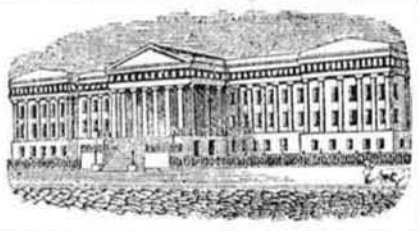

[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING MARCH 2, 1854.8

MACHINES FOR JOINTING STAVES—E. Valentine & A. Bradway, of Monson, Mass.: We claim the combination of the alternate reversely curved ledges on opposite sides of the doubly curved channel, with the springs placed opposite to their concave portions for the purpose of directing the staves alternately to the jointers arranged along said concave portions of the ledges with a properly curved motion for jointing both edges of the staves to a suitable form, as set forth.

We also claim the uniformly flexible metallic strips at the sides of the recess just in front of the cutters, in combination with the adjusting lever, for the purpose of enabling the curvature of the stave to be varied by tightening or slackening the said metalic strips, and thus varying the curved sides of the recess, as set forth.

SHIPS' BLOCKS—Elbridge Webber, of Gardiner, Me.: I claim the shell of cast or wrought metal, into which are fitted the wooden cheeks and the sheaves, the whole constructed and arranged as described.

PROCESS FOR TREATING INDIA RUBBER—E. D. S. Goodyear, of Stapleton, N. Y. (assignor to the "New York Rubber Company" of New York City): I am aware that water has been forced into the interior of hollow articles of plastic material, by mechanical means, for the purpose of forcing the material against the interior of molds, but such mode of using a fluid I do not claim.

I claim the introduction of water or any other liquid into the interior of articles which require expansive force for their perfect formation to the interior surface of molds, said liquid to be converted into steam, as described.

CHURNS—R. H. Harrison (assignor to R. H. Harrison & J. S. Gallagher, Jr.) of Washington, D. C.: I claim, first, the construction of a churn vessel with hollow or solid double concaved ajustable detachable side gatherers, as shown.

Second, I claim the construction of a churn reservoir dasher having curved or deflective radial chambers of a concavo convex form, with direct radial wings or flanges, as shown, and using the same combined with the double concave gatherers.

Thirdly, I claim also the double applieation of warm and cold water or ice, in combination with the dasher and the double concave gatherers, as set forth, I do not however claim the application of hot or cold water solely, in the process of butter making, as the same have been employed separately or distinctly heretofore, as is well known.

DISCHARGING APPARATUS OF HARVESTERS—A. J. Cook, of Enon, O.: I claim the device for forcing the unbound grain from the table, in combination with the arm at the end of the reel and the apron, by means whereof the grain is carried from the platform to the receiving table, and thence deposited upon the stubble in convenient quantities for binding.

BELT CLASPS FOR MACHINERY—H. G. Ellsworth, of Auburn, N. Y.: I claim the method of uniting or splicing belts, end to end, by means of metal plates riveted or otherwise secured to the outer surface of and near the ends of the belt, and clasping and interlocking, as described.

HARVESTERS OF GRAIN—B. G. Fitzhugh, of Frederick, Md.: I make no claim to the removable blade in itself.

I claim, first, the movable blade in the fingers, arranged and secured as described,

Second, the combination of a curved reciprocating knife with a curved row of fingers and a curved platform, as described.

Third, constructing the reel with curved beaters as set forth.

Fourth, the combination of a continuously revolving sweep rake with a revolving reel, which disposes the grain upon the platform with its stalks converging to the axis of the rake, as set forth.

SEED PLANTERS—L. B. Fisher, of Coldwater, Mich.: I do not claim the form of the frame or the method of operating the slides. But I claim the combination of the rod, lever, clevis, and pin, when the latter is movable in a longitudinal slot for raising the teeth from the ground, as set forth.

I also claim the attachment of the rods, operating the slides to the hook, as described, so that the slides will remain at rest during the turning of the implement, as set forth.

FEED WATER APPARATUS FOR STEAM BOILERS—Benaiah Fitts, of Worcester, Mass.: I claim in feeding apparatus for team boilers is the arrangement of the steam and water chambers, chains, pipes, and valves constructed and operated, as set forth.

MAKING ZINC WHITE—Richard Jones, of Burlington, N. J.: I claim the method, described, of cooling conveying and oxydizing the vapor of zinc, by means of a jet of air introduced into a closed retort, as described.

I also claim constructing the conduit pipes, so that every portion of them shall be inclined in such manner as to prevent the accumulation of matter to clog them and to direct the current of vapor downwards on entering the condensing chambers, the conduits thus constructed and operating, being arranged over the collecting or condensing chambers, as described.

SMUT MACHINES—Seymour Ketchum, of Lancaster, O.: I do not claim of itself building the concave of staves with vertical openings between or in them, for the dust &c. to pass through.

But I claim the concave constructed as described, that is to say, of loose staves, so fitted to or connected with the heads of the concave as to be capable of circular adjustment with facility and dispatch, as specified, for the purpose of varying the number and widths of the escape openings between the staves, tho said staves being formed on their inner face, with a longitudinal step or steps inclining outwards backwardly in relation to the travel of the runner, whereby the width of the openings between the staves may be made large, so as to form a ready escape for the smut, dust, and other extraneous matter without letting out the grain or wheat there through, and whereby the clogging of the escape openings by damp smut is avoided, as set forth.

PORTABLE HEAD-REST FOR CHAIRS—C. P. Bailey, of Zanesville, Ohio: I claim the apparatus, as described, consisting of a back plate with arms, for supporting the band or cushion upon which the head rests, the whole being sustained by the hips which hold it in place at all times disconnected with the back of the seat, but resting against or upon it so as to be at once taken away without injury to the seat and folded up in a portable form, the whole being constructed and arranged as described.

SUB-MARINE SCOOPS—Anson Balding, of Oldney, Ill.: I claim the combination of the scoop and sled, as described and for the purpose, set forth.

HOT-AIR FURNACES—T. W. Chatfield, of Utica, N. Y.: I claim the radiators, constructed as described, and for the purposes described, the whole being arranged and combined as set forth.

I am aware of the patents of Gordon Fox, patented in 1843, and of G. Walker, patented in 1844. I do not claim anything contained in either of these patents, but only these points and contrivances wherein I have improved upon both of these patents.

MACHINERY FOR OPERATING CAR BRAKES—Jos. Marks, of Dunkirk, N. Y. (assignor to Wm. Whitney, of Roxbury, Mass) Patented in England, Nov. 23, 1852: I do not claim any mode of forcing the brakes of one or more cars against their respective wheels by any mechanism brought into action by a power generated on an axle of the engine.

But I claim, first, the adjustable spring clip or clips, in combination with the pall, lever or levers and the draft rope thereof, and as applied and made to operate, as specified.

Second, in combination with the cord extending from the locomotive to the brake shaft and the pulley, I claim the traveling nut, screw, stud, and pin, in the manner and for the purpose specified.

Third, I also claim the combination of the lines and the mechanism for operating the same, as described, whereby the several brake springs of a train of cars may be wound up simultaneously, or one or more of them at a time, as required, in combination with the line, and the mechanism for operating the same, so that by adjustment of the spring clips, the several brakes of the train may be either simultaneously, or one or more at a time, put in action to retard or arrest the motion of the cars.

Finally, I claim generally, in my improved method of operating car brakes, the combination of main springs for pressing the brake against the wheels, mechanism for winding up the springs so as to remove the pressure from the brakes, and to hold the springs in a state of tension, ready to apply pressure on the brakes, instantly, on being released, and mechanism to release the springs, and allow them to act, both the mechanism for winding up and that for releasing the springs being so constructed and arranged that it can be operated on either the locomotive or on the separate cars, and also capable of such adjustment that the brakes of all the cars, can be either simultaneously, or one or more at a time, and in any required order of succession put in action.

MACHINERY FOR OPERATING CAR BRAKES—J. Marks, of Boston, Mass., and J. Howarth, of Salem, Mass. (assignors to Wm. Whiting, of Roxbury, Mass.: We claim the improvement of so adjusting the relative lengths of the relieving branch lines of a train of two or more cars by means of adjustable pulleys, and connecting these lines by a single main line, that all the relieving mechanisms of such train may be put in operation in such a manner that the brakes of the several cars of the train may be either simultaneously or in succession thrown out of action on the wheels or relieved of the pressure induced by the main spring or springs, as specified.

Heretofore we have constructed the main spring of a single coil bar or plate of metal, which being necessarily of a high temper in order to give it sufficient strength and prevent it from setting, it is liable to break from a variety of causes among others sudden changes of temperature, and when broken the apparatus is entirely disabled, and the lives of those depending upon its efficiency, thereby endangered; to such a spring as this we make no claim, neither do we claim a spring simply composed of two or more bars or plates of metal.

But we claim the combination and arrangement of a series of independent springs with the mechanism for applying the force produced by their tension to press the brake rubbers upon the wheels, this mechanism being put in action either for the locomotive or from the separate cars by the engineer or other person having it in charge, or automatically, and with certainty and promptness to detached cars, whenever one or more of them become detached from the train, either by design or accident, in such manner that each spring will act with its whole force, independently of all the rest, so that in case one or any number of less than the whole of the springs shall break, the mechanism will not be thereby disabled, but merely rendered less efficient, and as even the minimum of efficiency thus left may be sufficient to prevent an accident to the car on which the apparatus is placed, and would in any case lessen the damage, if it did not prevent the accident, the safety of railway traveling, is thereby increased.

We also claim in combination with the main spring shaft, and the frame, the apparatus by which the power of the main spring is prevented from acting too suddenly, or so as to rupture or injure the brake chain when the slack of it is taken, as stated, meaning also to claim the combination of parts or elements constituting such apparatus, the same consisting of the wheel, the rubber, the lever, spring K, catch lever, slide, with its stud, cam, spring Q, and the tripping cam, as specified.

We also claim the mechanism for disengaging the retaining pawl of the ratchet, that is to say, the tubular shaft or sleeve and its oblique end acting as a stop in combination with the windlass shaft, and its oblique end to act in connection with the oblique end of the sleeve, as described, so that in case the shaft should be turned back by the movement of the spring with too much force, its screw may not bind in the screw of the sleeve, and thus prevent the apparatus from working.

We also claim the improvement of so combining the windlass shaft with the fusees or apparatus by which it is put in rotation that it may be disengaged therefrom in order to relieve the car wheels from the pressure of the brakes, without rendering it necessary to do so by rewinding the springs.

We also claim the combination of the key or feather, and the locking arm, or their equivalents, with the shafts, the same being for the purpose specified,

We also claim the improvement by which each windlass or pulley shaft and its main line is connected, viz., by a branch line, for a loose pulley and friction screw or contrivance, as combined together and with the main line and windlass shaft, and made to operate as specified.

TONGUING AND GROOVING TAPERING BOARDS—John Absterdam & W. B. Merrill (assignors to J. A. Woodbury, of Winchester, Mass., and W. B. Merrill,) of Boston, Mass.: We claim first, giving to the tonguing and grooving cutters, a motion either towards or away from the edge of the board, so as to adapt them to boards of different widths or of a tapering shape, by means of the traveling carriage, with its adjustable cross bar operating upon the guide and connecting bar, attached to the slide which carries the cutters, as described.

Second, We claim giving to the traveling carriage a quick or slow motion proportionate to the length of the board to be jointed, so as to convey a similar motion to the tonguing and grooving cutters by means of the adjustable sliding bar, band, and cones, operating together, as described.

STEREOTYPE PANS—R. D. Mott, of Spring Garden, Pa.: I do not claim the pan proper, nor its lid; but I claim the substitution and use in stereotype pans of a single horizontal casting plate, combined with the adjustable attachments for holding the single faced plaster molds, the said attachments having chise l like cutting edges on their ends for cutting and trimming the said molds as they are forced by the operator between them and the plate, and the said casting plate having both its sides fitted with the cutting edged attachments, constructed as described.

FEED MOTION FOR SAWING LUMBER—N. G. Norcross, of Lowell, Mass.: I claim the method of regulating the velocity of the feed rollers of a gang of saws, viz., by a sliding wheel made to operate against the side of a wheel, and to be applied to the shaft, and pressed against the wheel, as specified.

MACHINES FOR FORMING CULTIVATORS' TEETH—David B. Rogers, of Pittsburgh, Pa.: I claim the arrangement of the cutter or knife and swaging dies, when constructed and operated as described, whereby I am enabled to swage the sheet blank into shape, and to give to the foot of the tooth by the cutter its shape and edge, after it has been swaged into form, and when it is held firmly between the dies.

HARVESTERS—Wm. H. Seymour, of Brockport, N. Y.: I claim the combination of the shaft, E, for rotating the pinion, the shaft, I, for turning and carrying the rake and connecting the mechanism constructed and arranged as described, whereby the rake is turned up and down, and firmly held in either position in a simple and convenient manner, without producing an undue strain upon any part of the driving gear.

I also claim the adjustment of the rake at varying hights from the platform in its elevated and depressed positions, by means of the device described, or its equivalent.

PUMPS—Joseph Smart, of Northern Liberties, Pa.: I claim, first, the mode of applying the outward chamber for supplying the inner chamber above the piston, and discharging the same, and the manner of connecting the valves with both chambers, as described.

Secondly, I claim the invention of the upper or movable valve seat with gate attacned, as exhibited, with the mode of securing the same to its bed by the open washer, and inside screw bearing on the top of the washer, as described.

SHINGLE MACHINES—H. C. Smith, of Cleveland, Ohio: I do not claim any one of the separate devices shown: but I claim the special and precise arrangement, and the mode of operating the devices set forth.

TENONING, &c., BLIND SLATS—T. G. Stagg, of Jersey City, N. J.: I am aware that cutters similar to the ones described, have been previously used on rotating disks for similar purposes, I therefore do not claim these cutters separately.

I claim, first, the employment or use of the stationary knives and the cutters, arranged upon a rotary disk, the knives and disk with the cutters attached being secured to a vibrating head, two heads being employed on one machine, and operating as set forth.

Second, I claim the employment or use of the clamp lever and staple or pricking lever, arranged and operating as described, for the purpose of properly clamping the slat and pricking the same or driving the staple therein.

FURNACES FOR ZINC WHITE—J. G. Trotter, of Newark, N. J.: I claim the combination and use of the upper and lower discharge or passage ways from the fire-place to the furnace, that is, the upper passageway for discharging or carrying off the lighter gases from the fire place by the reverberatory flue and return flues to the chimney, and the lower passage ways for discharging the flame from the fire place direct upon the mass of ore on the bed of the furnace, and thereby reducing or subliming it more effectually and with less consumption of fuel than ever before accomplished.

I also claim the combination of the alternating series or bridges or brakes in the return flues, with the reverberatory flue doubled arched conformation of the roof of the furnace and the upper passage way and lower passage way, from the furnace, for the purpose of working zinc ores for making white oxyd of zinc, as set forth.

OIL CUP FOR STEAM ENGINES—Geo. Trott, of Pittsburg, Pa.: I claim the arrangement of a double valve, and the passages for feeding and discharging the oil, as described.

MACHINES FOR BENDING SHEET METAL—Wm. Webster, of Morrisania, N. Y.: I claim the non-axled cylinder, as arranged, in relation to the rollers and mandrel, whereby I am enabled readily to adapt it to rolling and bending sheet metal, as described.

RAILROAD CAR WHEELS—R. A. Wilder, of Schuylkill Haven, Pa.: I claim the groove in the wheel near the flange, in combination therewith the convex form of the tread.

TRACK CLEANERS FOR RAILROADS—E. H. Ashcroft, of Boston, Mass.: I claim the method of cleaning snow or ice, or other obstacles from grooved railroad rails by means of a picker and mould board or scraper, as described.

COOKING STOVES—Joseph Leeds, of Philadelphia, Pa.: I claim, first, a fire box formed or composed of a series of vertical tubes, through which air is introduced to be heated, in combination with the air space under the top plate, and around the oven, as described.

I also claim so arranging the oven as that it shall not be in contact with any of the plates which are directly in contact with the heated products of combustion, but be heated by hot air, as described.

HAND PRINTING PRESS—H. Underhill, of Canandagua, N. Y.: I claim the method of operating the platen by hand intermittently in connection with a reciprocating double frisket carriage whose movement is derived from a continuous rotary motion whether produced by hand or power so that as the carriage brings the frisket of each end alternately under the platten, the latter may be made to descend at the will of the attendant and independantly of the movement of the carriage, so that its depression may be omitted if a blank sheet is not placed over the form, as described.

SACKETS BRAIDING MACHINE—Ephraim, Titus, and Emerson Sizer, and Amos Halladay, of Westfield Mass.: We claim the construction of the racers with the tail guides, as described.

We also claim the combination of the spring guides with the flanges on the carriers, for the purposes set forth.

We further claim guiding the racers by means of spring and tail guides operating either on the interior or exterior of the shell or circle, as set forth.

OPERATING THE DOCTORS OF CALICO PRINTING CYLINDERS—James Baxendale, of Fall River, Mass. (assignor to himself and James Furguson), of Taunton, Mass.: I claim a compound traverse machanism constructed of eccentric gears and a pinion gear and a supporting frame, as described for obtaining a compound traverse or constantly variable reciprocating movement of the doctor of a calico printing roller.

REISSUE.

SUBSTRATA FOR PAVEMENTS—Horace P. Russ, of New York. Original letters patent dated March 14, 1848: I do not claim to have invented or discovered any of the materials or parts described or used herein.

But I claim, first, leaving seems or other openings in the concrete foundation, as described, that the direct escape of the water, gas &c., may indicate the point or points at which repairs in the pipes are required.

Second, the construction in pannels or sections the concrete foundation to give access to pipes and conduits below, by the application and combination therewith of frames formed of any suitable material with the thinner edge upwards to allow the concrete mass to be lifted out when necessary, as described, when this is combined with a paved roadway of any kind laid thereon, as described.

DESIGNS.

COOKING STOVES—S. D. Vose, of Albany, N. Y.
COAL STOVES.—S. D. Vose, of Albany, N. Y.

Gutta Percha Tubing and Hollow Ware.

The following is the specification of the patent granted to S. T. Armstrong, of this city, in the 24th June, 1851, for making tubing and other hollow ware, such as bottles, &c., of gutta percha:—

"My improved process is applicable to the making of all kinds of hollow articles which can be formed in molds, such as bottles or articles which may be made hollow, of gutta percha, or gutta percha compounded with other substances.

After the gutta percha, alone or compounded with other substances, has been properly cleansed and prepared in any known or appropriate manner it is to be formed into a pipe or tube, in the manner of making lead pipe. And for this purpose I use any of the known machines for making lead pipe. The gutta percha during this part of the process should be kept at a temperature of about 150 degrees of Fahrenheit's scale, which degree of heat is best preserved by applying heat to the exterior of the cylinder of the machine as is sometimes practiced in the manufacture of lead pipes. As the gutta percha pipe issues from the die of the machine in a heated state, it is plastic and adhesive, so that the end can be closed by pressing it together. I then cut off a piece of the length required, and insert it in a mold, such as is used for molding glass with the the closed end downwards, and after opening the upper end I insert the end of a metal pipe connected with an hydraulic apparatus and force in water under a sufficient pressure to expand the gutta percha, until the external surface is brought in contact with the entire surface of the mold. I continue the pressure of water until the gutta percha is cooled and set, and then I remove the pressure and take the article out of the mold where it will be found to have taken the exact form of the mold of whatever figure it may be.

If the form of the article admit of it, the mold may be made in a single piece, or it may be made in two or more parts, depending on the form of the article to be molded; and if the article to be produced is to be made with a neck, when the piece of gutta percha pipe is put into it, the upper end is to be prepared for the reception of the water pipe by first inserting a conical plug into it until the external surface is forced out against the mold, and the inside is made sufficiently large to receive the water pipe, but if the article to be prepared be without a neck, then the gutta percha pipe is to be cut of greater length, and the open end is bound around the nozzle of the water pipe to prevent the escape of water when pressure is applied. When the article has been formed the surplus is then cut off and the edge properly trimmed. Bottles, vases, tumblers, powder flasks, and such articles can be made in this way to great advantage, and of great beauty, as the mold can be ornamented and chased in any way to suit fancy, and however figured if sufficient pressure be applied, the gutta percha will receive the impression of the entire figure As the gutta percha is cooled by forcing in the water to expand it, it will be set in the mold and retain the form thereof.

Many articles which are not required to be, but which admit of being made hollow, such as ornamental figures, may be advantageously molded by my improved process, and if required after such articles have been molded, the nozzle through which the water was introduced can be properly trimmed and closed up.

What I claim as my invention in the process described, is the method substantially as described of molding articles of gutta percha, or the compounds of gutta percha with other substances, by first making the same in the form of a pipe, and whilst in a partially heated and plastic state, giving to it the form required in a mold by forcing a liquid inside to expand the gutta percha as described."

[From the many inquiries which have been made of us about this patent, we deem it to be one possessing no small amount of interest.—[ED.

Great Belting.

A Boston paper was lately crowing over the manufacture, in that city, of the largest belting for machinery ever constructed in the United States. It was 127 feet long. Longer belts than that have been constructed here of India Rubber and of Gutta Percha. One recently sold by Thornley was 227 feet iong. An India Rubber six ply Belt of 152 feet was recently constructed for Mr. Maginnis, at Pottsville, to hoist coal at his shaft. It was 22 inches wide and weighed six hundred pounds. The stoutest belt ever made of India Rubber is one just completed by Thornley, for hoisting coal. It is twelve-ply, of India Rubber, three-fourths of an inch thick, and 60 feet long, weighing 228 pounds. The strength of such a belt, with the well known tenacity of India Rubber, is equal to any strain which the power of ordinary machinery can put upon it.—[Philadelphia Ledger.

A Monument to Watt.

A somewhat curious proposition is now being agitated in Scotland. It is proposed to build in Greenock, a great pile or cairn, of stones gathered from all parts of the world, in honor of James Watt, the mechanic who first applied steam to the working of machinery.—The pile is to be erected in a new cemetry on the western front of a high hill, which commands a magnificent view of the river Clyde, and of the neighboring country for many miles around. On the summit of this elevation, a spot has, from the first laying out of the grounds, been received as a suitable site for this monument to Watt, of a more substantial and striking description than any tribute erected to his memory.