

EXTRAORDINARY PROGRESS OF AMERICAN INVENTIONS IN EUROPE.

Patents for the following inventions have recently been secured in England, through the Scientific American Patent Agency, further showing the great and daily increasing progress which American inventions are making in Europe:—

Molding Candles.—Patentees, Henry Ryder and Horatio Leonard, of New Bedford, Mass. This is an improvement in the apparatus for manufacturing candles, especially those made of paraffine or other substances liable to adhere to, and to be broken in the operation of drawing from the molds. It consists in the employment of a trough at the top of the molds, of sufficient strength to bear the strain requisite to draw all the candles from the set of molds at once, and in the adjustment of springs for closing the lower ends of the molds for forming the tips.

Folding Frames for Umbrellas, Tents, &c.—Patentee, L. K. Selden, of Haddam, Conn. This umbrella frame is made with joints in the ribs, the inner ends of the ribs being fastened to a ring which slides on the central stick, so that by drawing down this ring, the ribs fold inward upon each other, occupying but half the space in length of the ordinary umbrella. The central stick also has a joint in the middle, so that it may be folded. When extended, suitable braces, coming nearly in line with their joints, hold the frame in position. The same device is applicable to tents and awnings.

Printing Addresses on Newspapers.—Patentees, Robert W. and Daniel Davis, of Elmira, N. Y. This is one of the best of the numerous plans which have been devised for printing addresses on newspapers. Each address is cut on a small wooden block, and the blocks are fastened on belts which are slipped upon rollers, so that by the rotation of these rollers, the blocks are brought in succession above the paper to be printed. The patent also covers an invention of a very simple machine for punching or forming the letters in the wooden blocks.

Machinery for Cutting Dovetails.—Patentees, Thomas H. Burley, Charles H. Phelps and William J. Lowerra, all of New York City. This valuable invention was fully illustrated and described on page 193, Vol. II. (new series), of the SCIENTIFIC AMERICAN. The dovetail grooves are cut in the ends of the boards or planks by means of swiftly revolving cutters; the board being tipped at an angle, first in one direction and then in the opposite direction, to give the proper taper to the grooves.

Packing for Pistons.—Patentees, Charles Lowery, of Brooklyn, and Horace A. Miller, of New York City. This improvement relates to that class of piston packing known as "metallic ring packing." It consists in producing the expansion of the packing ring or rings to make it or them fit the cylinder in which the piston works, by means of two levers which are fitted to the central hub or boss of the piston head, and are made to act on a cut metal ring fitted to the interior of the packing ring or rings.

Ships' Stoves.—Patentee, George A. New, of New York City. This is Slaton's ship stove, described and illustrated on page 288, Vol. II. (new series), of the SCIENTIFIC AMERICAN. The stove is hung in gimbals, like a ship's compass, so as to keep its top level notwithstanding the rolling of the ship; and the invention relates to the mode of leading the pipes out of the joints or journals by which the stove is suspended.

Sun Shades or Roller Blinds.—Patentee, Valorus Drew, of New York City. This patent covers several improvements in the mode of hanging window curtains. 1st. For regulating the strain of the cord for rolling the blind up or down; the cord is passed round a groove made at one end of the roller, and it also passes through a ring below, the latter being drawn by another cord fixed at one end to the window frame and provided at the other end with a friction bar or ring, whereby it may be retained at any given point. 2d. To secure the roller in the window frame, one end is provided with a fixed spindle, as usual, and the other end with a movable spindle, which is placed in a recess made in the roller, so that it may be pushed in or out as may be required. 3d. The shade is attached to the roller by means of an elastic rod which is passed through a hem in one end of the blind, and fits snugly in a longitudi-

nal groove made in the roller, in which it is held by staples, and also by being tied or secured at the middle. Messrs. Sullivan & Hyatt, 34 Beekman-street, this city, are the full assignees of the patent.

[To be continued.]

RECENT AMERICAN INVENTIONS.

The following inventions are among the most useful improvements lately patented:—

FIRE-ESCAPE.

Hugh Morohan, of Brooklyn, N. Y., is the patentee of an improved fire-escape, and his invention consists in arranging a sofa or other piece of furniture by means of suitable braces and sections, and by a chain or chain-work in its interior, in such a manner that the same can be fastened economically, and with little loss of time, to the sill of an ordinary window, so as to form the means to pass out of the window and down to the ground by the aid of the chain.

POWER LOOMS.

The object of this invention is to prevent, as far as practicable, the loss of time which occurs in the operation of power looms for weaving hair cloth, when the attendant, whose duty it is to "serve" the hair to the contrivance which places it in the shed, fails to serve it at the proper time, or in case of any failure of the operation of said contrivance. Hair cloth is commonly woven with five sheds, which are opened in regular succession, and in operating a loom of the usual construction, it is necessary, in case of any such failure as is above mentioned, when any one of the sheds is open, to wait till the same shed is again opened before attempting to serve, or the cloth will be made uneven; and thus the time occupied by the opening and closing of the whole number of sheds is lost. A stop motion has been used for the purpose of stopping the harness motion of the loom instantly when the hair is, from any cause, not placed in the shed that is opened to receive it; but this is liable to some serious objections. This invention consists in the use of automatic mechanism which so controls the operation of the harness motion that the opening of the same shed is repeated during the following movement of the lay whenever a shed fails to have the hair placed within it; and such repetition is continued with each beat of the lay until the shed receives the hair, when the operation of the harness proceeds as if no interruption had taken place. Isaac Angell, of Pawtucket, R. I., is the inventor.



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* Pamphlets giving full particulars of the mode of applying for patents, 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.

30,608.—Elliet Andrus, of Geneva, N. Y., for an Improvement in Apparatus for Drawing Water from Wells:

I claim the arrangement and combination of the several parts, for the purpose and to accomplish the result, as above specified, of emptying a bucket.

30,609.—S. P. Atherton, of Fitchburg, Mass., for an Improvement in Hoop Machines:

I claim, first, The combination of a gage cutter with a center head, constructed substantially as described, and having continuous rests, a and b, for the support of the hoop upon a side of the finishing cutter, as set forth.

Second, I claim the crimping roll, L, for giving form to the hoop, as described.

30,610.—A. J. Bartlett of Romulus, N. Y., for an Improvement in Excavators:

I claim the arrangement and combination of the hollow scoop or shovel, D, endless apron or elevator, I, and trough, N, when hinged or joined together, so as to allow the required adjustments of the said scoop, and operating together substantially in the manner and for the purposes specified.

30,611.—R. C. Bristol, of Chicago, Ill., for an Improvement in Slide Valves:

I claim, first, In combination with a valve carried upon rolling supports the use of bearing pieces of metal above and below such supports capable of being detached from the valve and cylinder face, in order that such bearing pieces may be made of a more durable material or be taken out and replaced when worn or injured.

Second, In valves mounted as above described, the wedge form of the bearing piece, E, in combination with the corresponding incline, C, upon the valve or cylinder face, for the purpose of adjusting the valve to its seat, or to the diameter of the rolling supports, G, substantially as described.

30,612.—B. F. Chappell, of Norwich, Conn., for an Improved Plumb-bob:

I claim, as an improved article of manufacture, a plumb bob, provided with a train of wheels, spring and stop, and otherwise made as shown and described.

[This invention consists in introducing within a hollow plumb bob a flanged drum or reel around which the string by which the bob is suspended is wound by a spring and train of wheelwork, and it consists further in applying a pinch-screw to the top of the bob by which the string may be stopped when entirely or partially unwound from the drum; so that a short or long string may be used as occasion demands.]

30,613.—A. F. Cobb, of Chapel Hill, Mo., for an Improvement in Fire Alarms:

I claim the arrangement of a crank shaft, A, alarm bell, H, ratchet, C, D, lever, L, gate, O, and cord, J, in combination with independent crank shafts, I, W, dogs, M, Y, and cords, P, T, leading to various parts of a building, substantially as and for the purpose set forth.

30,614.—L. A. Colbert, of Baltimore, Md., for an Improvement in Warming Apparatus:

I claim the adaptation and arrangement of a warm air reservoir or receiver, A, of box or niche form, and furnished with a door, B, a bottom passage, C, a side dampered passage, E, and a top dampered passage, F, all for use in combination with the ordinary furnace, hot air fine, draught or chimney fine, and fine leading into elevated chambers, substantially in the manner and for the purposes set forth.

30,615.—L. P. Collias, of Sacramento, Cal., for an Improvement in Loop Catches for Sewing Machines:

I claim a metallic or other hard loop catcher for sewing machines composed of a hub or main nut, a, in Figs. 1 and 2, also an adjusting screw, e, also, check nut, f, also, rib or latch, 2, so that the catch being hard and unyielding, against which the loop comes in contact, can be so adjusted by the screw, e, and firmly held by means of check nut, f, that the suture thread cannot pass between said catch and the rotary hook until the proper time for its release, the whole being constructed, arranged, and operating as set forth and explained.

30,616.—G. D. Colton, of Galesburg, Ill., for an Improvement in Apparatus for Drawing Water from Wells:

I claim the employment of the shaft, D, the cylinder, E, the lever, F, the ratchet wheel, a, and ratchet, c, together with the stop, n, the several parts being constructed and arranged substantially as and for the purpose specified.

30,617.—J. W. Crawford, of Rockport, Ind., for an Improvement in Grafting Machines:

I claim, first, The knife, a, with its weight, C, and the device described for operating it, in combination with the slotted bed plate, E, stop, d, d, and gage, y, as and for the purposes set forth.

Second, In connection with the above, and on the pedestal, A, the sliding knife, g, its frame, F, and slide rests, G, G, with the adjustable inclined bed pieces, e, e, arranged and operating as and for the purposes set forth.

[This invention consists in arranging on the top of a suitable standard a weighted cutter which works between two perpendicular guide ways operated by a foot bearer for splitting the stock; and it also consists in arranging by the side of this stock splitter a reciprocating knife and inclined adjustable bed pieces for preparing the wedge on the side.]

30,618.—Perry Davis, of Providence, R. I., for an Improved Boat, Convertible into a Land Carriage:

I claim the combination of the clamps, C, D, and rubber springs, a, formed as shown, with the axle, B, and boat, A, in the manner and for the purposes set forth and described.

I also claim the combination of the peculiarly formed rubber spring clip, G, and plates, g, g', with the axle, H, hook, F, and bow of the boat, in the manner and for the purposes shown and described.

I also claim the arrangement of the wheels, B, with the clamps, C, as and for the purposes shown and described.

[This invention is an improvement in boats to be used on land and on the water, for pleasure purposes. The invention consists in mounting the boat at its bow on an India-rubber spring of peculiar construction when it is used on land, said spring being attached to a square axle or to a square enlargement of an axle, and connected to the bow of the boat in such a manner that the front wheels, or the axles of these wheels, will have a universal play, and so that the bow of the boat will not be subjected to any jar and concussion in passing over rough roads. It further consists in arranging in the stern of the boat, above the keel, two paddle wheels, a, d in using a center board or false keel arranged between the paddle wheels, which wheels have independent shafts, and are turned by pulleys, bands and cranks.]

30,619.—S. S. Day, of New York City, for an Improvement in Fly-traps:

I claim the use or employment of the shelf, F, in combination with the lever, H, catch, G, springs, I, and lifter, J, when the same shall be combined and operated in the precise manner specified or by means substantially the same or in an equivalent manner.

30,620.—John Dickinson, of Painesville, Ohio, for an Improved Last-holder. Ante-dated Aug. 14, 1860:

I claim the mode of securing immovable, or nearly so, the turntable in any position of its vertical axes, by means of the bolt, I, provided with reversed screws on its ends, and operating in combination with the apertures for the apertures of the lower plate, Q, of said turntable, as described and for the purpose stated.

30,621.—H. Wm. Dopp, of Buffalo, N. Y., for an Improvement in Vapor Lamps:

I claim mingling the vapor formed with atmospheric air above the burner, as at a, a, Figs. 1 and 2, the vapor and the air descending through the pipe, A, to be burned at the burner, B, as and for the purpose specified.

30,622.—D. F. Dunham, of Brook, Ind., for an Improvement in Spelling Boxes:

I claim the spelling box with wheels having letters printed on them, as set forth, constructed as described for the purposes set forth.

This invention consists in enclosing within a suitable box having a small opening in one side of its top two or more wheels or cylinders, each of which has an independent rotary movement to the other, and in covering the peripheries of said wheels with the vowels and consonants, making a perfect word, and arranging on the next wheel the alphabet of any language, so that by rotating one of the wheels the letters may be grouped together to form words or parts of words, or simple and compound words.]

30,623.—E. G. Dyer, of Hamilton, Ohio, for an Improved Feed Motion for Head Blocks of Saw-mills:

In combination with the ratchet wheels, F, F, by means of which the head blocks, B, R, are operated, I claim the described arrangement of the pulley, H, vibrating piece, J, H, connecting rod, I, hand lever, L, and pivoted bars, J, J, whereby the operator is enabled to move the log readily and with precision towards the saw, so as to produce either parallel or tapering cuts as the same may be desired, in the manner as and for the purposes specified.

30,624.—E. Ehlin, of Boston, Mass., for an Improvement in Fire Alarms:

I claim, first, The employment or use of a fuse, K, in connection with a weight sustaining combustible thread or fuse, U, applied to a lever and weight, B F, connected with an alarm, to operate substantially as and for the purpose set forth.

Second, In connection with the fuse, K, applied as shown and described, the perforated pipe, H, one or more, and a water supply pipe, G, connected by a tube, M, provided with a cock which is connected to the lever, E, to operate as and for the purpose set forth.

[This invention consists in the employment or use of a fuse connected with an alarm, whereby the fuse, in case of the building taking fire, will conduct the flame to a thread or fuse which holds a weight connected with the alarm mechanism, and igniting the weight sustaining the thread or fuse will cause the weight to be liberated, the alarm mechanism to be actuated and the alarm sounded.]

30,625.—J. H. Elvard, of Ottawa, Ill., for an Improvement in Mole Plows:

I claim the sectional mole, e d c, the coulters, a and b, the coulter, A, being movable with their respective loops and joints, in combination with the side draught of the plow from the link or loop at f on the side of the beam, A, through one of the slots in the transverse piece, for the purpose of giving any desired curvilinear direction to the ditch or drain, when the several parts are arranged and operated together as represented, and substantially as described.

30,626.—Robert Gamble, Jr., of Tallahassee, Fla., for an Improvement in Channel Excavators:

I claim the employment or use of a float, A, provided with an adjustable plate or platform, C, and side pieces, F F, substantially as and for the purpose set forth.

[This invention is designed to deepen or excavate the channels of running streams or tide-ways by deflecting the running water against the bottom of the same.]

30,627.—J. B. Gibbs, of Boston, Mass., for an Improved Skate Shoe and Foot Check:

I claim the grooved skate shoe, constructed substantially as described for the purpose specified.

30,628.—L. W. Harwood, of Troy, N. Y., for an Improvement in Stove Grates:

I claim, first, So forming and arranging an arm, D, fast on the grate, A, and in line, or nearly in line, with the rocking support, B, of the grate, substantially as described, that the grate may be both vibrated horizontally on its central pivot, C, and tilted into a vertical position upon its rocking support, B, by the use of the arm, D, alone, substantially as represented.

Second, I also claim the combination and arrangement of a perforated sliding plate, M, with the slotted casing, G, of the stove or furnace, the arm, D, and grate, A, pivot, C, and rocking bar, R, substantially as and for the purpose described.

30,629.—J. M. Heard, of Prairie Station, Miss., for an Improvement in Railroad Joints:

I claim the arrangement of the tongue, F, to pass into a cavity in the bar, D, so as to be supported thereby, as shown and described, when said tongue is made in one piece with the bar, E, and when the rails are notched and slotted and all the parts constructed and combined all as set forth and represented.

[The object of this invention is to connect together the ends of sections of railroad rails in a more simple and perfect manner than has heretofore been done, to provide for the expansion and contraction of the rail in consequence of the change of temperature, to provide against the jarring, and consequently the wearing loose, and springing of the rails at the joints occasioned by the concussion of the passing and re-passing of trains over the rails, and to provide against the lateral thrust of the rails at the joints.]

30,630.—De Witt C. Hitchcock, E. B. Larchar and E. M. Larchar, of New York City, for an Improvement in Relief Printing Plates, &c.:

We claim the method of producing printing plates, blocks, &c., in relief, by employing liquid silic, or other material that has a hardening effect upon chalk, clay, or other analogous substance, or that has an affinity for, or the capacity to affiliate with the silic as a marking material, medium or ink, to delineate lines, figures, or any desired device, upon the surface of said chalk, clay, or other material susceptible of thus becoming hardened or petrified, and then removing the intervening and unacted on soft material next the surface, by brushing or rubbing so as to leave the said lines in relief, and finally solidifying, in a greater degree, hardening and petrifying the whole body, substantially in the manner and for the purpose set forth.

30,631.—David Johnston, of Eddyville, Iowa, for an Improvement in Water Elevators and Carriers:

I claim the arrangement of the track, carriage, hollow pin, bucket, knot, rope, pulley, A, and latches, B and D, when the whole is constructed, arranged and operated in the manner and for the purpose set forth.

30,632.—J. P. Kirk, of Austin, Texas, for an Improved Chain Link:

I claim the two pivoted hooks, A A', constructed and put together in such a manner that the ends of one hook will abut against or lap on the ends of the other hook, substantially as and for the purposes set forth.

[This invention consists in pivoting together, in a suitable manner, two hooks with beveled ends on the curved portions and straight ends on the shank portions, or in such a manner that, when a tension is brought upon the hooks, drawing from their center or axis of motion, their shank ends will abut against the hooked ends of each other, or lap and abut, and form a figure 8 connecting link, whose axis is to one side of a central line drawn diametrically through the two hooks.]

30,633.—E. B. Larchar, of New York City, for an Improvement in Fire-escapes:

I claim, first, Elevating a platform, or other equivalent device, by means of a telescope column, substantially as and for the purposes set forth.

Second, I also claim the piston joint composed of the fast and loose collars and elastic packing, as described.

30,634.—Rufus Leavitt, of Melrose, Mass., for an Improvement in Sewing Machines:

I claim, in a sewing mechanism, the arrangement and combination of the spool, H, with the lever, C, or other moving part of the mechanism, whose movement is uniform with and relative to that of the needle and with the screw, K, or other equivalent means of adjustment, and spring, N, all operating together in relation to the movement of the needle, substantially as and for the purpose specified.

Also, the employment of the "take-up," for the specified purpose, in combination with a spring and cam, both arranged and operated together to give the take-up the movement due to the form of the cam except when, from strain upon the thread, it requisite for the take-up to yield to avoid breakage of the thread, which yielding the spring, as applied, permits.

30,635.—Meier Rosenberg and Henri Scheuerle, of New York City, for an Improved Spring-Bed Bottom:

We claim the arrangement and combination of hinges with a bed bottom supported by springs, in the manner and for the purpose substantially as described.

30,636.—Nathan Maxson, of Wilmington, Ohio, for an Improvement in Harvesters:

I claim the arrangement of the automatic intermittently rotating platform, V, between the finger bar, R, and dividing axle, U, as shown, so that the cut grain will fall over the fingers upon the said rotary platform and be discharged, as set forth.

[This invention relates to a novel arrangement of parts, whereby it is believed many advantages are obtained over the ordinary harvesters in use.]

30,637.—T. J. Muyall, of Roxbury, Mass., for an Improvement in Machinery for Making India-rubber Hose:

I claim the use of a series of rollers having curved peripheries, which bear upon and work the coating or covering of india-rubber or gutta-percha into the surface of the woven tube placed upon a suitable mandrel, substantially as described.

30,638.—Wm. McAllister, of Gerry, N. Y., for an Improved Manufacture of Cheese:

I claim, first, The use of sour whey in combination with rennet, as and for the purpose set forth; and in connection therewith, I claim,

Second, The use of brine in the manner and at the period in the process of making cheese, for the purposes set forth.

30,639.—Hugh Morohan, of Brooklyn, N. Y., for an Improvement in Fire-escapes:

I claim the arrangement and combination, as shown and described, of the brakes, J K, gears, L M, shaft, E, drums, F I, chain, G, and rod, D, as and for the purpose shown and described.

30,640.—L. W. Nicholls, of North Brookfield, N. Y., for an Improvement in Odometers:

I claim the arrangement of the tubular sleeve, J, in combination with the shaft, I, carrying the ratchet wheel, H, and with the shaft, K, giving motion to the registering wheels, substantially as and for the purpose specified.

[This invention consists in the arrangement of a square tubular socket or sleeve, in combination with the vertical arbor which serves to communicate motion to the registering wheels, in such a manner that said arbor is allowed to rise and fall with the motions of the carriage, and that sudden jerks or other violent motions have no injurious influence on the correct action of the register.]

30,641.—R. S. Payne, of Chicago, Ill., for an Improvement in Sewing Machines:

I claim a reciprocating disk and two loose feed rings, arranged upon the circumference of said disk and operated by mechanism, substantially as described, in combination with a needle working between the two feed rings, substantially as and for the purposes set forth.

30,642.—C. W. Pearson, of Charlestown, Mass., for an Improvement in Swifts:

I claim the combination of the hollow arms, C C', E E', and spring wires, G, for extending the same, substantially in the manner and for the purpose specified.

Second, I claim, in combination with the above, the hubs, B and D, and thumbscrew, F, for holding the arms in any required position, substantially as described.

30,643.—Julius Pollock, of Morrisania, N. Y., for an Improvement in Ventilating Sweat Leathers for Hats:

I claim making single sweat leathers for hats, with embossed protuberances at any desired distance apart filled in on the side next the hat with some light and elastic substance, substantially as described, to form yielding cushions against the forehead, as set forth.

And I also claim making such single embossed sweat leathers with crimped or embossed corrugations at the sides, when the same are stiffened by coating the inside next the hat with shellac or other waterproof cement, substantially as described.

30,644.—Servetus Longley, of Cincinnati, Ohio, for an Improvement in Street-sweeping Machines:

I claim the eccentric ring, H, arranged and combined with the brush heads, substantially in the manner and for the purposes set forth.

[This invention is applied to brooms or scrapers which extend diagonally across the machine, and which sweep or scrape, as the case may be, the dirt, dust and snow to one side of the machine into wind rows. It consists in hanging the broom shaft in such a manner that it may be raised or depressed, so that the brooms or scrapers may be raised entirely free from the ground if desirable; and it consists in attaching, by a crank arm, each broom or scraper head to an eccentric ring, which will keep the broom or scraper always in a perpendicular position with the surface of the street, at the same time all the brooms are allowed to yield and to accommodate themselves to the unevenness of the surface of the street.]

30,645.—G. S. Roundebush, of Natchez, Miss., for an Improvement in Cotton and Corn Stalk Cutters:

I claim the bi-conical roller, D, provided with the knives, E, in connection with the knife cylinder, H, and with or without the bars or scrapers, G, all being placed in the frame, A, essentially as and for the purposes set forth.

[This invention is designed for cutting into pieces standing cotton and corn stalks, so that the same may be placed under the surface of the ground, and the latter rendered suitable for cultivation at a very moderate expense, the hitherto tedious hand labor being avoided and the work done much more thoroughly.]

30,646.—George Rugg, of Potsdam, N. Y., for an Improvement in Turning Machines:

I claim a new mode of constructing, arranging and operating devices, for the purpose as specified.

I claim, first, The tube stock, F, as attached and operated by means of the arm, d, the revolving pattern, L, and clutch, J, as connected and operated in the manner and for the purpose specified.

Second, I claim the guard, c c, as adjusted, for the purpose specified.

30,647.—Christian Sharps, of Philadelphia, Pa., for an Improvement in Forming Cartridge Cases:

I claim forming cases for metallic cartridges by placing a hollow cylinder in chambers of the desired form, and expanding the said cylinders within the chambers by means of plungers, through the medium of water or other suitable fluid, substantially as set forth.

30,648.—D. E. Somes, of Biddeford, Maine, for an Improved Heel Shave:

I claim the described heel shave, constructed substantially in the manner set forth, being provided with guides, A, gage, E, adjusting screws, C G, set screws, D D, and double-edged knife, B, arranged as and for the purpose as described.

30,649.—Gustav Wedekind, of Philadelphia, Pa., for an Improvement in the Preparation of Transparent Pictures:

I claim affixing and preserving lithographic pictures upon glass, mica, or other similar transparent substances, to be used for gas or lamp windows, screens, &c., by means of a plastic composition and a solution of silicate of soda or potash prepared and used as set forth and described.

30,650.—T. J. Weeks, of New London, Conn., for an Improved Harness Saddle:

I claim the disk, E, and bars, D D A B, constructed, combined and arranged substantially as and for the purpose set forth.

[The object of this invention is to obtain a harness saddle that will conform to the movements of the animal, without galling or injuring the same by rubbing and friction, even when made to sustain a heavy load.]

30,651.—S. W. Tyler, of Greenwich, N. Y., for an Improvement in Harvesters:

I claim, first, The combination of the automatically adjustable head piece, G, and twin plate, M, or their equivalent, with the cutting apparatus arranged and operating substantially as described.

Second, I claim the iron hanger, D, for a common support for the journals of the pinion and pitman shafts of a harvesting machine, when used as a strong iron brace of a light wooden frame, in combination with such frame, substantially as described.

Third, I claim the hand lever, L, when constructed and used as specified, in combination with the cutting apparatus, for the purpose set forth and substantially as described.

Fourth, I claim the adjusting rod, I, or its equivalent, by the use of which the driver, while on his seat, may bring the cutting apparatus to a position at right angles to the head piece, where it may be held in combination with the head piece and cutting apparatus, for the purposes set forth and substantially as described.

30,652.—Isaac Angell, of Pawtucket, R. I., assignor to the Pawtucket Hair Cloth Company, for an Improvement in Looms for Weaving Hair Cloth:

I claim the re-opening of the shed after the failure of the hook to take a hair, without stopping or disconnecting the heddles from their source of motion, in the manner, substantially as shown and described.

30,653.—H. N. Black (assignor to himself, H. Korn, Jr., and E. S. Bodine), of Philadelphia, Pa., for an Improvement in Machines for Hulling and Cleaning Rice:

I claim, first, The huller made up of plates of metal or other suitable material, the plates being detachable and having an elastic bed as the exterior hulling surface, and the solid cone for the inner hulling surface, as set forth.

Second, I claim the combination of a rubber constructed as d operated as described, with the cylinder for chafing the grain, as set forth.

Third, I claim the brushes or polishers constructed and operated as described, in combination with a cylinder of solid surface for polishing the grain, as set forth.

30,654.—Jacob Kinzer (assignor to C. Adams), of Pittsburg, Pa., for an Improvement in Door Locks:

I claim combining the roller, E, with the latch bolt, B, for the purpose of lessening the friction when forcing the bolt back into the lock, substantially as shown and described.

30,655.—Frederick Landon (assignor to B. E. Huntley, J. M. Bowman, Charles Silliman and Lafayette Silliman), of Brockport, N. Y., for an Improvement in Harvesters:

I claim, first, The traction yoke or lever, D, the rods, L, the pinion shaft and the gudgeon, I, as fixed fulcrum of the traction lever, in combination with the axle of the drive wheel, to secure a rolling or traction draught of the drive wheel while making descents, and especially when it may be necessary, in the use of the machine, to pass from declivities of greater or less degrees, for the purpose specified.

Second, The traction lever, D, the rods, L, the pinion shaft and gudgeon, as fixed fulcrum for the traction lever and the axle of the drive wheel, in combination with the frame and finger bar, to secure an automatic adjustment of the finger bar to the periphery of the drive wheel, for the purpose specified, substantially as described.

Third, The combination of the traction lever, D, the rod, r, and the frame, A, to secure an adjustment of the finger beam with respect to the periphery of the driving wheel when the machine is used for harvesting grain, substantially as described.

30,656.—John McCarty (assignor to Leysert, McManus & Co.), of Philadelphia, Pa., for an Improved Horse Shoe Machine:

I claim, first, The combination of the stripper, P, weighted lever, L, and carriage, E, the latter having a plane parallel with that in which it moves, for receiving the weighted end of the lever, and the said plane terminating in an inclination, h, so that the said stripper may have the desired dwell between its upward and downward movements, as and for the purpose specified.

Second, The combination of the stripper, P, lever, L, and rods, Q and Q', or their equivalents, arranged and operating substantially as set forth, for the purpose set forth.

Third, The combination of the stripper, P, the former, K, and the projection, d, of the platform, B, the said projection being of the same form as, but somewhat less than the end of the former, K, and arranged to coincide with the latter during the operation of the stripper, as set forth.

30,657.—H. F. Phillips (assignor to Downs & Co.), of Seneca Falls, N. Y., for an Improvement in Apparatus for Drawing Water from Wells:

I claim the combination and arrangement of the pivoted movable frame, A, or its equivalent, for sustaining the shaft, F, and main pulley, G, with the stationary pulley, J, weight, K, and bucket, D, and catch lever, L, substantially as and for the purposes set forth.

30,658.—D. E. Somes (assignor to J. S. Anderson), of Biddeford, Maine, for an Improvement in Curing Provisions:

I claim salting and curing food and hides, in latitudes too warm for the ordinary processes to be carried on, by means of operating in excavations made in the earth, to a depth sufficient to attain the minimum temperature, and further cooled by artificial refrigeration as set forth.

30,659.—Owen Sturdevant (assignor to himself and J. S. Gregory), of Maquon, Ill., for an Improvement in Mole Plows:

I claim forming a circular hole or suitable space under the end of collar, E, in combination with a groove in the top surface of the mole tooth, a, and the clamping part, a', placed behind the mole tooth substantially as described, a d for the purposes set forth.

[This invention is an improvement in that class of plows which make a small hollow drain, from 12 to 18 inches below the surface, by forcing a peculiarly pointed tooth horizontally through the ground. It consists in a novel method of closing up the opening in crown of the channel which is made by the cutter, thereby preventing too much surface water from being drained off by the channels, and also preventing the channel from clogging up.]

30,660.—George Williamson (assignor to L. S. Goble and H. E. Richards), of Newark, N. J., for an Improved Clamp for Holding Cylinders to be Polished:

I claim the combination of the section, B flange, K, spring, s, screw, c, and band, d, substantially in the manner and for the purpose described.

RE-ISSUES.

F. H. Bartholomew, of New York City, for an Improved Method of Governing the Action of Valve Cocks. Patented June 20, 1854:

I claim, first, The combination of these three elements or devices, viz: 1st, a variable chamber provided with proper apertures for admission and discharge of fluid; 2d, two valves acting to open and close a passage through which water may flow, the one being on its seat or closing the passage, when the variable chamber is of largest capacity, and the other being in a like position or performing the same office when the capacity of the chamber is smallest; and, 3d, A proper connection between the valves and the variable chamber, so applied that the motions of the former shall be controlled by the latter, the whole three being constructed and acting in combination substantially in the manner and for the purposes described, when operated upon by any competent force.

Second, I claim the combination of two valves, a variable chamber and a connection between them all, substantially such as last enumerated, with a seat or platform, substantially such as is described, by means of a connection, substantially such as is set forth, whereby the seat or platform, the valve and the variable chamber, all act in unison, substantially as set forth.

Third, As a means of preventing concussions on pipes supplying urinals or hopper closets where the amount of water used is not a material consideration, and where yielding seats or platforms are employed to open a supply valve, I claim the combination, substantially as described, of a variable chamber, a single valve and a yielding seat or platform, with proper connections and attachments, so that the motions of the valve may be caused by the seat and governed by the variable chamber, substantially as described.

Fourth, I claim the combination of a diaphragm performing the duty of a stuffing box, with a valve or valves and with a variable chamber controlling the valve or valves, the whole constructed and operating substantially as recited.

F. H. Bartholomew, of New York City, for an Improved Method of Governing the Action of Valve Cocks. Patented June 20, 1854:

I claim as my own invention the following devices in combination, viz: First, A pan provided with a proper rockshaft arm, or its equivalent.

Second, A valve or cock to open and close a passage way leading from a street main or its equivalent, to a basin of a pan closet.

Third, A variable chamber connected with the valve, so as to control its motions in either or both directions by retarding either its opening or closing, or both.

Fourth, A spring, or its equivalent, compressed when the valve is opened and expanding to close the valve when the pressure upon the spring is released.

Fifth, A lever so connected to the pan and to the valve as to open both when force is applied to the lever; and,

Sixth, A counter balance, or its equivalent, acting to raise or shut the pan, but not operating to close the valve; intending to claim none of these parts separately, but in combination only, and where all of them are constructed and operate in combination substantially as described.

R. M. Berry, of New York City, for an Improvement in Sewing Machines. Patented Dec. 7, 1858:

I claim forming the moving feeding surface of the material, or its equivalent, for the purpose and in the manner substantially as described.

Bernard Hufnagel, of New York City, for an Improvement in Photographic Baths. Patented Oct. 5, 1858:

I claim, first, The construction of a silver bath for photographic and ambrotype purposes, made out of two plates of glass with india-rubber packing between, and fastened together between wooden or other framework, in the manner and for the purpose substantially as specified.

Second, I claim the construction of the outer or wooden box or case and the manner of fastening the same together by screws, S, for the purpose and in the manner as set forth.

Third, I claim the arrangement of doors or panels, D D', in the front and back sides, B and B', or the outer box or casing, for the purpose substantially as described.

William Scarlett, of Aurora, Ill., for an Improvement in Skates. Patented May 29, 1860:

I claim, first, A skate composed of two sheet metal parts, A A A cut and bent into the proper form and applied together as shown.

Second, The employment of the central stiffening bar, D, in skates of the character above described, for the purpose set forth.

S. W. Tyler, of Greenwich, N. Y., for an Improvement in Harvesters. Patented Jan. 26, 1858:

I claim the single head piece, a, or its equivalent, as an intermediate automatically adjusting attachment for the reciprocating cutting apparatus to the carriages of harvesting machines, when combined with two or more main driving or bearing wheels and with the actuating gear in such a manner as to permit of the cutting apparatus being attached at the side of the carriage of the machine, and allow it to adjust itself to the inequalities of the ground, independently of the actuating gear and other main portions of the machine, for the purposes and in the manner substantially as described.

C. E. Smith and G. I. Hardeman, administrators of J. L. Hardeman (assignor to Wm. N. Whiteley, Jr.), of Springfield, Ohio, for an Improvement in Hemp Cutters. Patented August 21, 1855:

I claim, first, In combination with a cutting apparatus extending out from the side of the main frame to the front and to the rear of motion of the machine, substantially as described, I claim the employment of the horizontal reel supported entirely outside of or near the stubble end of the cutting apparatus, and so constructed with curved beaters or arms, or their equivalents, that it will press or hold the standing grain against the cutting apparatus, and then sweep the falling and cut material off to the rear of the cutting apparatus and discharge it sufficiently to one side of the machine to admit of the latter passing between the thus discharged material and the standing material to make the next cut, substantially as described.

Second, I claim, in combination with the cutting apparatus and reel, the employment of the curved guide rod, n, arranged and operating as specified, for the purpose set forth.

Third, I claim, in combination with the cutting apparatus and the horizontal reel, combined and operating as described, making the end of the curved reel arms to pass around in the open space formed by the divider, as described, for the purposes set forth.

Charles Eldy and Jacob Shavor, of Troy, N. Y., assignees through nense assignments of Henry Stanley, of Poutney, Vt., for an Improvement in Coal Stoves. Patented Jan. 4, 1845; extended for seven years from and after Jan. 4, 1859; re-issued April 10, 1860; and again re-issued May 8, 1860:

We claim the manner in which be arranged and combined as a whole the exterior parts, consisting of a projecting plinth or base, radiating columns, cornice or abacus, E, cornice, O, and of two cylinders. The first, a fire cylinder, A, having four triangular radiating flues or columns arranged, connected and combined with the same, one at each corner of the said projecting plinth or base, each forming a communication with the air-chamber, a, in said plinth or base, and with the said intermediate chambers, B and B', in the said cornice or abacus; the second, a surmounting cylinder, A', having four triangular radiating flues or columns arranged, connected and combined with the same, one at each corner of the said cornice or abacus, E, having also the chamber, H, and having the cornice, G, upon the top thereof, substantially as described and set forth.

We also claim the arrangement and combination of the said shell, x, at or near and with the lower end of the said fire cylinder, A, and with the fire grate, d, substantially as described and set forth.

We also claim the arrangement and combination of the conical rim, l, having thereon the grate, k, with the intermediate chamber, E, substantially as described and set forth.

We also claim the arrangement and combination of the conical ring, i, and the solid part thereof, with the rear intermediate chamber, E', substantially as described and set forth.

We also claim the arrangement and combination of the upper cylinder, A', and the flues or columns, B', and the chamber, H, connected therewith, with the cornice or abacus, E, or its equivalent, as and for the purposes described and set forth.

We also claim the arrangement and combination of chamber, H, having therein the damper, O, and thereto attached the exit pipe, F, with the rear intermediate chamber, E', substantially as and for the purpose described and set forth.

We also claim the arrangement and combination of the said shell, x, with the opening, S, or its equivalent, to diffuse and heat the air preparatory to its entrance under and into the fire, to aid, facilitate and promote the combustion of the fuel and to increase the volume or quantity of heat by means thereof, as described and set forth.

We also claim the arrangement and combination of the cornice, G, with the flues of columns, B', and with the cylinder, A', substantially as described and set forth.

DESIGNS.

N. S. Vedder (assignor to Hicks, Wolfe & Co.), of Troy, N. Y., for a Design for Parlor Cooking Stoves.

T. A. Carew, of Cambridge, Mass., for a Design of a Medallion Likeness of Theodore Parker.

J. D. Marshbank (assignor to himself and W. McConkey), of Lancaster, Pa., for a Design for Stove Doors.

John Polhamus, of New York City, for a Design for the Handles of Spoons, Forks, &c.

H. G. Reed, of Taunton, Mass., for a Design for Tea Service.

J. Steffe and S. H. Sailor (assignor to Cox, Whitman & Cox), of Philadelphia, Pa., for a Design for a Stove.

J. B. Sargent and Purmot Bradford (assignor to J. B. Sargent aforesaid), of New Britain, Conn., for a Design for a Drawer Pull.

N. S. Vedder (assignor to Hicks, Wolfe & Co.), of Troy, N. Y., for a Design for Cook's Stove Plates.



W. S., of Ill.—Of two sheet iron pans for boiling sugar juice, each having 16 square feet of bottom surface and a depth of but 4 inches, but the one having straight and the other flaring sides, more juice will be evaporated in the same space of time from that with the flaring sides than from the other, if the sides are exposed to the heat of the fire. But if the bottoms of the two only are exposed, we think the one with the straight sides will evaporate somewhat quicker. Your engine being 13 inches bore, stroke 3 feet and making 50 revolutions per minute, with 80 lbs. on the square inch, will be 36.19 horse power. As your piston runs at the rate of 150 feet per minute, the pressure in the cylinder will be as much as 10 lbs. less than in the boiler, and perhaps double this amount. You can only determine this with a gage. The boiler pressure is taken to be all above the atmosphere.

D. P. N., of Texas.—We have never seen oysters put up in a natural state that were capable of being kept fresh in warm weather for any considerable length of time. In putting up fresh vegetables and meats in air tight cans, the latter are first filled and soldered tight, then they are placed in boiling water with the ends up, when the expanded air inside bulges out the tin. A can is now lifted out, and a small hole is pierced in the end, through which the expanded air escapes from the inside, and the hole is then immediately closed with a piece of solder.

W. I., of Litchfield.—If you desire an answer to your letter you must inform us in what State you reside. You can get a copy of Muh's patent by addressing the Commissioner of Patents.

P. C., of England.—Machines for shearing sheep have been patented in this country, and we have illustrated some of them in the back numbers of this journal. We have not heard of the successful introduction of any of these machines into use, although there is great want of a good invention for this purpose.

T. B., of C. W.—We are much obliged to you for your kindness in offering to furnish us with a drawing of the Marquis of Worcester's original steam engine, but we have what is said to be a representation of it in Stewart's rare work on the steam engine. We esteem your obliging offer none the less on this account. We shall re-produce this engraving for publication as soon as we have room for it.

C. C. P., of Ohio.—The liquid which you have sent us, and which you state was obtained from the ground near Athens, is coal oil, and similar to that found in the oil wells of Pennsylvania. It requires to be purified before it can be employed for burning in lamps.

J. H., of Pa.—We do not think there is any need of your publishing anything about your steam plow at present. You cannot help the delay, and whenever you are ready to negotiate with parties you can readily make known the fact by advertisement through this paper. We do not think we can possibly attend the trial you speak of, as we are obliged to stand at our post of duty here.

W. J. H., of Ohio.—Clocks for telling the days of the week and month, and names of the month, are common, and have been known for a century. Patents, however, are frequently granted for improvements in such clocks, which are termed calendar clocks. We have also seen a contrivance attached to a clock for telling the time in different parts of the world. If you will send us drawings of your invention, we shall be happy to give you an opinion of its patentability.

J. H. P., of Texas.—If you have got air bubbles into your barometer, you will have to pour out the mercury, invert the tube, and fill it again.

W. S. I., of Oregon.—We have no data upon which we can estimate the time required to make a carriage wheel by machinery. We shall be happy to receive your model and act as your agent in procuring a patent for your invention.

C. R., of La.—Your suggestion in regard to an improved paper for the use of magnetic telegraphs is not new. It was carried out many years ago in Bain's chemical telegraph. He used chemically prepared paper, which was marked by the passage of electricity conveyed to it by the point.

E. O., of Va.—We have received the model and description of the improved steam governor, and we are of the opinion that a patent cannot be obtained for it. The principle is so much like Reynold's that a valid claim could not be obtained. You had better have us make a preliminary examination of the water wheel at the Patent Office.

N. R. R., of Ill.—We think our readers have had enough of the crank motion.

A. F. O., of N. Y.—We doubt whether you can produce power by such agency as you speak of as cheaply as it can be produced by coal and water, and doubt whether such an engine can be kept under perfect control. The only satisfactory solution to your question will be a trial.

H. K., of N. Y.—The standard price of 22 carat gold is £3 17s. 10½d. per ounce in England. This is called the mint price of gold in that country, because £3 17s. 10½d. is coined from every ounce of standard gold.

J. W. H., of Iowa.—You cannot weld iridium and steel together. You will find a description of the mode of electrotyping woodcuts and forms of type on page 257, Vol. I. (new series) of the SCIENTIFIC AMERICAN.

E. F., of Maine.—One horse will not be able to drive a 22-inch planing machine. To prevent black ink from molding, put in a little essence of cloves. To make red sealing wax melt 4 oz. of hellac in a bright copper pan, then mix 1¼ oz. of Venice turpentine and add 3 oz. of vermilion.

R. C. B., of Ill.—We are perfectly open to be convinced that friction is not independent of velocity when any well authenticated facts are shown to be inconsistent with the received doctrine.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Nov. 17, 1860:—

- H. T. P., of Mass., \$25; H. T. S., of Mich., \$30; H. S., of N. Y., \$30; J. E. A., of Ill., \$10; J. W. S., of Ill., \$25; O. S., of Ala., \$25; A. C., of N. Y., \$30; D. W. S. K., of Ill., \$10; G. W. H., of Pa., \$25; W. A. H., of R. I., \$350; L. & B., of Mass., \$30; J. N. P., of N. Y., \$30; H. B. W., of Conn., \$35; A. M., of N. Y., \$250; E. F. F., of Ky., \$30; A. J. R., of N. Y., \$50; T. S. D., of N. J., \$25; S. & S., of Ga., \$25; J. G., Jr., of N. Y., \$30; V. & K., of N. Y., \$25; J. P. S., of N. Y., \$73; W. S., of Mass., \$25; D. S., of N. Y., \$30; W. H. T., of Mass., \$30; P. L., of N. Y., \$30; C. S., of Ohio, \$35; L. F., of Mass., \$30; C. R. C., of Cal., \$35; D. H., of Ala., \$35; W. H. Y., of Conn., \$35; D. J. T., of Va., \$90; A. & J., of Tenn., \$25; J. E. F., of Fla., \$55; E. C. T., of N. Y., \$25; A. F. F., of Vt., \$30; J. P. W., of Ky., \$25; W. Y., of Ind., \$30; A. I., of Iowa, \$30; H. R., of N. Y., \$30; L. P. T., of N. Y., \$150; G. C., of Maine, \$55; J. S., of Pa., \$10; E. H., of Cal., \$35; S. & A., of Iowa, \$30; T. B. J., of Ill., \$35; F. P., of Tenn., \$30; E. B., of Ind., \$10; J. A. C., of Ohio, \$30; R. F. B., of N. Y., \$20; S. & P., of N. Y., \$25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Nov. 17, 1860:—

- J. E. F., of Fla.; J. L. F., of Iowa; S. & S., of Ga.; J. W. S., of Ill.; W. S., of Mass.; A. J. K., of N. Y.; J. C. H., of N. Y.; J. G., of Ohio; O. S., of Ala.; E. S., of N. Y.; P. L., of N. Y.; E. C. T., of N. Y.; W. H. Y., of Conn.; A. & J., of Tenn.; H. T. P., of Mass.; T. S. D., of N. J.; G. W. H., of Pa.; J. P. W., of Ky.; V. & K., of N. J.; C. S., of Ohio; E. B., of Ind.; E. H., of Cal.; P. J. A., of N. J.; H. B. W., of Conn.; A. M., of N. Y. (three cases).

NEW BOOKS AND PERIODICALS RECEIVED.

THE ATLANTIC MONTHLY for November. Ticknor & Fields, Boston. The high literary character of this magazine is well sustained.

WARREN'S DESCRIPTIVE GEOMETRY. General problems from the orthographic projections of descriptive geometry; with their applications to oblique, including isometrical projections, graphical constructions in spherical trigonometry, topographical projection ("one plane descriptive"), and graphic transformations. By S. Edward Warren, C.E., Professor of Descriptive Geometry and Geometrical Drawing in the Rensselaer Polytechnic Institute, Troy, N. Y. John Wiley, No. 66 Walker-street, this city.

This is a book of 466 pages, profusely illustrated with diagrams, well engraved, and seems to be a learned and exhaustive treatise.

THE AMERICAN STOCK JOURNAL. Published monthly at No. 25 Park-row, this city. D. C. Lindsey, editor and proprietor.

This is one of the ablest agricultural papers in the country; we never take up a number without finding something valuable in it.

EDINBURGH AND WESTMINSTER REVIEWS. Published by L. Scott & Co., Gold-street.

These two reviews for the present quarter contain quite a number of deeply interesting essays. The "Westminster" contains a review of the life of Robert Owen, and another disquisition on the North American Indians, which are of great interest to all American readers. The "Edinburgh" contains a most able article on "Grotius, and the Sources of International Law." These periodicals contain the essence of European literature.

THE AGE OF HORSES. By Louis Brandt, Veterinary Surgeon, of Indianola, Texas. Published in this city by the author.

This little book, which may be carried in the pocket, contains full directions for telling the ages of horses by their teeth, written in a plain, clear manner, and fully illustrated with 46 wood engravings. From the great number of people who would like to know how to tell the age of a horse with certainty, this work is doubtless destined to have a wide circulation. It is endorsed by Dr. Dodd, the well known veterinary surgeon of Boston. The book can be had of W. F. Heins, No. 31 Nassau-street, this city. Price \$1.