgomery & Co., 42 Barclay st., New York, or Cleveland, O.

Skilled Workers in Wood, Iron, and Stone, please notice advertisement of Warm Spring Colony, Western North Carolina, on page 172.

C. A. Woodbury, West Woodstock, Vt., wants to know who makes Asbestos Cloth.

All parties wanting a waterwheel will learn something of interest by addressing P. H. Wait, Sanay Hill, N. Y., for a free circular of his Hudson River Champion Turbine.

Ashcroft's Low Water Detector, \$15; thousands in use; 17 year's experience. Can be applied for \$1. Send for circular. E. H. Ashcroft, Boston, Mass.

Three Universal Wood Workers, in constant use by Barney & Smith Manufacturing Co., Dayton, O. In their letter of Feb. 17, 1871, to Messrs. McBeth, Bentel & Margedant, they say: "We purchased the first Universal Wood Worker from you in 1865, the second in 1869, and the third in 1870. We find they will do all you claimed for them, entirely satisfactory to us all. We think any one of these Machines we have in use paid for themselves during the first four months. The variety of work they do saves much labor in handling material." Address, for further information, the manufacturers, McBeth, Bentel & Margedant, Hamilton, O.

The best Corn Husker in the world, to let on royalty. One to three millions can be sold annually. See SCIENTIFIC AMERICAN, June 11, 1870. N. Evinger, Sanford, Ind.

Second-hand Corliss Engine, 12x16, wanted. Address, stating condition and price, Geo. W. Rose, Pleasantville, Pa.

Manufacturers and Dealers in Tin Foil, Foil and Fancy Papers, will please send Price List and Samples to B. Miles, Jr., 95 Water st., Boston.

Wanted.—Machines for manufacturing Pails, Tubs, and Matches. Also, competent man to superintend construction of buildings, and manage all parts of business when complete. Address, with descriptive circulars, price, etc., No. 266 Lexington avenue, New York.

Turbine Water Wheels, Portable and Stationary Engines, Gang and Circular Saw Mills, Rolling Mill Machinery, and Machinery for Axe Manufacturers, manufactured by Wm. P. Duncan, Bellefonte, Pa.

For best Power Picket Header in use, apply to Wm. P. Duncan, Bellefonte, Pa.

New Blind Wire and Rod Cutter. B. C. Davis & Co., Binghamton, N. Y.

Those having smoke-consuming devices, for burning shavings, saw dust, etc., address, with particulars, Geo. Starr, Danbury, Conn.

Self-testing Steam Gage. There's a difference between a chronometer watch and a "bull's eye." Same difference between a self-tester and common steam gage. Send for Circular. E. H. Ashcroft, Boston, Mass.

See advertisement of L. & J. W. Feachtwanger, Chemists.

H. W. Noyes, Agent for sale of Patent Rights and Patent Goods, North Bridgewater, Mass. Agencies solicited.

\$3.50. Stephens' Patent Combination Rule, Level, Square, Plumb, Bevel, etc. See advertisement in another column. Agents wanted.

Wanted.—An experienced and steady man as Foreman of Molders. Apply to Butterworth & Lowe, Engine Builders and Machinists, Grand Rapids, Mich.

Only at 63 Union st., Boston, Crane's Patent and Canvas Signs.

American Boiler Powder Co., Box 315, Pittsburgh, Pa., make the only safe, sure, and cheap remedy for "Scaly Boilers." Orders solicited.

Planing, Sawing, Mortising, Boring, and other Machines, especially arranged for Car Work, from new designs, built by Richards, Kelley & Co., Philadelphia.

Peck's Patent Drop Press. For circulars address the sole manufacturers, Milo, Peck & Co., New Haven, Ct.

Wanted.—An Analytical Chemist. Good references required. Address M. A., Post Office Box No. 3990, New York.

Belting that is Belting.—Always send for the Best Philadelphia Oak-Tanned, to C. W. Army, Manufacturer, 301 Cherry st., Phila.

E. Howard & Co., Boston, make the best Stem-winding Watch in the country. Ask for it at all the dealers. Office 15 Maiden Lane, N. Y.

For mining, wrecking, pumping, drainage, and irrigating machinery, see advertisement of Andrews' Patents in another column.

The best place to get Working Models and parts is at T. B. Jeffery's, 160 South Water st., Chicago.

"Edson's Recording Steam Gage and Alarm," 91 Liberty st., N. Y. Recommended by U. S. Inspectors as protection to good engineers, the charts showing quality of work performed.

Brown's Coal-yard Quarry & Contractors' Apparatus for hoisting and conveying material by iron cable. W. D. Andrews & Bro., 414 Water st., N. Y.

First-class Gage Cocks, at E. H. Ashcroft's, 55 Sudbury st., Boston, for \$10.80 per dozen.

Thomson Road Steamers save 50 per cent over horses. D. D. Williamson, 32 Broadway, New York.

Improved Foot Lathes. Many a reader of this paper has one of them. Selling in all parts of the country, Canada, Europe, etc. Catalogue free. N. H. Baldwin, Laconia, N. H.

Steel name stamps, figures, etc. E. H. Payne, Mfr., Burlington, Vt.

Cold Rolled—Shafting, piston rods, pump rods, Collins pat. double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa.

Keuffel & Esser 116 Fulton st., N. Y., the best place to get 1st-class Drawing Materials, Swiss Instruments, and Rubber Triangles and Curves For Solid Wrought-iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

For the best Self-regulating Windmill in the world, to pump water for residences, farms, city buildings, drainage, and irrigation, address Con. Windmill Co., 5 College Place, New York.

The Merriman Bolt Cutter—the best made. Send for circulars. H. B. Brown & Co., Fair Haven, Conn.

Taft's Portable Hot Air, Vapor and Shower Bathing Apparatus. Address Portable Bath Co., Sag Harbor, N. Y. (Send for Circular.)

Glynn's Anti-Incrustator for Steam Boilers—The only reliable preventive. No foaming, and does not attack metals of boilers. Price 25 cents per lb. C. D. Fredricks, 587 Broadway, New York.

For Fruit-Can Tools, Presses, Dies for all Metals, apply to Bliss & Williams, successor to May & Bliss, 118, 120, and 122 Plymouth st., Brooklyn, N. Y. Send for catalogue.

McCauley's Improved Force Pump, especially adapted to deep wells. Send for Circular. R. A. McCauley, Baltimore, Md.

2d hand Worthington, Woodward and Novelty Pumps, Engines 25 to 100 H. P., 60 Horse Loc. Boiler. W. D. Andrews & Bro., 414 Water st., N. Y.

Wanted.—A Partner, with capital, in a newly invented Gun. Address A. H. Townsend, Georgetown, Colorado.

Agents wanted, to sell the Star Bevel. It supersedes the old style. Send for Circular. Hallett & White, West Meriden, Conn.

English and American Cotton Machinery and Yarns, Beam Warps and Machine Tools. Thos. Pray, Jr., 57 Weybosset st., Providence, R. I.

House Planning.—Geo. J. Colby, Waterbury, Vt., offers information of value to all in planning a House. Send him your address.

For small, soft, Gray Iron Castings, Japanned, Tinned, or Bronzed, address Enterprise Manufacturing Company, Philadelphia.

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

Conklin's Detachable Rubber Lip, for bowls, etc., works like a charm. For Rights, address O. P. Conklin, Worcester, Mass., or A. Daul, Philadelphia, Pa.

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.

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 100 a line, under the head of "Business and Personal."

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

PASTE.—A correspondent wishes paste that will keep. Let him first prepare in the ordinary way a good flour or starch paste. It can be preserved by adding to it a small quantity of brown sugar, then corrosive sublimate in fine powder in the proportion of about a teaspoonful to the pint of paste; add also a teaspoonful of oil of lavender, or rosemary, or cloves, or any of the essential oils, and a few drops of carbolic acid, and stir well with a wooden spatula. This paste will keep for any length of time "perfectly pure." The rationale is this: The corrosive sublimate ensures it against fermentation, and the essential oil and carbolic acid, against mold. Corrosive sublimate in the above is a poisonous agent, but it is not expected, that the paste is to be eaten because of its containing sugar; and in the use of it as paste it is not in the least dangerous, as we all handle with impunity many things more poisonous than this. I do not know in what climate friend "Query 11" resides, but in our Alabama climate—where I now sit in my room, with no fire, windows up, coat off, and thermometer 70° precisely, this 17th February—I find no trouble in preserving paste prepared as above all the year round. If he should find any difficulty in its keeping qualities, he has only to increase a little the preserving ingredients.—B. F. R., of Ala.

ANOTHER.—A correspondent sends the following, found in the Boston Journal of Chemistry: Dissolve a teaspoonful of alum in a quart of warm water. When cold, stir in as much flour as will give it the consistency of thick cream, being particular to beat up all the lumps; stir in as much powdered rosin as will lie on a dime, and throw in half a dozen cloves to give a pleasant odor. Pour this flour mixture into a pan containing a teacupful of boiling water, and stir it well over the fire. In a very few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool; lay a cover on, and put in a cool place. When needed for use, take out a portion and soften it with warm water. Paste thus made will last twelve months. It is better than gum, as it does not gloss the paper, and can be written on.

CHEAP BATTERY.—Let L. D. take a gallon stone jar, and put in it a sheet of zinc bent to fit; inside of the zinc put a porous cup, either of porcelain, unglazed earthen or stone ware, or an unglazed flower pot, with the hole in bottom stopped by waxed cork, or wax. Put a saturated solution of sulphate of copper inside the porous cup, and solution of common salt outside in stone jar. Put a piece of sheet lead or copper in the blue vitriol solution, and fasten soft copper wire both to zinc and lead, either by solder, or tied through a hole. Better get "Napier on Electro Metallurgy," or a work imported by Thomas Hall, Boston, before attempting to do much. I enclose specimen of electroplate by such battery, which has now run for twenty-three days continuously.—A. G. (The specimen referred to shows the battery to be quite effective.—Eds.)

BOOT BLACKING.—W. H. P. will find the following a good recipe: Ivory black, "killed" with a tablespoonful alcohol, ½ pound; sweet oil, 1 fluid ounce; molasses, ½ pint; hydrochloric acid, 1 ounce; sulphuric acid, 1 ounce; mix the first three ingredients, add the acids, and 3 pints of vinegar if it is to be liquid blacking. No "challenge blacking" equals this.

JOURNAL OF MILL SPINDLE.—We would suggest to H. A. S. the use of a cast-iron step, and to put a little pure plumbago in the oil. The plumbago makes the iron more slippery than Babbitt, while if there be any wear the plumbago is harmless, and the iron beneficial to health.—B. & W.

E. H. C., of Mo., desires us to give an opinion of the cause of a boiler explosion, from a brief description forwarded by him. We respectfully decline to give opinions of this kind, unless we have opportunity for personal examination.

L. A. S., of N. Y.—We recommend you the Polytechnic School, at Stuttgart, as being probably the best in Germany for an American to attend.

Dr. R. M., of Pa.—We know of no work which specially treats of drying lumber by artificial heat. Various articles on this subject have appeared from time to time in the SCIENTIFIC AMERICAN.

J. W., of Pa.—The "Painter, Gilder, and Varnisher's Companion," published by Henry Carey Baird, of Philadelphia, contains the information you seek.

F. L. C., of Ohio.—The application of a rod to dampers to regulate the draft in furnaces, by expansion and contraction, is the same idea you advance for a perpetual motion.

Recent American and Foreign Patents.

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

WASH BOILER.—T. U. Parker, Middletown, Pa.—This invention relates to an automatic wash boiler, and consists in attaching transverse ribs to the upper side of the false bottom, for supporting the clothes above the water line, and provides the vertical discharge tubes with perforated "rose heads," whereby water is delivered over the whole surface of the clothes.

MOWER AND REAPER.—Daniel Mulock, Mount Hope, N. Y.—This invention relates to a new mower and reaper, which is so constructed that it can be used with suitable speed of the cutters, and without side draft. The invention consists in a novel arrangement of gearing for varying the speed; in a new method of balancing the cutter bar, so that it will not drag on the ground, nor be injured by protuberances; in a new manner of constructing the cutter bar and finger bar for strengthening the same; in a novel manner of arranging stationary end cutters on the finger bar, to prevent clogging at the ends; in a new adjustable wedge, for regulating the degree of inclination of the finger bar; and in a novel construction and arrangement of joints and shafting for the parts, and novel construction of braces.

REVOLVING BATTERY GUN.—R. J. Gatling, Indianapolis, Ind.—The object of this invention is to perfect the mechanism of the original Gatling gun, in such manner that more satisfactory operation, greater strength and durability, and simpler construction will be obtained. The invention consists chiefly in making the "cocking cane" laterally adjustable, so that the same may, while experiments are made with the gun without firing the same, be drawn out to not snap the locks, and that it may also be easily set in to operate the locks when firing is to be carried on. The cocking cane is also made longitudinally adjustable, for the purpose of varying thereby the force of the spring which operates the lock hammer. Some kinds of cartridges are made of thicker metal than others, and require, consequently, stronger blows in order to explode their fulminates. It is therefore very essential that the blow should be regulated in accordance with the material of which the cartridges are made. The invention consists, also, in perforating the casabel plate and the back diaphragm in the outer casing, and in closing the apertures through both these plates by a removable plug, for the purpose of enabling the removal and reinsertion of either one or more of the locks, without requiring the casabel plate to be taken off. The repair or inspection of all parts of the gun is thereby considerably facilitated.

ADJUSTABLE ANIMAL POWER.—N. Potter, East Troy, Pa.—This invention has for its object to furnish an improved animal power, which shall be so constructed that the inclination of the track may be increased or lessened, as may be required, without stopping the machine, removing the animal, lengthening or shortening the endless band, or affecting any of the operating parts of the machine.

FENCE.—John Waddle, Bakerstown, Pa.—This invention has for its object to furnish an improved fence, simple and economical in construction and durable in use, and which is designed for use as a stationary or portable fence, as may be desired.

STEAM AND WATER ENGINE.—H. J. King and D. C. Mulock, Middletown, N. Y.—This invention relates to several improvements in the construction of the valve gear and other working mechanism of steam and water engines, and consists in a novel construction of valve, cut-off, piston, cross-head, and valve gear, all arranged with an object of simplifying the construction of the machinery and avoiding friction.

COTTON PLANTER.—R. F. Norwood, Charlotte, N. C.—This invention relates to improvements in feed apparatus for dropping cotton seed fertilizers and the like, and it consists in a grooved revolving cylinder, arranged in the bottom of the hopper, to receive the seed in the grooves, through a pair of vibrating gates above, operated by the attendant, and a spring cutting-off gate, which permits the discharge from more than one of the grooves as once, said spring being pushed back, to open the passage for the seed, by pins projecting from the roller, and the latter being turned by connection with the wheel on which the machine is mounted.

LIFTING JACK.—B. F. Johnson, Glasgow, Mo.—This invention relates to improvements in lifting jacks for lifting wagons and other articles, and it consists in a novel arrangement, with a stand, of a vertically movable lifting block, operating lever, and hoisting pawl.

COUNTERSINKING AND REAMING ATTACHMENT TO BORING INSTRUMENTS.—F. H. Palmer, Foxcroft, Me.—This invention relates to improvements in attachments for boring instruments, and consists in a countersink and reamer, provided with a kind of clamping attachment which may be clamped on the shank of a boring instrument, and so adjusted that either one may be used as it is required to countersink or ream the hole at the same time that it is bored.

SEWING MACHINE TREADLE.—F. E. Mills, California, Cal.—The nature of this invention consists in so constructing the foot board and other parts of the treadle, relative to its axis, that the ankle joint of the operator may be always placed in line with the center of motion of the treadle, and held there, thereby saving that unnecessary exertion and waste of power occasioned by the motion of the entire lower limb, whenever the ankle is in any other position.

STEAM AND HYDRAULIC PRESS.—John F. Taylor, Charleston, S. C.—This invention relates to a press for cotton or any other material, in which the platen is operated by the introduction beneath it of oil or some other liquid under pressure, communicated to said liquid by the pistons of a steam cylinder, and in which the platen is lowered by its own weight, and the expansion of the material compressed, both acting through the medium of the liquid upon the pistons, which are permitted to yield by the opening of valves in the ends of the cylinders in rear of the pistons, through which steam escapes before the returning pistons; the pistons acting upon the platen alternately, one to impart the initial pressure, and the other the finishing pressure; the piston that imparts the initial pressure being operated by the exhaust steam of the other cylinder, which steam having then done all that is required of it, is discharged into the atmosphere; and the piston that imparts the finishing pressure being operated by live steam from the boiler, which steam is subsequently discharged into the other cylinder there to communicate another initial pressure to the platen.

NAIL MACHINE.—Henry Reese, Baltimore, Md.—This invention consists in an arrangement of quadrant blocks and operating gear, whereby a heated rod introduced into transverse grooves between the blocks is reduced to a headless nail, and cut off by the blocks, which move in opposite directions. The head of the nail is formed by a subsequent operation.

SELF LOADING DUMPING CART.—Ansell P. Rout and John J. Keeton, Liberty Mills, Va.—This invention consists of a mechanism for holding the body of a dumping cart inclined so as to scrape up earth, and of a mechanism by which certain hoes, located within the cart body, are operated to draw the loosened earth into the same, and of a device for holding the cart body horizontal while in route to or from the place where it is employed in excavating.

FIRE-ESCAPE LADDER.—William B. Perego, Baltimore, Md.—This invention relates to a ladder made in curved sections that are jointed together, one end of the ladder being attached to the periphery of a drum stationed inside any one of the upper windows of the building, and provided with means for its revolution, from which drum the ladder may be uncoiled and let down to the ground or pavement.

COMBINED COTTON PLANTER AND GUANO DISTRIBUTOR.—J. H. Nicholes, Sumter, S. C.—This invention has for its object to furnish an improved machine for planting cotton seed and distributing guano, which shall be simple in construction, effective and reliable in operation, and convenient in use.

ODOMETERS.—David L. Branning, Tampa, Fla.—This invention relates to improvements in odometers, and consists in an arrangement of adjustable arms on the axle, to which motion is imparted by the wheel of the vehicle which arms may be set for indicating the distance travelled by the wheels of different diameters. It also consists in a combination with the said arms secondary set, pivoted to the frame, and arranged for indicating the fractions of miles.