springs. The machine is placed or fitted upon a truck to enable the drill to be readily placed in position or adjusted to its work. J. S. French, of San Francisco, Cal., is the inventor of this machine.

Stuffing for Mattresses &c.—This invention, which was patented last week, consists in a peculiar manner of treating cork waste, whereby the same is rendered soft and elastic. The stuffing thus obtained is particularly adapted for mattresses, its principal advantages being its coolness and cleanliness, affording no refuge to vermin. It is also free from moisture, and for these reasons a mattress made of this cork stuffing is particularly adapted for hospitals and for the army. Its lightness recommends it to masters of vessels. A. C. Crondal, of 36 Mott street, New York, is the patentee of this improvement.

APPLICATIONS FOR THE EXTENSION OF PATENTS.

The following persons have applied to the Commissioner of Patents for the extension of their patents :—

Improvement in Rotting Flax.—Lemuel W. Wright, of Palmer, Hampden county, Mass., has petitioned for the extension of a patent granted him on the 25th of December, 1849, for an improvement in rotting flax, said patent expiring Dec. 25, 1863. It is ordered that the case be heard at the Patent Office, Washington, on Dec. 7, 1863, at 12 M. All persons interested are required to show cause why the claim should not be granted. Persons opposing extension are required to file their objections in writing at least 20 days before the day of hearing.

Spark Arrester.—James Radley, and Margaret D. Hunter, of New York city, Administrators of John W. Hunter, deceased, for an extension of a patent on a spark arrester, obtained on Jan. 2, 1850, and which expires on Jan. 2, 1864. Claims to be heard Dec. 14, 1863.

Steam Boiler Furnaces.—Benjamin Crawford of Allegheny City, Pa., for an extension of patent granted him for an improvement in steam boiler furnaces, on Jan. 29, 1850, and which expires Jan. 29, 1864. Claims to be heard Jan. 14, 1864.

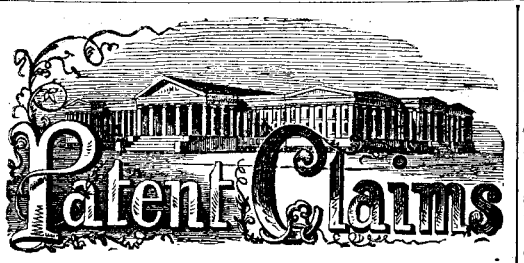
All persons interested in the above cases are notified to appear (as per directions in the first case) and state their objections, &c., at the Patent Office, Washington, D. C.

NEW BOOKS AND PUBLICATIONS.

WHAT TO EAT AND HOW TO COOK IT. P. Biot. D. Appleton & Co.

It is an old adage that "Heaven sends meat but the devil sends cooks;" and in view of the messes, misnamed food, served up daily in a thousand homes in the land, it would seem as though a little instruction in the art of cooking is sadly wanted. It is just as necessary to perfect health that food should be appetizing and wholesome, as it is imperative that man must eat to preserve life; and here it is that good cooking fulfils an important part in the economy of life. No man need make a god of his belly, as the saying is; but the simplest food may be easily spoiled by one ignorant of the first principles of the culinary art. In the book before us there are a quantity of recipes for cooking every conceivable kind of game, meat, vegetables, soups, &c., and to judge from the modes of preparation they are not only wholesome and savory, but cheaply made—a consideration of no small importance at the present time. Innumerable cookery books have been written, but we have seen none more comprehensive or more clearly written than "What to Eat and How to Cook It."

TO OUR READERS.



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING SEPTEMBER 29, 1863.

Reported Officially for the Scientific American.

*** Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

40,088.—Suspension Rack for Coupon Tickets, &c.—E. P. Bacon, Milwaukie, Wis.:

I claim a case or rack, for coupon tickets or other articles to which it may be adapted, provided with horizonal bands or supports, a a, attached to upright standards, b b, with projections, d d, on the latter, at the several points of intersection, hooks or other means of suspension being affixed to the horizontal bands, from which tickets or other articles may be suspended, when constructed in this or any other manner substantially the same, for the purposes set forth.

40,089.—Marking Brush.—E. P. Clark, Northampton, Mass.:

I claim the elastic fountain, B, in combination with the tube, A, and brush, G, as shown and described for the purpose set forth, also the brush, G, connecting with the handle, C, sliding within the tube, A, in the way and for the purpose before described.

40,090.—Furnace for Grain Dryers.—M. C. Cogswell, and A. G. Williams, Buffalo, N. Y. Ante-dated Sept. 20, 1863 :

We claim the arrangement of the flues, c c1 c2 c3 and D (including their valves) relatively with the blower, H, hot-air chamber, E, and pipe, M, for the purposes and substantially as described.

40,091.—Flax Brake and Swingler.—Samuel Cowan, Bloomfield, Iowa:

I claim the combination of the rollers, F G N O, with the endless aprons, B and I, and reel, P, when the two latter move at the same speed, substantially in the manner and for the purposes herein set forth.

I also claim combining with a flax brake, constructed and operating as herein described, the swingler, T, substantially in the manner and for the purposes set forth.

40,092.—Cartridge Bullet.—W. H. Dibble, Middletown, Conn.:

I claim the within-described new article of manufacture, to wit: A quick powder, ductile-metal tubular cartridge projectile, a b c e, with a quick powder charge, within it, and with a fibrous covering, h, and a highly inflammable cementing and igniting cap, i, all as set forth.

40,093.—Skate Fastening.—W. H. Dutton, Utica, N. Y. Ante-dated Sept. 20, 1863 :

I claim, first, The metal loops, as constructed and provided with the posts and buttons, H, in combination with the stationary straps, in the manner and for the purpose described.

Second, The double turn or pulley in the strap, in combination with the metal loops and button fastenings, as described and for the purposes described, the whole being arranged and operating substantially in the manner herein set forth.

40,094.—Lamp.—M. B. Dyott, Philadelphia, Pa.:

I claim a lamp made with a drip-trough depression, b, at its neck and a handle-depression or indentation, C, at its side, with attached handle, C, therein, all as herein shown and described.

[This invention relates to that class of lamps designed for burning coal oil, and it is believed that it possesses many advantages over the ordinary burners.]

40,095.—Cultivator.—B. F. Field, Sheboygan Falls, Wis.:

I claim, first, The arm or drag-bar, G, when constructed as described.

Second, The combination of the arm, G, the cultivator, E F, the independent rolling shield, K, and the arm, L.

Third, The combination of the crank, R, the pulleys, t and s, the shaft, P, and the cords or chains, r and p, for the purpose of elevating the cultivators and shields.

Fourth, Making the wheels of a cultivator adjustable on their shaft or axle, by means of the collars, n n, and set screws, o, substantially as set forth.

40,096.—Cultivator.—B. F. Field, Sheboygan Falls, Wis.:

I claim, first, A cultivator shear, when constructed substantially in the manner described, to be attached to the ordinary drill tooth.

Second, The long handle, H, in combination with the lifting bar, G, substantially as described and for the purpose set forth.

40,097.—Rock Drilling Machine.—J. S. French, San Francisco, Cal.:

I claim, first, The manner of arranging the frame, I, of the machine, so that it and, consequently, the drill, T, may be adjusted in either a vertical or horizontal position or at any degree of inclination between those positions, and at any point in a circular plane parallel with the axis of the drill, to wit: by having the frame, I, hung loosely on an arm, i, which is attached to a block or nut, F, fitted in a vertical column, C, having a screw, G, placed in it, which passes through the block or nut, and the column arranged to turn on a plate, B, on the truck, A, the column being retained at any desired point, and also the frame, I, by the means herein described or their equivalents.

Second, The drawing back of the drill, T, after each stroke, by means of the slide, R, connected with the drill through the medium of the collar, d', fitting in the ledge, c', on the slide, the slide being operated by the rack, r', pinion, s, pawl, S, and crank, n on shaft, K, and springs, u u, or their equivalents as set forth.

Third, Rotating or turning the drill, T, during its backward movement, by means of the box, V, gearing, f' g', ratchet, h', and pawl, V, attached to the pawl, S, substantially as set forth.

Fourth, Operating the hammer, Q, through the medium of the cam, L, slide bar, M, and springs, P P, substantially as specified.

40,098.—Hay Fork.—Theodore Foster, of Coxsackie, N. Y.:

I claim, first, The hinge, b, secured to the top of the handle, B, and operating in combination with the latch, D, and with the fork, in the manner and for the purpose herein shown and described.

Second, The ring, g, and loop, f, in combination with the toggle arms, d d, catches, c c, and latch, D, all constructed and operating in the manner and for the purpose specified.

[This invention relates to certain improvements in the arrangement of the bale from which the fork is suspended, and those parts which retain the bale while the fork is hoisted, and releases the same and allows the fork to tilt when it is desired to discharge the load; also, to a certain improvement in the position and shape of the tines, whereby the same are rendered more firm and less liable to break than tines of the ordinary construction.]

40,099.—Printing Press.—G. D. Gordon, Brooklyn, N. Y.:

I claim, first, Locking and holding a rocking platten securely in a stationary position for the purposes fully described.

Second, I claim placing the shaft of the rocking platten between the impression shaft and the vibrating bed shaft, thus causing the shafts to fall in a direct line with the connecting rods, at the moment of impressions, for the purpose or purposes set forth.

Third, In combination with the shafts so arranged, I claim the manner described of operating the rocking platten for the purpose specified.

Fourth, I claim the end gage, Y, constructed and operated substantially as shown; also, the combination of such end gage, Y, into the drop gage, X, for the purposes herein fully described.

40,100.—Axle Box for Vehicles.—S. F. Green, Croton Falls, N. Y.:

I claim, The combination with the two parts of the divided box, D, axle, A, and nut, B, of the nut, E, in the manner and for the purpose herein shown and described.

[Ths invention consists in having the axle box made in two longitudinal parts, and having a screw thread cut on the outer ends of said parts to receive a rack, which is provided with a circular plate or flange to fit into the outer end of the hub, and serve as an outer bearing for the box and retain the same in a firm position in the hub, the interior of the box being lined with Babbitt metal, whereby the usua difficulty of the working of the box in the hub is avoided, and the box and axle are rendered capable of resisting much wear.]

40,101.—Sheep Rack.—William Heaton, Center Township, Pa.:

I claim the sheep rack, provided with the double inclined bottom, E, sliding fenders, O, and feed-holders, G, provided with prongs, I, the whole constructed, arranged and operating substantially as herein set forth.

40,102.—Slate Pencil Sharpener.—J. M. Hicks, Boston, Mass.:

I claim the manufacture of slate pencil sharpeners or other equivalent instruments, without a separate casing or frame, permanently to hold the roughened surfaces in their relative position as set forth, by forming both roughened surfaces upon one plate or piece, which is bent in the manner and for the purposes herein described.

40,103.—Quartz Crushers.—Alonzo Hitchcock, Chicago, Ill.:

I claim the combination of the circular cap and trough and the three crusher wheels, constructed and operated substantially in the manner described.

40,104.—Cooking Stove,—J. R. Hyde, Troy, N. Y.:

I claim, first, In a cooking stove having an oblong fire-chamber, A, with pot-holes, h h', over it, and a live air-chamber, D D, alongside with apertures, e, between, and a fire-flue, F, extended from the said fire-chamber first over the said air-chamber, as herein described, the removable air-chamber cover, i i, constructed in several parts and secured to the said air-chamber by clamps, k k, as and for the purposes herein set forth.

I also claim a cooking stove having two separate sub air-chambers, D D, arranged between an oven, L, and a fire-chamber, A, and communicating with the latter by apertures, e e, and with the open air by passages, m m', separate from each other and from the main draft-chamber, C, and provided with independent dampers, n n', when a fire-flue, F, is extended from the said fire-chamber along the said oven, and under pot-holes, h h1 h2 h3, in a top-plate, G, substantially as herein described.

40,105.—Adding Machine.—M. C. Jeffers, New York City:

I claim the combination in an adding machine of the wheels, B B, hubs, C C, and verges or scapements, F F, substantially as and for the purposes set forth.

40,106.—Register for Account Books.—A. F. Jones, Douglas, Mass.:

I claim the merchant's monitor, being circular to ecomise room, revolving for greater convenience, and to save steps by bringing the books round to the operator, with movable cases and alphabetically and numerically arranged, essentially as above described.

40,107.—Planting Hoe.—C. N. Jones, Galway, N. Y.:

I claim the arrangement of the foot, E', at the lower end of the seed slide, E, when the latter works in a box, C, secured to the handle of a hoe, A, in the manner and for the purpose shown and described.

[The object of this invention is an attachment to an ordinary hoe whereby corn or other seed can be dropped simply by pushing the hoe down on the ground, and the time usually lost in counting the kernels can be saved.]

40,108.—Chime Bell for Horses.—Charles Kirchhof, Newark, N. J.:

I claim, first, The contrivancer, a a, or its equivalent, to attach and support on or above the horse a number of bells and clappers or their respective equivalents, connected with each other and with the contrivance in the manner and for the purpose as specified.

Second, The combination of rein rings or equivalents with said contrivance as set forth.

Third, The method to produce a peculiar harmonic prolonged alarm by governing and extending the operation of the hammers or clappers and bells by means of springs or vibrating materials, and by other devices described, and the manner in which these different parts are arranged and combined with each other, and also with the contrivance, a a, as specified herein.

40,109.—Attaching Labels to Bales, &c.—E. A. Locke, Boston, Mass.:

I claim the carrier, A, when made with an end gradually tapering to a point, and preceding the anchoring device, provision being made in or on the carrier for attachment thereunto of the detachable anchor.

And I claim so making the anchor that it may be attached to the side and near the point of the carrier, so as to pass easily into the bale with the carrier, and be left therein on withdrawal of the same.

40,110.—Washing Machine.—T. R. Markillie, Winchester, Ill.:

I claim, first, The combination of the furnace, C, with the bottom-plate, of a washing machine in the manner and for the purposes as described.

Second, The method of operating the traveling squeezer, L, by means of the crank-shaft, F, pitman rod, I, and swing arms, h, herein described, whereby the purposes set forth are effected in a simple and efficient manner.

40,111.—Cartridge.—Edward Maynard, Washington, D. C. :

I claim the formation of one or more clasping or retaining tongues in the upper rim of a metallic cartridge by slitting the edge of the same substantially in the manner and for the purpose herein set forth.

40,112.—Metallic Cartridge.—Edward Maynard, Washington, D. C.:

I claim combining with a metallic or otherwise cartridge, a suitable retracting arm, chain, thong or cord, in such a manner as to avoid the necessity of a distinct or unusually thick bottom thereto, substantially in the manner hereinbefore described.

40,113.—Car Seat Lock.—George McGregor, Cincinnati, Ohio:

I claim the arrangement and combination of the case, A, with lug, j, and pin, m, hollow key, C, with double shouldered bit, k, and spring bolt, B, all constructed and operating in the manner and for the purpose shown and described.

[The object of this invention is a latch peculiarly adapted for locking the backs of car seats in either position in which the same may be brought, and arranged in such a manner that the same can be made at a trifling expense, requiring a comparatively small quantity of metal, and that is strong, durable and not liable to get out of order.]

40,114.—Diving Apparatus.—T. C. McKeen, Dunkirk, N. Y.:

I claim, first, The employment of the independent air knapsack, B, constructed and operating substantially in the manner and for the purpose herein shown and described.

Second, The arrangement of the expansible buoys, C, and secondary reservoir, D, in combination with the air reservoir, B, and diving dress, A, constructed and operating substantially as and for the purpose described.

40,115.—Guard Attachment for Locks.—William Miller, Boston, Mass.:

I claim the clasp, D, constructed substantially as shown, so as to be

capable of being fitted on the bore, a, of the key, C, with one end in the keyhole, E, as and for the purpose set forth.

40,116.—Separating Copper Nickel and Cobalt.—A. Monnier, Philadelphia, Pa.:

I claim the treatment of sulphates of copper, cobalt and nickel, by means of chloride of sodium or other compound of chlorine, substantially as and for the purpose herein set forth.

40,117.—School Desk and Seat.—James Monteith, New York City:

I claim so attaching the board, C, to the settee or chair by pivots, a a, or their equivalents, that it may be brought either to a position to form a seat or turned up back, and over to a position to form a desk, substantially as herein specified.

[This invention consists in so attaching the seat to a settee or chair, that it may be turned up and over the back to form a desk.]

40,118.—Steam Boiler.—James Perkins & Wm. Burnet, Newark, N. J.:

We claim, first, The combination of the cylindrical boiler, A, with the boiler, B, and short cylinders, C C, in such a manner that the position of B, is horizontal and also parallel and perpendicular to the boiler, A, so that the steam generated in B, will ascend in a perpendicular line through C C, to A, without obstruction.

Second, We claim the combination of the tubular or other, B, with the horizontal partition, E, and extension thereof, G, substantially in the manner and for the purposes described.

Third, We claim the combination of the boiler, B, with its setting E G and G′, substantially in the manner and for the purpose described.

Fourth, We claim the combination of the parts, A B E F G and G′, substantially in the manner and for the purposes described.

40,119.—Water Elevator.—Isaac A. Pinnel, Galva, Ill.:

I claim the forked hand lever, E, and brake, f, in combination with the drum, A, and wheels, C and D, constructed and operating in the manner and for the purpose herein shown and described.

[The object of this invention is an improvement in that class of machines which are generally used to facilitate and regulate the operation of raising and lowering well-buckets.]

40,120.—Potato Digger.—Wm. Proctor & David C. Payne, Elkhart, Ind.:

We claim, first, The employment or use in a potato digger in connection with the plow share, as aforesaid of rotary cutters, H H, applied at each side of the plow share, to sever stalks or weeds.

Second, The combination in a potato digger, substantially as described, of a series of two or more revolving rakes, J j, to carry the potatoes backward from the plow share, and pulverize and separate the earth, in combination with the plow share, G, as specified.

Third, The combination with the aforesaid rakes, J j, and inclined open frame, I I, with a plow, G, constructed, arranged, and operating as specified.

Fourth, The combination with the gear frame, D, constructed and operating as described, of cogged segments, F, shaft, f, and lever, F′, for raising and lowering the same.

Fifth, The endless carrying apron, K, constructed with alternate slats, k k′, of unequal width, substantially as and for the purposes specified.

Sixth, The combination with the endless apron, K, when constructed as described of the rotary rake, N n, operating in the manner and for the purposes specified.

40,121.—Breech-loading Ordnance.—Robert B. Reynolds, U. S. Navy:

I claim the arrangement with the exterior and lower portion of the gun, of the lobes, d d, rock-shaft, C, toggle, e g, stop, i, and breech-piece, B, operating together in the manner herein shown and described.

[This invention consists in a novel arrangement of mechanism for operating a sliding breech-piece and in an improved system of boring and rifling breech-loading ordnance, whereby some important advantages are obtained.]

40,122.—Buffer Spring for Railroad Cars.—A. H. Rowand, Allegheny City, Pa.:

I claim, first, A bumper or buffer composed of a series of overlapping plate metal springs, so arranged as to form a continuous spring, and having a bulge or swell in the middle; a smaller bulge at each end and a contraction or neck between the bulges, when constructed and operating substantially in the manner described for the purposes set forth.

Second, The combination of the spring, A, double convex tongue, D, and draw-bar, B, when arranged and operating substantially in the manner described, and for the purposes specified.

Third, The combination of the spring, A, double convex tongue, D, and flanges, F, in the manner and for the purpose described.

40,123.—Car Wheel.—Thomas Sharp, Chicago, Ill.:

I claim constructing a two-flanged car wheel of a single casting, when the outside flange is placed at such a distance from the inside flange that the wheel is adapted to the two different gages hereinbefore described, substantially as herein specified and set forth.

40,124.—Manufacture of Steel Traps.—Amos Shepard, Plantsville, Conn.:

I claim a steel trap having its base-plate or base-bar, A, projections, c, and arms, journals or pivots, e e, of the bait-plate, B, and the pawl or catch, C, all cast in one piece and of malleable cast-iron, as herein specified.

[This invention relates to an improvement in the construction of the cheap style of traps, such as are manufactured of scrap iron, and imported and sold at a very small cost.]

40,125.—Water Elevator.—Orlando Shepard, Rochester, Ohio:

I claim the double cone, C C, of the windlass, with the double rope, F F, and pulley, E, when constructed, arranged and operating substantially as and for the purpose set forth.

40,126.—Automatic Feeder for Sugar Evaporators.—Jonathan Smead, Pawlett, Vt.:

I claim the combination of the adjustable float, B, and the valve, e, and its lever, C, or the equivalents thereof, with the induction pipe, D, the supplying cistern, A, and the syphon, G, applied to the latter, the whole being for the purpose and to be employed substantially as specified.

I also claim the combination of the valve vessel, E, and the guard, g, with the induction pipe and the valve thereof.

I also claim the syphon, G, as made with the air vessel, k, and the cup, H, or with either applied to it, substantially as and for the purpose or purposes as specified.

40,127.—Binding Guide for Sewing Machines.—George R. Smith, Dowagiac, Mich. Ante-dated Sept. 12, 1863:

I claim the combination in the manner herein shown and described, of the lining pieces, d d′, and guiding strips, i i, with the laterally and vertically adjustable jaws, a a′, slides j j, and plate, A, all as set forth.

40,128.—Saddle or Sweat Cloth.—Robert Spencer, Newark, N. J.:

I claim, first, The use of the pockets, C C, or their equivalents, attached to the under part or lining of the saddle, and wholly or partially covering the tree and adjusted to be put on or off, substantially in the manner and for the purposes described.

Second, I claim the combination of A B and C, substantially in the manner and for the purposes described.

40,129.—Absorbing and Ventilating Sweat or Saddle Cloth.—Robert Spencer, Newark, N. J.:

I claim, first, The ventilation of the saddle cloth by means of the distinct perforations, p p p p, partially or entirely through the fabric, substantially in the manner and for the purposes described.

Second, I claim the parts, A B and C, in combination with the perforations, p p p p, substantially in the manner and for the purposes described.

40,130.—Grain Dryer.—Wm. H. Sutton & James J. Gibson, Brantford, Canada West:

We claim, first, The perforated metal plate, B, bent so as to form a series of paarallel concaves, a, in combination with the spiral conveyors, D, and a kiln, A, all arranged to operate substantially as and for the purpose herein set forth.

Second, The conveyor, J, placed within the perforated tube, H, fitted within a close or tight box, I, and communicating with the chute, G; in combination with a fan or other blast generating mechanism, all arranged substantially as shown and in connection with the grain drying mechanism to operate as and for the purpose set forth.

40,131.—Wool Carding Machine.—Daniel Tainter, Worcester, Mass.:

I claim, first, The combination with the flange, D, when cut or cored out as described, of the peculiarly constructed arch cap piece, a, with its bead or molding, c, as and for the purposes set forth.

Second, The combination of the ears, i i, and hooks or angular projections, f, with the wings or arms, A or B, and hooks or notches, d′, upon the main frame, F, for the purpose of retaining the wings or arms, A or B, in their proper or relative positions as described.

40,132.—Coal Stove.—W. B. Treadwell, Albany, N. Y.:

I claim, first, Constructing the fire-brick, F, with horizontal arched openings, h h, and vertical openings, h′ h′, communicating therewith, substantially in the manner and for the purposes described.

Second, Arranging the fire-brick, F, with its arched openings, in such a relation to the flue, H, surrounding the supply cylinder, G, and the descending flues, E E, surrounding the fire-pot, that either a descending or ascending draught may be obtained by regulating the single damper valve, b, substantially as set forth.

Third, The cylindrical, flanged, metallic lining, d, in combination with the fire-brick, F, constructed substantially as and for the purposes described.

Fourth, The circular plate grate, K, constructed with concentric openings through it in combination with vertical fingers, S S, of a circularly vibrating rake, substantially as described.

Fifth, Constructing the illuminating door frame with a tongue on its inner surface, and the door box, J, with a corresponding groove on its outer edge, in combination with the nut fastening, i j, as set forth, whereby a closely fitting tongue and groove joint is obtained when the door is closed, substantially as described.

Sixth, The revolving or rocking agitator, L, provided with projections, m m, on its sides, said agitator being arranged at the base of the supply cylinder, G, substantially as and for the purposes described.

Seventh, In a base burning stove having a supply cylinder, G, and a flaring fire-pot, B, I claim interposing between said cylinder and pot the perforated fire-brick lining when the same is arranged at the point where the combustion of the fuel takes place most rapidly and is supported directly or indirectly by the fire-pot, B, and the cylinder, A, substantially as described.

Eighth, The combination and arrangement of flue space, H, supply cylinder, G, chamber, B′, flues, E E, chamber, D, fire-pot, B, and arched fire-brick lining, F, the whole operating substantially as described.

40,133.—Receiving Magnets.—S. F. Van Choate, New York City:

I claim, first, Locating the armature or vibrator of an electro-magnet, together with the core within the coils and concentrically therewith, substantially in the manner herein before set forth.

Second, In combination with an armature located within the cylinder of the spool or coils, I claim the horse-shoe magnet, so shaped that both of its ends are within the cylinder of the spool or in line of its axis, substantially as set forth.

40,134.—Railway Dumping Car.—Anthony Welsch, Chicago, Ill.:

What I claim as my invention in the construction of dumping cars are the bearings, H H, revolving on the end of a bent shaft, that forms the axle for the friction rollers, E E, as and for the purposes herein described and set forth.

40,135.—Fountain Pen.—Joseph Weller, Washington Court House, Ohio:

I claim the central rod, B, provided with a conical shoulder or stopper, b, adapted to fit a countersink in the converging tube, a, in combination with the rocking lever, C, rod, D, and helical spring, E, when arranged to operate in the manner described.

Also in combination with the above described parts the plug, i, attached to the rod, B, and serving to open and close an air ventage in the fountain, in the manner and for the purpose described.

[The nature of this invention consists in a novel contrivance in a fountain pen, whereby the penman is enabled to supply the nib with fluid, according as it is needed for either a fine or coarse hand-writing, without removing his hand from the paper: also, to prevent the pen under any circumstances being surcharged with fluid.]

40,136.—Stopping Bottles.—Anton Wiegand, Philadelphia, Pa.:

I claim the employment for the purposes specified, of the device described; the same consisting of the collar, E, swinging bow, D, screw, B, and cap, C, constructed and applied together to a bottle so as to operate substantially in the manner described and set forth.

40,137.—Coffin.—Samuel H. Young, St. Louis, Mo.:

I claim, first, Arranging the deodorizing chamber on the outside of the coffin body instead of within it, in the manner and for the purpose described.

Second, I also claim the combination of the external deodorizing box, with the wooden coffin made air-tight, by the means herein above set forth.

40,138.—Window Sash Lock.—Wm. E. Arnold (assignor to H. G. Arnold & J. H. Castle), Rochester, N. Y.:

I claim the slide, D D, or its equivalent, in combination with the tumbler, C, and catch-box, A, and upright, B, substantially as herein set forth and described and for the purposes herein named.

I also claim the guide, G, and stop, S, or their equivalents, arranged with the tumbler, C, the whole combined with the box, A, substantially as and for the purposes set forth.

40,139.—Window Sash Lock.—Wm. E. Arnold (assignor to H. G. Arnold & G. H. Castle), Rochester, N. Y.:

I claim the combination of the joint, B or B B, nib, A, grooves, G and F, or their equivalent for the purpose of perfecting a combined horizontal and gravity motion to the bolt, and at pleasure to form either a right or left-hand fasten or lock, the whole being made, arranged and combined with the box, substantially as herein set forth and described, to hold the sash up or down.

Also the notch, E or G, in combination with nib, A, or its equivalent, and joint, B or B B, for the purpose of securing the bolt when down from being pushed inward or upward by any pressure, that may be brought to bear upon the outer end of it, substantially as herein set forth and described.

I also claim the adjustable joint, B B, when arranged with the bolt and box, for the purpose of varying the length of the bolt to the different widths of sash, as herein set forth and described.

40,140.—Machine for turning Irregular Forms.—C. B. Conant (assignor to himself and J. D. Eager), Springfield, Mass.:

I claim combining the tenon machine with the lathe in such a manner that both shall be operated simultaneously, and that one shall so control the motions of the other that the operation of each shall be performed at the proper time, for the purpose of turning out complete articles on which round as well as straight work is to be done, substantially in the manner and for the purpose herein described.

I also claim, in combination with the vertical carriage, A′, the adjustable tenon cutters, C′, and belt pulleys, G′ H′ I′ K′ and F′, when constructed and operated substantially in the manner and for the purpose described.

I also claim the arrangement of the lever, 6, with its links, connecting rods and jaws, M′, for the purpose of opening and closing said jaws on the endless screw, N′, which operates the tenon carriage, substantially in the manner and for the purpose herein described.

I also claim the combination and arrangement of the sliding cam, 12, and bolt, 22, and the devices to operate it, with the lever, K, for the purpose of automatically closing the jaws, L, upon the screw, H, to operate the lathe carriage at the proper time, substantially in the manner herein described.

I also claim connecting the lever, R, of the polishing wheel cutter frame, L, and lever, u, of the friction wheel, W, by means of the adjustable rods, s and x y, substantially in the manner and for the purpose described.

40,141.—Neck Yoke and Whiffletree.—A. S. Dow (assignor to himself and E. W. Wilcox), Cerderville. N. Y.:

I claim the combination of the leather or other packing, D, with the ring, B, made in two parts and united by the screws, d d′ d″ d‴, or their equivalents.

And I also claim the combination of the tubular or cylindrical portion made in two parts, as described, with either a neck yoke or whiffletree, substantially as and in the manner set forth.

40,142.—Projectile for Ordnance.—Halvor Halverson, Cambridge, Mass., assignor to Charles Spear, Boston, Mass.:

I claim allowing the escape of the air on the ramming home of the shot and preventing windage by diminishing the diameter of the shot at or near its base, in combination with the packing and base plate and the air channels and openings, substantially as set forth.

40,143.—Preparation of the Roots of Plants for Useful Purposes.—J. N. Katzenmeyer (assignor to himself and W. C. Molo, New York City:

I claim as a new manufacture, preparing or treating and utilizing, substantially in the manner herein described, the roots of plants or shrubs of the character hereinbefore referred to, for the purpose of making it available for the production of brushes, besoms and other like implements.

Second, I claim as a new article of manufacture, brushes, besoms and other like implements made substantially in the manner hereinbefore described, of the roots of plants or shrubs of the character hereinbefore referred to.

40,144.—Cork-cutting Machine.—George Lloyd (assignor to Edward Bovie and Alex. Mackie), Philadelphia, Pa.:

First, I claim the annular revolving knife, E, when the same is applied to the cutting of corks, substantially as described.

Second, In combination with the said annular knife, I claim any desired number of spindles, K and W, whereby the blocks of cork are held and turned as described, for the purpose specified.

Third, The disks, I and I′, on the tubular spindle, h, the plates, J and J′, attached to the disk, the segments L and L′, secured to the shaft, G, which passes through the said tubular spindle, h, the whole being arranged for carrying and operating any convenient number of spindles, K, with cog wheels, e, substantially as set forth.

Fourth, The spindles, K, each being provided with a roller, c, or its equivalent, and a spiral spring, f, in combination with the bent plate, M, or its equivalent;

40,145.—Self-locking Window Hinge.—J. R. Murphy assignor to Alexander Speer), Pittsburgh, Pa.:

I claim the combination with the two parts of a hinge, the shoulder, i, upon the pivot pin, and the cam-shaped or eccentric opening, and the shoulder formed in the wall thereof, for the purpose of locking a shutter or door back, and at the same time concealing the locking mechanism, substantially as described.

40,146.—Stove Grate.—G. H. Phillips and W. H. Johnson, Troy, N. Y., assignors to Anson Ingraham, Center Cambridge, N. Y., G. H. Phillips aforesaid, and Wm. H. Ingraham, Troy, N. Y.:

We claim, first, A fire grate, A, having two shanks or journals, of which only one, b, is supported by a ring, D, surrounding the grate, and the other one, c, by a bearing separate from and outside of the said ring, the latter being mounted on an annular or open base, E, and connected with both of the said grate shanks by lateral bearings, h h i i, substantially as herein set forth.

Second, We also claim the combination of a perforated slide, g, and slotted casing, L, with a grate, A, having two supporting shanks, b c, and a ring, D, mounted on a suitable open base, E, and provided with lateral bearings, h h i i, for both, and a supporting bearing, m, for only one of the said grate shanks, substantially as herein described, with or without a fixed grate shank bearing, f.

40,147.—Fire Regulator.—John Rozell (assignor to Felix Campbell and H. Y. Davison), Brooklyn, N. Y. Antedated Sept. 11, 1863:

I claim, first, The combined hollow piston and piston rod, D H E, with the cup-shaped packing, f, all constructed and operating substantially in the manner described

Second, The combination with the upper and smaller head, H, of the hollow piston of the guide rollers, c, arranged and operating substantially as described.

Third, In combination with the hollow piston rod, D, the pointed rod, J, lever, K, and weight, L, constructed, arranged and operating substantially as set forth.

40,148.—Machine for Drying Wool.—Hiram Smith, Worcester, Mass., assignor to J. A. Locke, Watertown, Mass.:

I claim the use, in wool-drying machinery, of an elongated fan extending throughout the whole length of the air chamber and operating substantially as described.

I also claim the distributing board, H, arranged and operating in the manner and for the purpose substantially as set forth.

40,149.—Tile Rack and Cut-off.—Porter L. Sword, Adrian, Mich., assignor to G. S. Tiffany, Palmyra, Mich.:

I claim the combination of the sliding rack with the stationary frame, when arranged to operate substantially as and for the purpose herein specified.

40,150.—Cheese Press.—J. L. Treat, New York City, assignor to himself and M. V. Millar, Oriskany Falls, N. Y.:

I claim the combination of the three levers, B F E E2, and G g, constructed in the manner described, the first two forming clamp jaws, and the whole operating together to constitute an automatic press, as and for the purpose specified.

[This is an ingenious device for compressing a cheese equally on both sides by its own weight.]

40,151.—Breech-loading Fire-arm.—J. H. Wichmann (assignor to Henry Schroder), Oldenburg, Germany:

I claim in combination with a hinged breech piece, recessed on its lower side, the cut-away shaft, and lever, D, for the purpose of throwing up said breech piece to load the arm, allowing it to return to its seat, and firmly locking it there, substantially as and for the purposes herein described.

RE-ISSUES.

1,544.—Forge Fire.—John Evans, New Haven, Conn. Patented March 24, 1863:

I claim, first, An inclosed Lehigh forge fire, substantially in the manner and for the purpose herein set forth.

Second, The arrangement of the hollow water chamber front, D, in combination with the fire-place, B, of a Lehigh fire, A, constructed and applied substantially as and for the purpose set forth.

Third, The combination of the air chamber, G G′, in combination with the fire-place, B, of a Lehigh fire, A, and communicating with the air-supply channel, j, and discharge pipe or tongue, m, the whole being constructed and operating substantially as and for the purpose specified.

1,545.—Grain Separator.—B. T. Trimmer, Rochester, N Y. Patented July 7, 1858:

I claim, first, The combination of the blast or draught tube, D, pocket, P, and screens, a b d, or equivalent, arranged in such a manner that the grain that is carried into the pocket is discharged on to the screens, to be separated with the main portion of grain fed directly thereon, substantially as herein described.

Second, In combination with the blast or draught tube, D, pocket, P, and screens, a b d, or equivalent, I also claim the pivoted double spout, g, arranged in such a manner as to discharge the contents of the receptacle either upon or aside from the screens, to accommodate different kinds and conditions of grain, substantially as herein specified.

Third, I also claim the arrangement of the triple blast or draught tubes, D E F, connected with the fan case, and uniting in a common discharge head, G, the tube, D, being provided with the valve, f, and the tubes, E F, having a valve, h, at their junction, by which arrangement the current of air may be intensified or modified in either or all the tubes, substantially as herein set forth.

Fourth, I also claim the adjustable diaphragm, S, situated in the discharge area, at the outlet junction of the triple blast or draught tubes, in combination with said tubes, D E F, by which means the current of air in either is modified, substantially as described.

Fifth, I also claim the combination and arrangement of the blast generator, B, triple blast tubes, D E and F, and their valves, f h, movable diaphragm, S, with the screen box, J, and return spouts, P and Q, operating conjointly for separating, screening and returning the grain, and for increasing, diminishing and modifying the blasts, for the various purposes required, substantially in the manner set forth.

Sixth, I also claim the adjustable deflector, R, in combination with the screen box, J, for returning the lighter grain through the screens, and resubjecting it to the blast or discharging it as refuse, as described.

Seventh, I also claim giving the screens an unequal reversible, gyratory motion, for the purpose of neutralizing the centrifugal force of

the grain, and retaining it in the center thereof, in combination with the vertical, vibratory motion, by means of the double reverse acting cranks, n n, arms, s, and springs, m, or their equivalents. arranged and operating substantially in the manner and for the purpose set forth

1,546.—Converting Motion.—C. L. Spencer, New York City. March 4, 1862 :

I claim the use of the spring, I, or its equivalent, in combination with the curved connecting rods, G G, for the purpose of enabling the operating pawls to be so adjusted as to obtain an effect upon the shaft equal to the action of the crank, while the danger of hanging upon the dead point is prevented, substantially as described.

1,547.—Converting Motion.—C. L. Spencer, New York City. Patented March 4, 1862 :

I claim two hubs, each composed of the two parts, G and B, in combination with friction rollers, C, spring, S, and axle, I, so that each of the said hubs may be alternately fixed to said axle, one revolving loosely while the other is clutched and in action, for the purpose of producing a continuous rotary motion, in the manner and for the purpose herein set forth.

EXTENSION.

Mode of operating Brakes for Cars.—Nehemiah Hodge, North Adams, Mass. Patented Oct, 2, 1849. Re-issued March 1, 1853. Extended Sept. 16, 1863 :

I claim a combination of two levers. f f′, a rod, h, two levers, c c′, and rods, d d′, as applied to the brakes, and two windlasses of the car, and operated by either of the windlasses so as to bring down at the same time the brakes of both trucks upon the wheels thereof, with the same or practically the same degree of force, and whether when the car is running on the railway, the axles of one truck, or of the wheels of one truck, are thrown or moved out of parallelism with those of the other truck, or the rubbers or brakes become unequally worn, or of an unequal thickness. as above stated.

DESIGN.

1,820.—Clock Case.—Elias Ingraham, Bristol, Conn.

Notes and Queries

E. J., of N. H.—Your idea for plating vessels is not new. The Ordnance Bureau is now experimenting on this very idea, and are to practice with a target this week. Commodore Porter has a patent on the use of India-rubber between plates, as you suggest. The owner of a patent of an improvement on a common patented article cannot use the article improved in connection with the original, without the consent of the original patentee, if he is obliged to infringe the first patentee's claims in using his improved implement.

D. P., of N. Y.—We have received your letter, but it is too long for a communication. It is an important subject, as you say, but more suited to the columns of a daily paper. We may be able to refer to the subject, but not at length.

C. E. L., of Mo.—Your article on "Moral Science applied to Labor" is not suited to our columns; but if it were we could not endorse the theory, that Government, as a grand central power, should have control of the labors of the farmer. If you will read Dr. Chalmer's Bridgewater treatise "On the Designs of God in Human Society," you will think differently on such subjects.

J. S. A., of D. C.—The article on cast steel, to which you refer, was not published in the SCIENTIFIC AMERICAN.

W. E. P., of Mich.—The largest steel cannon manufactured in the United States, so far as we know, was by Norman Wiard, of this city. It was a 50-pounder and weighed 7,000 pounds.

J. J. B., of Iowa.—The loss of energy in a steam engine by wire-drawing the steam in its passage from the boiler to the cylinder, is inappreciable, according to the experiments of D. K. Clark on locomotives. He states that the area of the steam pipe should not be less than one-tenth the area of the piston, when the speed of the piston does not exceed 10 feet per second. Theoretically, there is some loss of energy by the friction of the steam in wire-drawing, but the amount has never been determined. When the esistance to the work of an engine is diminished, the best method of economizing the power of the steam is by cutting off rather than by wire-drawing. The initial pressure should not be lowered in the cylinder.

J. B., of Ind.—The loadstone is a magnetic oxide of iron, found in many parts of the world. It abounds at a hill called the iron mountain, not far from St. Louis, Mo.; but the most powerful natural magnets of the kind are found at Magnet cove or valley, near the Washitaw hot springs, in the State of Arkansas. The peculiar property of the loadstone was first observed in specimens of an oxide of iron found near Magnesia, a city of Lydia, in Asia Minor, and hence the name of magnetism has been applied to the phenomenon to which it appertains. Its polarity and attractive properties are daily witnessed in the needle of the mariner's compass, and in the little tack hammers used by some saddlers and upholsterers. Cobalt and nickel are the only metals besides iron which are known to be affected by the magnet. The sulphuret of iron, commonly called iron pyrites, often possesses magnetic properties. Its form is in acicular crystals of a beautiful bright golden color; and many a simple man has been deceived with them in supposing he had discovered a gold mine ; verifying the trite proverb—"All is not gold that glitters."

M. B., of Vt.—Artesian wells are so called from the department in France where they were first made—the district Artois, called Artesium by the Romans. The water is generally tepid, but excellent to drink when cooled. The deepest in the United States is 4,000 feet, at Columbus, Ohio. One in Louisville, Ky., in Messrs. Dupont's paper mill, throws a jet more than 40 feet high: the water of which is impregnated with salt, much resembling the Blue Lick water of Kentucky, and similar to that of many German *brunnen* and *quelle*. It is much used for drinking and for bathing in.

A. J. D., of Ky.—The cultivation of the Chinese tea plant has been attempted with only partial success in several parts of the United States. In South Carolina, Tennessee, Texas and California it has flourished, but the insuperable obstacle to its general cultivation is want of cheap labor. The substitutes for the China tea, in the New world, are numerous. In almost every part of South America the *mate* is used for it. Mate is a species of holly called by naturalists *ilen paraguayensis*. In North Carolina and the adjoining States an infusion of the yopon leaves is the common tea. In New England many aromatic garden herbs are made into tea. In the Middle and Western States the spring table drink is sassafras tea, made of the root bark of the very common laurus sassafras. Tea and coffee may both go out of use one of these days, in America, and something indigenous be used instead.

S. F. H., of N. H.—The lunar tidal-wave is the moving swell caused by the moon's attraction of the waters of the ocean. Its periods change with the position of the moon in her orbit. The most accurate information respecting the tides on the American coast is contained in the reports of the "Coast Survey."

B. W., of N. Y.—Chemically pure bismuth, tin, lead, &c., are not to be found in our markets. You may have such metals rendered pure, however, by Professor C. Seely, chemist and editor of the *American Journal of Photography*, this city.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, Sept. 30, to Wednesday, Oct. 7, 1863 :—

H. M., of N. Y., $25; E. W. S., of N. J., $25; W. T. E., of N. J. $25; A. W. H. of Ill., $41; A. T., of N. Y., $16; W. V. M. K., of N. J., $16; L. M. S., of Ill., $20; B. F. S., of Iowa, $20; A. McK., of N. Y., $20; A. S. M., of Ill., $20; J. R. S., of Pa., $20; E. B. N., of N. Y., $16; G. S., of N. Y., $16; T. C., of R. I., $46; S. R., of N. Y., $25; J. H. Q., of N. J., $15; J. L. L., of Pa., $25; J. G., of Ind., $16; C. S. W., of Mass., $16; J, B., of La., $10; E. H. G., of N. Y., $25; F. J. T., of Md., $16; A. P. P., of Conn., $63; P. & S., of N. Y., $23; H. G. G., of N. Y., $44; J. L., of N. Y., $16; J. A., of N. Y., $16; C. M., of N. Y., $16; H. & S., of Pa., $20; T. H., of Cal., $20; T. H. B., of Mass., $20; G. G., of N. Y., $45; J. W. H., of N. Y., $90 W. K., of N. Y.. $20; R. H., of N. Y., $20; D. W. S., of Conn., $16; J. E., of N. Y., $92; G. W. H., of Pa., $25; S. & B. of Ill., $500; J W. S., of Ill., $16; D. and K., of Cal., $15; C. B. G., of Iowa, $16; H. A. A., of N. Y., $25; W. W., of N. J., $25; B. & B., of N. Y., $25; D. G. G., of N. Y., $16; L. C., of N. Y., $20; J. B., of N. Y., $20; P. M., of Ill., $20; C. C. W., of Pa., $45; W. R., of N. Y., $45; H. I. D., of Ill., $20; E. S., of N. Y., $16; H. M., of N. Y., $44; M. H. F., o N. Y., $30; J. C. B., of Conn., $19; C. S., of N. Y., $12; S. B. H., of Mass., $16; D. R. P., of Mass., $26; J. B. A., of Ill., $15; A. H. G., of N. J., $25; E. St. J., of N. Y., $16.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgement by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

H. M., of N. Y.; A. P. P., of Conn. (2 cases); P. & S., of N. Y., E. C., of N. Y.; H. G. G., of N. Y.; T. C., of R. I ; E. H. G., of N. Y.; S. R., of N. Y.; C. S., of N. Y.; J. L. L., of Pa.; A. W. H., of Ill.; H. A A., of N. Y.; W. W., of N. J.; B. & B., of N. Y.; E. C , of N. Y.; H. M., of N. Y.; D. R. P., of Mass.; A. H. G., of N. J.; E. P., of Ohio; G. W. H., of Pa.; H. G. G., of N. Y.; E. W. S., of N. J.; W. T. E., of N. J.; A. W. H., of Ill.; T. F. H., of N. Y.; R. B. L., of Ohio; P. G., of Mo.; T. J. E., of Ind.; D. C. M., of Nevada; R. T. S., of N. Y.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, Sept. 30, to Wednesday, Oct. 7, 1863 :—