77,915.—JOINT FOR SHACKLES.—John F. Reiner, Columbus City, Iowa.

I claim a joint or shackle having parts, A and B, bolts, C and E, clutch, D, and hollows, G, constructed, combined, and arranged substantially as specified.

77,916.—CAN OPENER.—Charles F. Ritchel, Chicago, Ill.

I claim the can opener made of one piece of sheet metal, as described, provided with point, D, and blade, E, both arranged and operating substantially as herein shown and specified.

77,917.—GAS BURNER—Wm. H Rodgers, Brooklyn, N. Y.

I claim, 1st, the cock, c, formed with the gas ways 2, 4, and 7, in combination with the opening, 3, and pipes, 5 and 6, to supply gas to the chamber, f, and jet, i, when the jet, e, is extinguished, the parts being arranged and acting substantially as and for the purposes set forth.

2d, The regulating screw or cock, S, in combination with the jets, i and e, all and for the purposes set forth.

77,918.—HARNESS LOOP.—Geo. W. Rowland, Salem, Oregon.

I claim a winged metallic loop for attachment to harnesses, constructed to operate substantially as described.

77,919.—MOP WRINGER.—Hugh B. Rorke, California, Mo.

Antedated April 29, 1868.

I claim the rollers, B B, either with or without corrugations, the ear pieces, A, lever, C, when combined and arranged as described and set forth.

77,920.—MACHINE FOR TREATING HIDES.—Hermann Royer Louis Royer, San Francisco, Cal.

We claim, 1st. The vertical shaft, B, with a slot, B', and set screws, b b b, said shaft having a forward and and back motion, substantially as and for the purpose described.

2d, The pins or rollers, C C, set in the rings, D and D', together with the grooved weight, I, substantially as and for the purposes described.

77,921.—SOLDERING FURNACE.—Geo. O. Sanderson, Boston, assignor to himself and E. D. Goodrich, Cambridge, Mass.

I claim, 1st, The flattened tube, A D E, when made and arranged substantially as described and for the purpose set forth.

2d, The combination as well as the arrangement of a Bunsen burner with a deflector, G, to the pieces, K K' K" K"', and the case N O, made substantially as described and for the purpose set forth.

77,922.—APPARATUS FOR HANDLING IRON IN ROLLING MILLS. Elias Sanford, Meriden, Conn.

I claim the pan, C, with the valve, a, attached, and its peculiar construction, with the perpendicular bar, D, and double jointed lever, F, by which it is carried around over the upper roll, and presented to the man in front of the machine, substantially as herein specified.

77,923.—REGULATING AND DISPENSING MECHANISM.—Socrates Schofield, Providence, R. I. Antedated March 20, 1860.

I claim, 1st, Causing the motion derived from any kind of governor, as transmitted in one direction, to be stopped and controlled by an obstructing point or notch, or system of elevations and depressions, operating under the action of a governor, transmitted in annother direction, substantially as described.

2d, Arranging the ratchet teeth in steps, or one above the other, in connection with a guard operating to produce a corresponding change in the elevation of the catches, substantially as and for the purpose specified, in any regulating or dispensing mechanism.

3d, The combination of several elements, consisting, first, of a dispensing device; second, of a vibrating bar or lever; and third, of an opposing point, placed in connection or combination with any governor or other indicator of a desired change in the action of a machine, to operate substantially as described.

77,924.—GRAIN DRILL.—Jacob H Shreiner, Camp Hill, Pa.

I claim, 1st, The peculiar construction of the foot, B, substantially as and for the purpose herein set forth and described.

2d, The combination of the foot, B, cutter, C, and boot, A, substantially as herein shown.

3d, The cutter guard, E, substantially as and for the purpose set forth.

4th, The combination and arrangement of the feed pipe or boot, A, cutter guard, E, brace, D, cutter, C, foot, B, and share, d, substantially as herein set forth and for the purpose specified.

77,925.—MACHINE FOR MAKING DRAIN PIPE.—Robert Skinner, San Francisco, Cal.

I claim, 1st, The follower, G, constructed with slots, G' G', and the curved openings, F F, in which it slides, in combination with the stationary core, E, and ring, N, substantially as and for the purpose set forth.

2d, In combination with the above claimed apparatus, the steam jacket, J, for heating the same, and the material worked thereby, substantially as described.

77,926.—CHURN—J. C. Slaughter, Crumpton, Md.

I claim, 1st, A casing, A, contracted in diameter near the bottom, in combination with a series of revolving blades, arranged nearer together at the lower than at the upper end of the casing, for the purpose set forth.

2d, The frame, G having blades, m, extending across the same, and hung to the shaft, C, in respect to its blades, n, as and for the purpose specified.

77,927.—FOXING AND SOLING BOOTS.—Alfred G. Smith, Marathon, N. Y.

I claim, as an improved article of manufacture, a foxing or fronting and soling for boots and shoes, constructed separately from the work to which it is to be applied, substantially as and for the purpose set forth.

77,928.—MEASURING-FAUCET.—James D. Smith (assignor to Arthur P. Emery), New York city.

I claim, 1st, The combination, with a rotary measuring and drawing device, C, arranged in the chamber, B, of the faucet, A, and turned from the outside by crank or handle, G, of the fast and loose differential wheels, I J, pinion, K, carried by the handle and wheels, M N, or their equivalents, for operating the shaft, F, substantially as shown and described.

2d, The dial, P, hung for independent action, as described, and for free rotation with the wheel, N, by which it is driven by frictional gear with the latter, through a spring or springs interposed between said wheel and dial, essentially as specified.

77,929.—DOUBLE STEAMER FOR TIN WORK.—Charles F. Spaulding, St. Johnsbury, Vt., assignor to himself and E. D. Goodrich, Cambridge, Mass.

I claim, 1st, The carrying disk, F, the shaft, D, and crank, E, when combined with the compressing-disk, H, operating substantially as described, and for the purpose set forth.

2d, The rubber band, G, in combination with the disk, F, substantially as described, and for the purpose set forth.

3d, The standard, K, pivot, K', in combination with the brace, N, substantially as and for the purpose set forth.

4th, The combination and arrangement of the lever, M, shaft, I, sliding standard, J, and standard, K, substantially as described, and for the purpose set forth.

77,930.—DITCHING MACHINE.—George H. Stevenson, Washington, Ohio.

I claim the construction of a spade that will cut a ditch ready for tile, thirty inches deep, without the use of any other instrument, and is useful for digging post holes and many other useful things, which is done by the movable foot-piece and peculiar shape of the blade and lips attached thereto.

77,931.—BOOT AND SHOE LAST.—James H. Swain, San Francisco, Cal.

I claim the projection or flange, C, or its equivalent, on the face of the last, substantially as and for the purpose specified.

77,932.—PUDDLING AND BOILING FURNACE.—William Swindell, Allegheny City, Pa.

I claim, 1st, A bottom plate for a puddling or boiling furnace, cast with a series of grooves in or along its lower surface, in which to arrange a series of water pipes, substantially as and for the purposes hereinbefore set forth.

2d, The use of a series of triangular water chills, a', when arranged in grooves cast in the lower face of the bottom plate of a boiling or puddling furnace, substantially as and for the purposes hereinbefore described.

3d, Supporting the boshes of a puddling or boiling furnace by a ledge or rim, c, on the upper face of the bottom plate, and extending around in it the outside ring of the boshes, substantially as and for the purposes hereinbefore expressed.

4th, Jointing the boshes of a puddling or boiling furnace to the bottom plate and to each other by ribs, e, so shaped as, in connection with lips, c', to form a dove-tail joint, substantially as and for the purposes set forth.

5th, Making chill-faced boshes for puddling or boiling furnaces, by casting them against a metalic chill, substantially as and for the purposes hereinbefore set forth.

77,933.—OSCILLATING RUBBING MACHINE FOR MEDICAL USES.—George H. Taylor, New York city.

I claim, 1st, The rubber, A, composed of india rubber, and having its outer surface coated or covered with India rubber, the said outer surface being furnished with projecting ribs, points, or corrugations, and the said rubber A being constructed substantially as and for the purpose specified.

2d, The combination, with the rubber, A, of the forked rod, C, hung on a pivot, E, and operated by any suitable mechanism, substantially as and for the purpose set forth.

3d, The combination, with the rubber, A, and rod, C, of the crank, G, arm or connecting-rod, H, and shaft, I, substantially as described and for the purpose set forth.

4th, The combination, with the rubber, A, driven by suitable mechanism, substantially as set forth, of the couch, S, properly connected with the frame, O, and having an opening, R, through it, for the said rubber A to work through, substantially as and for the purpose set forth.

77,934.—TAILORS' PRESSING MACHINE.—Joseph W. Thorpe, Hillsborough Bridge, N. H., assignor to himself and David F. Brown.

I claim, 1st, The arrangement of the socket, E, the sleeve, F, and the spindle, J, with the press iron and its adjusting handle, substantially as set forth.

2d, Supporting the heater at a distance from the face plate of the press iron, by means substantially as described and for the purpose specified.

3d, The arrangement of the adjustable handle, a, and cam, a', with the spindle, J, and press iron, for the purpose substantially as set forth.

4th, The rubber or elastic bearing, e, arranged in combination with the jack P, substantially as set forth.

77,935.—APPARATUS FOR COOLING AND PURIFYING BONE BLACK.—Daniel H. Turner, New York city.

I claim, 1st, The combination of the circumferentially close revolving cylinder, A, provided with interior lifters, and set horizontal, or thereabouts, screen, or screen extension, C, at the forward end of said cylinder, and hot air, gas, and dust conductor, F, for operation together substantially as specified.

2d, In combination with the circumferentially close cylinder, A, and screen forward extension, C, the adjustable ring or cover, K, essentially as shown and described.

3d, The arrangement, within the conductor, F, of the distributing apron, H, for operation in connection with the cylinder, A, provided with lifters, and set horizontal, or thereabouts, as herein set forth.

77,936.—LAMP SHADE.—Gustav Wedekind, Philadelphia, Pa.

I claim, in combination with the radial braces for supporting the shade on the chimney, the raised elbows on said braces, to support the shade and prevent it from shaking about, substantially as and for the purpose described.

77,937.—BED PAN ATTACHMENT FOR INVALID BEDS.—Sam'l G. Welling, New Rochelle, N. Y.

I claim the movable elastic seat piece, in combination with the pipe and pan, substantially as and for the purposes set forth.

77,938.—ARTIFICIAL IVORY.—William M. Welling, New York city. Antedated May 2, 1868.

I claim the composition herein specified, prepared as set forth.

77,939.—CHURN DASHER.—E. B. West, St. Anthony, Minn.

I claim, 1st, The arrangement of the arm, N, and stationary paddle, O, as specified, and for the purpose set forth.

2d, The combination of the stationary arm, N, and its paddle, O, with the movable arms, M I, their paddles, and the plate, A, all constructed and operated as specified.

77,940.—PORTABLE MUSIC STAND.—Daniel M. White, Malden, Mass.

I claim so arranging a convertible cane and music stand that when closed to form a cane, said cane shall consist of the hinged legs, B B B, and the tube, A, said parts being adapted to enclose the rod, D, and folding rack, C, and, when arranged as a music stand, the legs, B B B, shall be extended to support the tube, A, and the rod, D, and frame C be adjustably supported on the latter by means of the spring, S, substantially as described.

77,941.—TUBE WELL.—William H. White, Lynn, Mass.

I claim the combination, with a well tube, A, of the movable strainers of induction tubes, applied and operating substantially as described.

77,942.—PORTABLE FENCE.—Thos. B. Wickham, Granville, Ohio.

I claim the manner of locking and supporting the panels by the double brace and clamp, B B, in combination with the stakes, D D, and lock, C C, all substantially arranged as set forth in the foregoing specifications.

77,943.—PLATFORM CAR STAKE HOLDER.—Wm. J. Willits, Detroit, Mich. Antedated April 28, 1868.

I claim, 1st, The arm, I, cams, N N, collar, H, staple bolts, F F, etc., clamp, E, plate, R, projection, O, staple bolt, P, nut, S, and lever, L, for the purpose designed.

2d, The combination and arrangement of the stake, B, the sill, A, the gain, D, in the floor, C, the clamp, E, the staple bolts, F F, etc., the collar, H, the arm, I, the head, K, the lever, L, the cams, N N, the projection, O, staple bolt, P, the plate, R, the ring, X, and the stop, T, arranged substantially as described for the purpose designed.

77,944.—VEGETABLE WASHER.—George H. Tift, Morrisville, Vt.

I claim the combination of the bolt headed journals, C C, when attached to the rotating cylinder, F, from its interior, and used with the pivoted blocks, J J, in the manner as specified.

REISSUES.

2,925.—COVERING WHIPS.—Chas. C. Pratt, Westfield, Mass., assignee by mesne assignments of Gamaliel King. Patented June 18, 1867. Division 1.

I claim, 1st, A water proof coating, consisting of the combined ingredients herein shown and described.

2d, The application of the dissolved caoutchouc with or without the lead and oil, to a whip, substantially as and for the purpose shown.

2,926.—COVERING WHIPS.—Chas. C. Pratt, Westfield, Mass., assignee by mesne assignments of Gamaliel King. Patented June 18, 1867. Division 2.

I claim, 1st, The covering of the body of a whip with an inner braiding, d, substantially as shown and described.

2d, The combination of the inner and outer braidings, d f, with the varnish or coatings, c e, all applied in the construction of a whip, substantially as shown and described.

2,927.—MACHINE FOR POLISHING BUCKLES.—Emanuel Andrews, Williamsport, Pa., assignee of Robert G. Pine. Patented April 8, 1856.

I claim, 1st, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for said holder, and springs to bear the article against the revolving wheel with a yielding pressure, substantially as before set forth.

2d, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for the holder, springs to exert a yielding pressure, and guides to limit the movement of the article under the yielding pressure, substantially as before set forth.

3d, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for the holder, springs to exert a yielding pressure, and traversing mechanism, to move the article transversely to the rim of the wheel, substantially as before set forth.

4th, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, guide to limit the movement of the article towards the polishing wheel, and pattern for the article, substantially as before set forth.

5th, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for the holder, guide to limit the movement of the article towards the polishing wheel, and pattern for the article, substantially as before set forth.

6th, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for the holder, spring, guide, and pattern, substantially as before set forth.

7th, The combination of the following instrumentalities, viz., the revolving polishing wheel, holder for the article, shaft for the holder, springs to exert a yielding pressure, traversing mechanism, and guide to limit the movement of the article towards the polishing wheel, substantially as before set forth.

2,928.—OPERATING THE TREADLES OF LOOMS.—Robert W. Andrews, Stafford, Conn. Patented January 18, 1853. Extended seven years.

I claim the combination, in a loom, of the harness frame and cords with the treadles and treadle cams, constructed and operating substantially as described.

Also, the treadles and the movers or cams, combined, constructed, and arranged so that by reversal of the cams upon the shaft, a reversal of the movements and retentions of the harness frames is produced, substantially as herein set forth.

Also, in a cam loom having upright treadles or harness levers strung to the harness leaves or frames, and actuated by a single set of cam wheels, the arrangement of the fulcrum shaft of the harness levers directly over or within the vertical plane of the cam wheels, substantially as described.

2,929.—CORSET SPRING.—Francis L. Barnes, New York city, administratrix of the estate of Samuel H. Barnes, deceased. Patented July 17, 1866.

I claim a corset spring, consisting of the parts, B, provided with pins, b, and slotted springs, B2, riveted as shown and having suitable clasps, C, and headed rivets, D, and of form corresponding to the body of the wearer, constructed and operating in the manner and for the purpose herein represented and described.

2,930.—PAPER FILE.—Henry E. Woodbury, Washington, D. C. Patented August 8, 1854.

I claim the box or compartment document file, consisting of a box part, A, and spring platen or holder, B, the said holder being hung or attached to a sprig or springs, C, at its back, so as to give a flexible or yielding character to the platen, all constructed and operating substantially as herein described.

2,931.—HARVESTER.—Jacob V. A. Wemple, Quincy, Mich. Patented April 19, 1859.

I claim, 1st, A separating rod or finger, W, automatically interposed, for separating the falling grain from that which is being discharged from the platform.

2d, The rod or finger, W, pivotal piece, C, and standard, E, in combination with the rod, B, constructed and operating substantially as specified.

3d, A movable or separating rod and finger, for separating the falling grain from the completed gavel on the platform, in combination with a single supporting standard or post, located at the inner end, or inner front corner of said platform, substantially as described.

DESIGNS.

3,019.—IMITATION BRAID FOR BONNETS, ETC.—Samuel A. Blake, Milford, Conn.

3,020 to 3,032.—BRACKETS.—F. W. Brocksieper (assignor to Sargent & Co.), New Haven Conn.

3,033.—CARD RECEIVER.—F. W. Brocksieper (assignor to Sargent & Co.), New Haven, Conn.

3,034.—MATCH SAFE.—F. W. Brocksieper (assignor to Sargent & Co.), New Haven, Conn.

3,035.—MEDALLION.—Garret Erkson, Brooklyn, N. Y.

3,036 to 3,039.—FLOOR OIL CLOTH PATTERNS.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson.

3,040 and 3,041.—FIGURE.—Carl Muller and John Deacon, New York city.

3,042.—CLOCK CASE.—George B. Owen, Winsted, Conn.

3,043.—BOX STOVE.—Asa Snyder and Alexander Delaney, Richmond, Va.

3,044.—TRADE MARK.—James S. Waters, St. Louis, Mo., assignor to St. Louis Lead and Oil Company.

3,045.—STEAM-VALVE CASE.—John Johnson, New York city.

3,046.—DOOR OF A COOK'S STOVE.—John Martino, Jacob Beesley, and John Currie, Philadelphia, assignors to March, Sisler and Company, Limerick Station, Pa.

3,047.—COFFIN HANDLE.—C. L. L. Nieberg (assignor to Sargent and Company), New Haven, Conn.

3,048.—TRADE MARK.—Dudley F. Stevens, Boston, Mass.

EXTENSIONS.

ATTACHING PROPELLERS TO THE DRIVING SHAFT.—James L. Cathcart, Georgetown, D. C. Letters Patent No. 10,790. Dated April 18, 1868.

I claim attaching the propeller, secured to a short shaft which passes through the rudder to its main or driving shaft, by a universal joint placed between the stern post and the rudder, by which attachment the propellers is moved laterally with the movement of the rudder.

APPARATUS FOR MOLDING CANDLES.—Willis Humiston, Troy, N. Y. Letters Patent No. 10,730. Dated April 4, 1854. Reissue No. 2,196. Dated March 6, 1866.

I claim, 1st, The employment of the wick stretcher, E, so arranged and combined with the machine, having vertical stationary candle molds therein that the candle wick within such molds shall be uniformly stretched or strained before the material is run or poured into such molds, and the friction or strain be removed therefrom before the candles are drawn or ejected from such molds in a vertical direction, substantially as herein described and set forth.

2d, I claim the stretching or straining of the candle wick in each and every of the vertical stationary candle molds contained in the candle mold machine, at and by one continued or simultaneous operation, when the said wick extends from spools or bobbins below said molds upwards into and through the center thereof, and from the lower or tip end of such molds to and into the candles suspended above such mold, substantially as herein described and set forth.

3d, I claim the employment of the candle tip bar, F, or any substantial equivalent therefor, which shall be so constructed and arranged as to be moved in a lateral direction up to, or against, or under the tips of the candles drawn or ejected from the stationary candle molds below, and thereby come in contact with the tips of the said candles in such manner as to center the candle wick in the said molds, and at the same time hold the said candles thus suspended during the operation of filling the said molds with melted material from which to mold candles, and during the cooling thereof, and until the wick is cut or severed between the said suspended and molded candles in said stationary candle molds, substantially as herein described and set forth.

4th, I claim a vertical stationary candle mold, constructed with an inner and annular shoulder, h', and with an outer surrounding shoulder, c, and with a screw and nut at or near the lower end thereof, in the manner and for the purposes substantially as herein described and set forth.

5th, I claim the contraction of the lower end of the vertical stationary candle molds, so as to form an inner annular shoulder, in the manner and for the purposes substantially as herein described and set forth.

6th, I claim the mode, substantially as herein described and set forth, for attaching to, and combined with the lower end of the vertical stationary candle molds, having an outer surrounding shoulder, c, and the bottom plate, B', of the surrounding water box, so as to make the same water tight and firm therein, in the manner and for the purposes substantially as herein described and set forth.

7th, I claim the employment of the shovel blade cutter, J, or any equivalent therefor, and the passing of the same between two rows of the wicks of the vertically suspended candles, so as to cut or sever the two rows of the said wicks, in the manner and for the purposes substantially as herein described and set forth.

RAILROAD CARS.—B. J. La Moth, New York city. Letters Patent No. 10,721. Dated April 4, 1854. Reissue No. 360. Dated March 18, 1856.

I claim the construction of the frames of railroad cars, substantially in the manner and for the purposes specified.

SEWING MACHINE.—Samuel J. Parker, Ithica, N. Y. Letters Patent No. 10,757. Dated April 11, 1854.

I claim that combination that secures to me the relative position in which I place the needle's eye to the movement of the material or feed motion, and and the position of the shuttle and its race resulting therefrom, when the needle is straight and the table on which the material to be sewn is horizontal, said relative position meaning the longitudinal axis of the shuttle and its race at right angles to the feed motion, and the consequent position of the needle's eye therefrom, so that the line drawn through the needle's eye, when in the act of passing the center of the material sewed, shall coincide with the line of feed motion, but be at right angles therewith, and this for the purpose of rendering the stitch more nearly straight and perfect than it otherwise would be, the combination and purpose substantially as described.

HEATING SKELPS FOR THE MANUFACTURE OF WROUGHT IRON TUBES.—James McCarty, Reading, Pa. Letters Patent No. 10,747. Dated April 3, 1854.

I claim the new mode of operating, as described, viz., heating the skelps in a furnace constructed substantially as herein set forth, with raw coals as fuel, whose combustion is maintained by a blast of air forced into the furnace under pressure, as set forth.

VESSELS FOR HOLDING LIQUIDS.—Julia M. Colburn, Baltimore, Md., administratrix of James Stimpson, deceased. Letters Patent No. 11,819. Dated Oct. 17, 1854. Antedated April 17, 1854.

I claim the employment of a chain or string attached to the handle and lid of a pitcher, as described.

TREATING CANE FIBER FOR PAPER AND OTHER PURPOSES. Benj. A. Lavender, Halifax, N. C., and Kate Lowe, Baltimore, Md., administratrix of Henry Lowe, deceased. Letters Patent No. 10,722. Dated April 4, 1854

We claim breaking down woody fiber of cane and other like plants, and dissolving the gummy and other foreign matters therefrom by means of muriatic or sulphuric acid, of the strength of 10° Baumé, or thereabout, preparatory to making hemp for bagging, rope, paper pulp, etc., in the manner substantially as set forth.

MACHINERY FOR LAYING ROPE.—Stephen Bazin and James A. Bazin, Canton, Mass. Letters Patent No. 10,823. Dated April 25, 1854.

We claim adapting the machinery for forming both hard and soft cordage by means of the ring, g, so actuated by the circular plate, i, and its rollers made to revolve, or hold stationary, as above set forth, as to form an extra twist in the rope when desirable, by giving an additional revolution to the bobbin frames, as above described.

We also claim an improvement in the movable crane, the same consisting in forming it of a bent shape, with the right angular hinged arm operating as above described, so as to feed the rope in a direction parallel with the axis of the winding reel.

We also claim stretching the rope after it is laid, by means of the double pulley, r b, with grooves of different diameters, as above set forth.

COFFEE POT.—James Buell, New York city, executor of Jas. MacGregor, Jr., deceased. Letters Patent No. 10,752. Dated April 11, 1854.

I claim having the pot where the tea or coffee is prepared air tight, and so regulating the heat that is applied to the heating of the same that a small pressure by the covers prevents it from boiling, and consequently from evaporation, while the tea or coffee is being prepared, in the manner and for the purpose substantially as above set forth.

AIR ENGINES.—Philander Shaw, Boston, Mass. Letters Patent No. 10,868. Dated May 2, 1854. Reissue No. 1,014. Dated July 17, 1860. Again reissued No. 71. Dated April 23, 1861.

I claim, 1st, The within-described auxiliary heater, constructed and arranged as set forth, the exhaust air and the products of combustion being passed through in one direction while the cold air from the force pump is passed through in the other, by which means the heat is extracted from the heated air and smoke and transferred to the cold air on its way to the engine the latter being pumped in against a pressure much less than that at which it is worked off from the main heater, as explained.

2d, I claim passing the exhaust air which has propelled the piston directly through the fire, for the purpose of economizing heat, as set forth.

3d, In combination with a tight ash pit, into which the air for the support of combustion within the furnace is forced, I claim a chamber, D, communicating with the ash pit and surrounding the furnace for the passage of a portion of the air not required by the fire, which, combining with the products of combustion in the chamber, E, passes off through the flue, G, for the purpose of economizing heat, as set forth.

4th, I do not claim refrigerating the cylinder or piston of hot air or other engines by means of cold water, but I do claim the arrangement herein described of the tubes within the piston rod, the reservoir, R, and the india-rubber tubes, S S', for the purpose set forth.

MACHINE FOR FEEDING SHEETS OF PAPER TO PRINTING PRESSES.—Henry Clark, Cedar Keys, Fla. Letters Patent No. 10,824, dated April 25, 1854.

I claim loosening or detaching the top sheet of a layer of papers from those underneath it, by giving a part of said sheet a backward and forward motion, as herein shown, previously to its being operated upon by the pressure rollers or other device for conveying it to the printing press or other to which the sheet of paper is fed, for the purpose of insuring the feed of only a single sheet of paper at a time, as set forth

GLASS FURNACE.—Frederick G. Schaum, Baltimore, Md., administrator of Frederick Schaum, deceased. Letters Patent No. 10,830, dated April 25, 1854.

I claim making the external and internal configuration of the breast work of the furnace wall with the re-entering portions, so as to partly embrace the pots and to furnish room for additional or extra teaze or ring holes, substantially in the manner described.

PLATE FOR ARTIFICIAL TEETH.—Mahlon Loomis, Washington, D. C. Letters Patent No. 10,847, dated May 2, 1854.

I claim the improved manufacture of whole or half sets of porcelain or mineral teeth, substantially as described.

EXTENSION NOTICES.

Alexander Hay, administrator of the estate of M. C. A. Mellier, deceased, of Philadelphia, Pa., having petitioned for the extension of a patent granted to the said Mellier the 26th day of May, 1854 (said patent was also granted in France Aug. 7, 1854, and in England Oct. 26, 1855), for an improvement in making paper pulp, for seven years from the expiration of said patent, which takes place on the 7th day August, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 20th day of July next.

Albert G. Safford, of Boston, Mass., having petitioned for the extension of a patent granted to him the 8th day of August, 1854, for an improvement in applying springs to windowsashes, for seven years from the expiration of said patent, which takes place on the 8th day of August, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 20th day of July next.

Jarah W. Reed, administratrix of the estate of Cheeney Reed, deceased, and Jane E. Mould, administratrix of the estate of Brooks K. Mould, deceased, of Chicago, Ill., having petitioned for the extension of a patent granted to the said Cheeney Reed and Brooks K. Mould the 8th day of August, 1854, for an improvement in ventilating railroad cars, for seven years from the expiration of said patent, which takes place on the 8th day of August, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 20th day of July next.

Jacob Senneff, of Philadelphia, Pa., having petitioned for the extension of a patent granted to him the 13th day of January, 1852 and additional improvement granted thereon the 20th day of July, 1852, for an improvement in metallic heddles, for seven years from the expiration of said patent, which took place on the 13th day of January, 1866, this application having been authorized by act of Congress, it is ordered that the said petition be heard at the Patent Office on Monday, the 20th day of July next.

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents."]

PROVISIONAL PROTECTION FOR SIX MONTHS.

910.—PREPARING IRON ORE FOR SMELTING, AND FURNACES THEREFOR.—Alois Thoma, New York city. March 17, 1868.

1,096.—SEWING MACHINE.—Geo. Rehfuss, Philadelphia, Pa. March 31, 1868.

1,109.—COTTON GIN.—Joseph H. Adams & Coombs, New York city. April 1, 1868.

1,212.—MODE OF VENEERING PAPER, CLOTH, LEATHER, ETC.—Samuel W Huntington, Augusta, Me. April 11, 1868.