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 ebband 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, 00, and the cost of a pier of the same sort (granite), 45 by 400, \$400 000.

Facts for the Ladies,

l purchased my Wheeler & Wilson Sewing Machine in May, 1853, and have used it constantly, ever since, in making all kinds of garments worn in the ramily, 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, \$400 a year. Advertisements 17c. 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 grop, 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.

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 Urion 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,

\$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. 64 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. Sendforlist.

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-fastening 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-tun 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 tinmans' tools, presses, etc., apply to Mays & Bliss, Ply-

mouth, 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 \$400 a year.

Cold Rolled—Shafting, piston rods, pump rods, Collins pat. double compression couplings, nanufactured 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 gratiatous replies to questions of a purely business or personal nature. We will publish such inguisies, hincorer, when pa d for as advert sements at \$100 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 sub mit to the temporary inconveniences the plan entails. It has often been found that in 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 Marriotte's law—namely, that the volumes of gases are inversely as the pressures to which they are submitted—bas 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 willunite 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 398° Fah. 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 feldspar and hornblende, or of feldspar and augite.

Becent American and Loreign Latents.

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.

PREBARING 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

TRACTION ENGINE.—Thomas F. Hall, Omaha, Nebraska.—This invention relates to a new traction engine, or construction of vehicle, of that class in whichan 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 suspend ing 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 irips the device and re-engages with itself-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 DEYER.—A. H. Patch, Hamilton, Mass.—This invention relates to mprovements in apparatus for suspending clothes, for drying them, and consists in long bars, for hanging the clothes, suspended from cords, work ing 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 DENTSTS' 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 s 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 eylinder by the operation of a single double-acting hollow piston, which receives water nto its chamber alternately through orifices in its upper and lowers 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 ordinarylive steamports, 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, Trof, 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, where by thattedious 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 rol rs, 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 planofortes, which are operated by means of screws and worm wheels, and more particularly to strengthen such pins and to lessen the cost of their con

MANUFACTURE OF STEEL AND IRON.-G. F. Ansell, London, England .-This invention relates to the conversion of iron into steel or wrought iron, for armor plates, railways, and for other purposes, by the use of bisulphate of potash, or the bisulphate of soda, or a mixture of the two, the same being applied in such a manner as to act throughout the mass of melted

ANIMAL TRAP.—Elonzo Sprague and George C. Belt. Bridgeton, Ind.—This invention has for its object to construct a trap, by means of which animals can be readily caught, and which will always remain set without any liability of getting out of order. The invention consists in providing a double treadle in an open passage, each treadle operating a gate, whereby the escape of an animal, once within the passage is absolutely prevented

MOLD FOR CASTING SPOONS .- Luther Boardman and N. S. Boardman East Haddam, Conn.-This invention has for its obect to reduce the expense of molds for casting spoons of britannia or other metal.

MUFF.-R. M. Seldis, New York city.-This invention relates to a new manner of securing pocket flaps on muffs, with a view of economizing material and labor in their manufacture.

FLOCK GRINDER.-Robert Aldrich, Forestdale, R. I.-This invention re lates to a new construction of flock grinder, and more particularly to a new method of securing the knives in the grinding surfaces, with a view of adjusting the same to different kinds of work, and to provide for wear by the operation of grinding.

SAPONIFIED MINERAL BATH.-Otto Gavron, New York city.-This inven tion has for its object to furnish a convenient surrogate for mineral baths, which can be brought into a condensed form to be conveniently transported and handy for use. The invention consists in combining the minerals and salts that are contained in the mineral waters with soap, so that the soap thus prepared can be used in baths with the same effect as the mineral waters alone.

HATAND CAP SWEATS. - Philipp F. Lenhart, Brooklyn, N. Y.-This invention has for its object to improve the sweat bands of hats and caps in sucli manner that the same will be more convenient and less injurious to health than those now in use. The invention consists in a novel treatment of the leather for the purpose of making the same water-proof, and still an absorbent of moisture.

CARPENTERS' PLANE .- Charles G. Miller, Brattleboro, Vt.-This invention has for its object to construct a plane which will be convertible into a grooving, rabbeting, or ordinary smoothing plane, and which therefore combines in one tool all the advantages heretofore included in three

CHURNING APPARATUS .- James P. Curtis, Wytheville, Va .- This inven tion has for its object to furnish an improved churning apparatus which shall be so constructed and arranged that the operation of churning may be changed from a labor to a pleasure, enabling even a child to work the machine, and which shall, at the same time, bring the butter quickly and thoroughly.

LAMP-SHADE HOLDER.-Cornelius St. John, New York city.-The object of this invention is to furnish an improved lamp-shade holder, simple in construction, easily attached to and detached from the lamp, and shall be so arranged as to allow the shade to be expanded or contracted at will.

CULTIVATOR PLOW .- James G. Miner, Nashville, Tenn .- This invention has forits object to furnish an improved plow which shall be so construct ed as to cut up all the weeds and grass between two rows at a single passage, and turn up their roots so that they may be killed by the sun.

SEATS FOR VEHICLES.-P.F. Dean, Watsonville, Cal.-This invention has for its object to furnish an improved seat for buggies, carriages, cars, and other vehicles, so that when in use they may be easier to the rider.

INSIDE WINDOW BLIND.-Stephen Eich, East Toledo, Ohio,-This invention has for its object to furnish an improved inside blind for windows which shall be simple in construction and effective in operation, being so constructed that it may be closed so closely as not only to shut out the light, but also to prevent the entrance of flies and other insects, and which may at the same time be made light and ornamental.

Wood Box.-Frank Ficht, Dyckesville, Wis.-This invention has for its object to furnish an improved box for holding fire wood when prepared for the stove, which shall be neat in appearance, convenient in use, and easily kept clean.

SAFE LOCK .- Ludwig Beer, New York city .- This invention relates to improvements in that kind of locks in which a slotted key is applied to shift a series of slides or plates which serve as levers for turning a slotted locking cylinder, by which the bolt is moved. The invention consists chief ly in the application to the locking cylinder of a primary lock, which engaging pins in a notch of said cylinder, prevents the same from being turned, even if the slides are properly set to unlock.

BOILER PLUG.-Robert L. Neill, Paterson, N. J.-This invention has for its object to economize boiler plugs which are, during the testing of the plates, used to close the holes that are provided for the reception of the tubes.

MEDICAL COMPOUND.—Wm. C. Tait, Alexandria, La.—This invention relates to a new and useful improvement in a compound to be used as a medicine for coughs and for all affections of the lungs or bronchial tubes and other affections of the human system proceeding from colds, exposure or other causes.

PROCESS OF CONCENTRATING TOMATOES.-Christopher T. Provost, New York city.—This invention has for its object to so prepare tomatoes for preservation, that only the nutritious and aromatic matter, but none of the aseless bulk or body will be retained. The fruit can thereby be preserved in the most concentrated form, and will not occupy superfluous space.

DOOR AND SAFE LOCK -Joseph Linder Seneca Falls N. Y - This inventionrelates to a new construction of lock and key, with an object of preventing the opening of the lock by means of false keys. The invention consists chiefly in provision of complicate bolts and double key, all ar ranged so that a single key or bolt will not suffice to open the lock.

SIDE SADDLE TREE.-William Hill, New York city.-This invention relate to a new and useful improvement in trees for side saddles. whereby the strength, beauty, and utility of that article is increased while it is greatly simplified in its construction, and its cost diminished.

Mowing and Reaping Machines.-Francis E. Rogers, Paw Paw, Ill.-This invention relates to new and useful improvements in mowing and reaping machines, having for its object to provide an arrangement of the cutting sections, whereby power may be economized, the cutters more easily detached for grinding, and the machines made to run with less noise than those now in use.

EXCAVATOR.-Benjamin Slusser, Sidney, Ohio.-This invention consists mainly in a scraper placed by the side of each of the rollers over which the endless apron runs, so as to clear the same of dirt, said scraper being attached at its ends to the boxes in which the rollers are mounted, so that whenever the boxes with the rollers are moved in one direction or the other in the frame, the scrapers are moved also to the same extent, and always preserve the same position relative to the rollers.

COMBINED CALL BELL AND SLOP BOWL .- Nathan Lawrence, Taunton Mass.-This invention consists of a metallic slop bowl provided with a threaded stem projecting downward from its under side, and with a horizontal arm connecting any two of its anjacent legs, on which arm is pivoted the thumb-piece and tongue of a call bell; and combined with the sounder of a call bell when the latter is either screwed upon the aforesaid projecting threaded stem, or slipped thereon and held by a nut.

FIRE AND DECK PUMP.-Peter M. and Oscar Snell, Williamsburgh, Ohio -This invention consists in the application of a lever having a movable ful, crum placed in vertical slots, said fulcrum being directly connected with a slide valve to the operation of the piston of a force pump, for the purpose of giving the slide valve the movement requisite to opening and closing the cylinder ports.

WASHING MACHINE.-Gideon W. Cottingham, Marshall, Texas.-This invention consists of a globular case for containing clothes, provided with slots for admitting water, the globular case being intended to be suspended on trunnions in a vessel containing hot water, and to be revolved therein for the purpose of causing currents of water to flow through the case among the clothes.

INVALIDS' BEDSTEAD.—A. J. Russell, Baltimore, Md.—This invention re-lates to the simultaneous employment of two bedsteads, one above and outside the other, the inner one sustaining merely the mattress, and the upper one being provided with a contrivance for raising and lowering and supporting the other bedding, that part of which-that is, beneath the patient-being so contrived that it may be removed and replaced without lifting the patient off the bed, and without in any way aisturbing him.

STILL.-E. Melton, Flemmingsburg, Ky.-This invention relates to that class of stills in which the alcohol is carried off by steam ejected into the wash at the bottom of the chambers, and rising through the wash and passingoff, charged with alcoholic vapor, to the refrigeratory.

BUCK SAW .- William Hankin, Williamsburgh, N. Y .- This invention re lates to a new brace for buck saws, and has for its object to simplify the construction of saw brace and still permit the adjustment of the saw frame. The invention consists in constructing the said brace with forked ends and doublearched edges, of one single piece of wood or other material, there by producing an entirely reliable and inexpensive article.

STUMP EXTRACTOR .- C. Bilharz, Pittsylvania C. H., Va.-The object of this invention is to provide a stump extractor which will be yielding during operation, so that it will not require a change of position if by the weight of a stump one side should draw heavier than the other. The invention consists chiefly in suspending the entire operating apparatus from a semi-spherical yoke, which rests upon a perforated plate, so as to be swiveled thereon

HAY AND COTTON PRESS .- Richard Ball, Petersburgh, Va.-This invention has for its object to provide means whereby the parts of a press will be kept from injury, even if the follower should not be held entirely level during its vertical adjustment. The invention consists chiefly in the ap plication to the followers of swinging nuts and in the combination with the swing of right and left screws.

RAILROAD CAR SPITTOONS.-M. J. Beach, Nashville, Tenn.-This invention has for its object to furnish a spittoon for cars, which may be placed on and extended through the floor and allow the contents to be easily emptied upon the ground under the cars.

Official List of Latents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING June 28, 1870.

Reported Officially for the Scientific American

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104,683.—Belt Buckle.—Israel Alexander, San Francisco. 104,684.—Animal Trap.—Charles Angle, Hazel Green, Mich. 104,685.—QUILTING FRAME.—John Angus and John P. Angus Mindenville, N. Y. 104,686.—MANUFACTURE OF IRON AND STEEL.—George F. Ansell, Bernard street, Russell Square, England. 104,687.—LAPPET LOOM.—William Aspinall, Philadelphia, Pa.
104,688.—PUMP.—Anson Balding, Wheeling, West Va.
104,689.—HAY AND COTTON PRESS.—Richard Ball, Peters.

burg, va. 104,690.—Sleigh Bell.—Wm. E. Barton, East Hampton, Conn. 104,691.—RAILROAD CAR SPITTOON.—William James Beach, Nashville Tenn. 104,692.—STUMP EXTRACTOR.—Candidus Bilharz, Pittsylvania Court House, Va.
104.693.—CORN HUSKING MACHINE.—T. J. Burgess, Rondout,

104,694.—Lime Spreader.—W. C. Burnett, Burns' Mills,

Pa.

104.695.—HARVESTER.—James Birch and Addison Crosby,
Westfield N. Y., and Thomas Birch, Meadville, Pa.

104,696.—STEAM HEATER.—George W. Blake, New York 104,697.—WATER WHEEL.—Oliver J. Bollinger, York, Pa.

104,698.—BAG HOLDER.—Edwin Boynton, Palmyra, Wis. 104,699.—BIRD CAGE.—Thomas H. Bradley, St. Louis, Mo. 104,700.—PREPARATION OF WHEAT FOR FOOD.—William S. Brewster, Chicago, Ill. 104,701.—STAMP CANCELER.—Franklin W. Brooks, New

York city. 104,702.—SNAP HOOK.—George A. Brown, Kalamazoo, Mich. 104,703.—COMBINED HEARTH, GRATE, AND FENDER.—Geo.

Buchanan, Washington, Pa.

104,704.—CAR COUPLING.—Samuel P. Carll and Amos Shute,
Richmond, Ind.

104,705.—Off-Bearing Apparatus for Brick Machines.—
22Cyrus Chambers, Jr., Philadelphia, Pa.

104,706.—Device for Tendering or Chopping Meat.—

Fred. W. Codding, West Rutland, Mass.
104,707.—STREET SWEEPING MACHINE.—Alexander A. Consalvi, New York city. Antedated June 13, 1870.
104,708.—WASHING MACHINE.—G. W. Cottingham, Marshall,

104,709.—LAMP BURNER.—Robert R. Crosby, Boston, Mass. 104,710.—CHURNING APPARATUS.—Jas. P. Curtis, Wytheville, 104.711.—MUSTACHE SHIELD FOR CUPS.—George P. Cutler.

Lawrence, Mass. 104,712.—KNOB LATCH.—John Davis, Terre Haute, Ind. 104,713.—METALLIC ROOFING.—John B. Davis, Cleveland,

104,714.—SEAT FOR VEHICLES.—P. F. Dean, Watsonville, 104,715.—BALANCE SLIDE VALVE.—Wm. Dillon, Wheeling,

West Va. 104.716.—APPARATUS FOR CARBURETING AIR.—Antoine E. Dupas, Paris, France, and Arthur Barbarin, New Orleans, La. 104,717.—WINDOW BLIND.—Stephen Eich, East Toledo,

104,718.—End Fastener for Car Springs.—Geo. Elliot, St. Louis, Mo. 104.719.—COMPOUND FOR STUFFING AND TANNING HIDES.— Elihu England, Mossy Creek, Tenn. 104,720.—CLOTHES PIN.—G. K. Farrington, Alcatraz Island,

Cal.
104,721.—LINIMENT FOR TREATING NEURALGIA, ETC.—Geo.
L. Fearls, Connersylle, Ind.
104,722.—WASH BOILER.—Benjamin G. Fitzhugh, Frederick,

104,723.—GAS BURNER.—C. S. Ford (assignor to himself and Charles Young), Philadelpbia, Pa. 104.724.—Bow for Carriage Tops.—J. F. Fowler, Alliance,

104,725.—Washing Machine.—Sam. C. Frink, Indianapolis, 104,726.—WATER WHEEL.—Olnev Fuller, Bennington. Vt.

104,727.—MEDICAL COMPOUND.—George C. Furber, Yreka 104,728.—Grain Cleaner and Separator.—Wm. Gardner,

Catalpa, Ky. 104,729.—CORN PLOW.—Marcellus R. Goff, Delavan, Wis. 104,730.—Coffin Fastening.—Wm. Hamilton, Allegheny

City, Pa. 104,731.—ELEVATOR.—William Hamilton, Allegheny City, 104,732.—NEEDLE SHARPENER.—Edgar K. Haynes, Boston,

Mass.
104,733.—SHANK LASTER AND PUNCH.—Frederick Henderson, Marietta, assignor to himself and G. H. Bell, Portsmouth, Ohio. An tedated June 23, 1870.

104,794.—Debut Ating and Tanning Hides and Skins.—

104,734.—DEPILATING AND TANNING HIDES AND SKINS.— John Henry, New York city. 104,735.—ASH SIFTER.—Lewis G. Hoffman, Albany, N. Y. 104,736.—DUMPING MACHINE.—Geo. W. Hough and Wm. S. Hongh Galys. III

104,735.—DUMPING WACHINE.—GOO. W. HOUGH BILL WALL HOUGH, Galva, III.
104,737.—BUHAL CASE.—Ralph Hunt, Milford, N. J., assignor to D. M. Sprogle, Annapolis, Md.
104,738.—CAR BRAKE.—Reuben Hurd, Morrison, III.
104,739.—APPARATUS AND PROCESS FOR THE MANUFACTURE OF SOAPS.—Moses Hyde and Francis Hyde, Baltimore, Md.
104,740.—IRONING MACHINE.—William Jones, Oshkosh, Wis.

104,740.—IRONING MACHINE.—William Jones, Oshkosh, Wis. 104,741.—TANNING.—James Kidder, Urbana, Ohio, assignor to himself and James F. Shumate.
104,742.—APPARATUS FOR ELEVATING BEER.—Albert H. Ladner and Thomas F. Fenlin, Philadelphis, Pa. 104,743.—TABLE CASTER.—C. H. Latham (assignor to Woods, Sherwood, & Co.), Lowell, Mass.
104,744.—ENGRAVING MACHINE.—John D. Lathrop (assignor, 32 mesne assignments, to Lippiatt, Malthy & Morse), New York city 104,745.—LANTERN.—Lemnel W. Leary, Norfolk, Va. 104,746.—ROTARY STEAM VALVE.—Geo. Leckenby, Western, Mo.

Mo. 104 747.—SIIEET-METAL CAN.—Joseph Le Comte and Geo. H.

Perkins Brooklyn. N. Y.
104,748.—FLAT OR SADIRON.—Luther Lincoln, No ton, Mass.
Antedated June 9, 1870.
104,749.—Door Lock.—Joseph Linder, Seneca Falls, N. Y. 104,750.—CAR COUPLING.—J. A. Mason, Keokuk, Iowa. 104,751.—LATHE.—F. B. Mattson, Rockford, Ill., assignor to himself and Wm. P. Dennis.

104.752.—STILL FOR SPIRITS.—Elijah Melton, Flemingsburg,

104,753.—CARPENTERS' PLANE.—C. G. Miller, Brattleborough, 104,754.—CULTIVATOR PLOW.—James G. Miner, Nashville,

104,755.—Punching Machine.—Charles S. Moseley, Elgin, 104,756.—SAFETY PINION FOR WATCHES.—C. S. Moseley,

Eigin, III.

104,757.—Dredeing Machine.—Ralph Robert Osgood, Troy, 104,758.—MEDICAL COMPOUND.—Edward Mycrs, Davis, Ill. 104,759.—BOILER-TUBE PLUC.—Robert L. Neill. Paterson.

104.760.—Case for Scissors.—David B. Page, Henry, Ill. Antedated June 16, 1869.

104.761.—CLOTHES DRYER.—Asahel H. Patch, Hamilton,

104,702.—STREET-RAILWAY CAR TRUCK.—J. R. Perry, D. W Perry, and James Perry, Wilkesharre, Pa. 104,763.—Cultivator. — John Wesley Philip, Humboldt

104,763.—CULTIVATOR.—JOHN WORL,
Tenn.
104,764.—TEAPOT.—Nathaniel Plympton, Boston, Mass.
104,765.—REFRIGERATOR RAILROAD CAR.—Joseph D. Potts,
Philadelphia, and Benjamin P. Lamsson, Milton, Pa., assignors to Empire Transportation Company.
104,766.—BOTTLE STOPPER.—Henry C. Pratt, Boston, Mass.
104,767.—WINDOW-SHADE RACK.—Joshua Pusey, Philadelphia, Pa.
104,768.—AUTOMATIC FAN.—David Ramler, Union Deposit, plia. Pa. 104.768.—AUTOMATIC FAN.—David Ramler, Union Deposit,

104,769.—Punch.—Isaac P. Richards, Whitinsville, Mass. 104,770.—BAND SAWING MACHINE.—John Richards and W. H. Thorne, Philadelphia, Pa.
104,771.—STOVE AND FURNITURE LEG.—H. R. Robbins, Baltimore, Md.
104,772.—STEAM HEATER.—John J. Rocper, Philadelphia,

Pa. 104,773.—HARVESTER CUTTER.—Francis E. Rogers, Paw Paw,

104,774.—Invalid Bedstead.—A. J. Russell (assignor to himself and W. W. Rowles), Baltimore, Md. Antedated June 16, 1870. 104,775.—Breech-Loading Fire-Arm.—Sven Rydbeck, Red Wing Minn. 104,776.—Ironing Machine. — Alvah C. Sawyer, Canton,

104.777.—MOLD FOR CAR WHEELS.—John K. Sax, Pittston, Pa. 104,778.—Wood PAVEMENT.—Joseph J. Schroyer, Springfield,

104,779.—KNIFE FOR CUTTING SHEAF BANDS.—Henry Sears, and E. B. Sears, Rockford, Id. 104,780.—MUFF.—R. M. Seldis, New York city.

104,781.—APPARATUS FOR BLEACHING PAPER STOCK.— Francis Shelden (assignor to the Union Machine Company), Fitchburg, Mass.

Mass.

104,782.—Excavator.—Benjamin Slusser, Sidney, Ohio.

104,783.—MILL GEARING.—Harlow M. Smith, Peoria, Ill.

104,784.—GRAIN-FANNING AND SEPARATING MACHINE.—J.
I. smith and W. H. Nicodemus, Frederick, Md.

104,785.—MANUFACTURE OF STEEL-HEADED HORSESHOE

NAILS.—J. H. Smith, Allegheny City, Pa.

104,786.—PUMP.—P. M. Snell and Oscar Snell, Williamsburg,
Obio.

104,787.—Broom Holder.—C. P. Snow (assignor to Sterne F. Aspinwall), Freeport, Ill. 104,788.—FRUIT DRYER.—George M. Sternberg, Fort Riley

Kansas.
104,789.—FEED-WATER HEATER AND FILTER.—E. R. Stilweil, Dayton, Ohio.
104.790.—FLOOR CLAMP.—Oliver Taff, Whitestone, N. Y

Antedated June 16, 1870. 104,791.—MEDICAL COMPOUND.—Wm. C. Tait, Alexandria, 104,792.—Steel Car Wheel.—J. B. Tarr, Fairhaven, Mass.

Antedated June 18, 1870. 104,793.—BRIDLE BIT.—Henry C. Thompson, Mount Sterling 104,794.—BOTTLE STOPPER.—Nathan Thompson, Brooklyn,

104,795.—POTTERY MACHINE.—S. R. Thompson, Portsmouth, 104,796.—MANUFACTURE OF SOAP.—Joseph Treat, New York

104,797.—Boring Machine. — William Tucker, Fiskedale,

Mass. 104,798.—Instrument for Testing Oils.—Peter H. Vander Weyde, New York city. Antedated June 8, 1870.

104,799.—MACHINE FOR HULLING COTTON SEED, ETC.—A. J. Vandegrift, Coyington, Ky.
104,800.—Churn.—Stroud Van Meter, Henderson, Ill.

104,801.—HEATING STOVE.—C. E. Warring, Poughkeepsie, 104,802.—Hot-Air Register.—Alfred Watson, Jersey City, N. J. 104.803.—Extension Ladder.—Thomas Watson and Chas.

Perty, Brooklyn, N. Y. Antedated June 23, 1870. 104,804.—Tweer.—Peter L. Weimer, Lebanon, Pa. 104,805.—Lubricating Journal Bearings.—I. P. Wendell (assignor to himself and S. P. M. Tasker) Philadelphia, Pa. 104,806.—HARNESS.—Lewis Whitehead, Nunda, N. Y.