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Improvement in Galvanic Batteries.

The accompanying engravings represent an improvement in connecting clamps for the plates of galvanic batteries, for which a patent was granted to Charles T. Chester, of this City (New York,) on the 15th of last May.

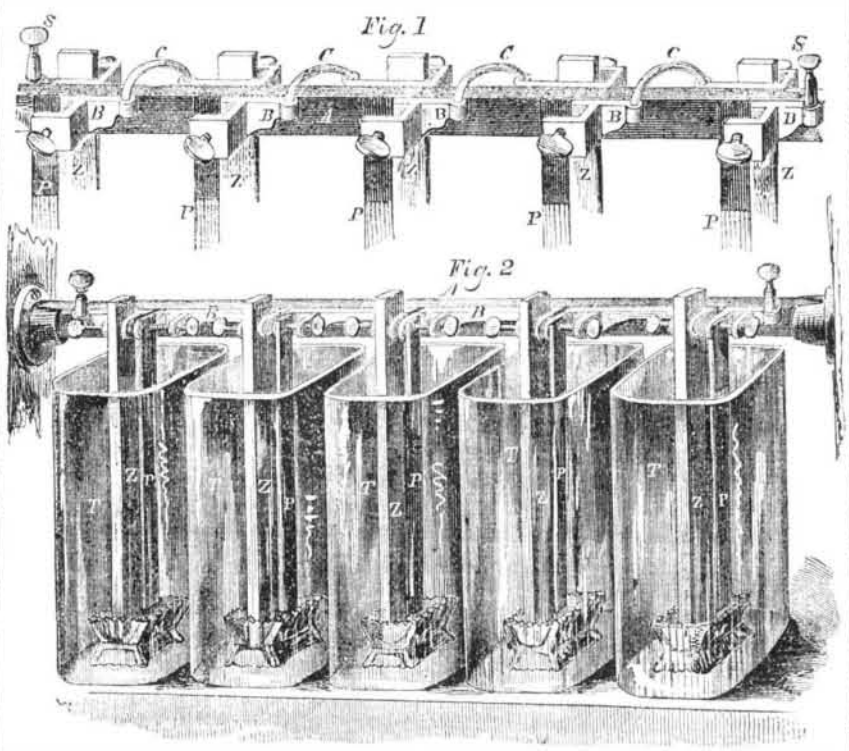
The nature of the invention consists in the use and combination of brass clamps with insulated wooden supports, so that the plates immersed in the exciting fluid are insulated from each other, thus preventing local action, while at the same time the plates can be removed, cleaned and replaced, or their size increased or diminished without stopping the action of the battery.

Fig. 1 is a perspective view of one modification of the improvement connected to the plates, without the cups; and fig. 2 is another modification of it applied to a battery of five cups; T T represent the cups; P P represent the platina, and Z Z the amalgamated zinc plates. A is a piece or strip of highly insulated wood having secured to it on opposite sides (fig. 1,) metal clamps, B, for holding the zinc and platinized plates, Z P. These are secured in position by thumb screws, as shown, and the connection between the clamps is made with stout copper wires, C C. S S represent binding screws for making the circuit connections with wires from one battery to another. In fig. 2, A represents the same insulated wooden bar, but the clamps are all on one side of it, and no wire connections like C C (fig. 1) are used. Each clamp has two screws for binding the plates, the one for a platina plate, P, in one cup, and the other for a zinc plate, Z, in another cup, as shown, and thus no two plates in one cup have a metallic connection. The plates are varnished above the liquid in the cups to prevent the acid flowing up by capillary attraction and injuring the screws of the clamps, and the insulating quality of the bar, A. It will be observed that a plate can be put in and taken up by merely turning one of the screws to the right or left, thus affording the greatest facility for cleaning and changing them.

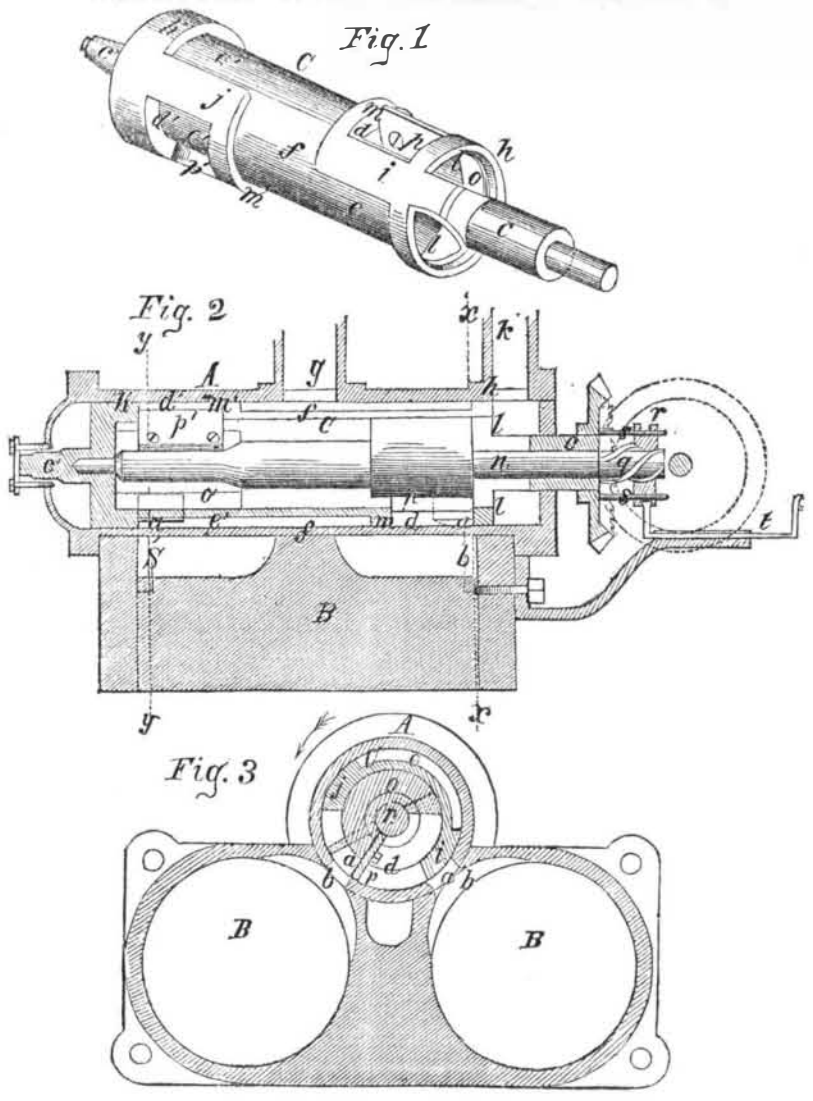
The tumblers or cups are coated with Faraday's Electrophorus, and all communication is thus cut off with the surface of the glass cells. The advantages derived from these arrangements, we conceive, will be appreciated at a glance by those acquainted with galvanic apparatus. The prevention of local action in the individual cells, and cross-fire between the different cells, the facility afforded for taking out the plates, cleaning, and changing them, by substituting an extra plate in the battery, when one is lifted out, so as not to interrupt the flow of the current are all evident. The solution used in this battery is dilute sulphuric acid, and one has been in use for five months without being taken down. It is cleanly and healthy, and can be kept in the operator's room, requiring to be noticed but once a-day, and not a constant attendance day and night, like Grove's battery. The battery of Grove is compact and very powerful, but it is expensive and unhealthy. It requires a separate room because the noxious fumes given off by the nitric acid are dangerous. It has also to be renewed very often, and is very irregular in its action. It involves much local action, wastes its force, and soon eats itself up. This is also the case with that of Daniels, and every other diaphragm battery. Smee's battery is more economical than these, but it is inconvenient for separating the elements—shifting and changing the plates. The battery here represented, it is evident, obviates these evils, and its merits have been already appreciated by a number of our Telegraph Companies, who have laid aside their old Grove's, and are now using this one. It is intense, constant, economical, and convenient.

More information may be obtained respecting it of Mr. Chester, at No. 6, Wall street, or by letter addressed to him "box 2766," New York City Post Office.

IMPROVEMENT IN GALVANIC BATTERIES.



IMPROVED VALVE FOR STEAM ENGINES.



The annexed engravings represent an improved induction and eduction valve for steam engines, for which a patent was granted to Thomas Goodrum, of Providence, R. I., on the 3rd of April last.

Figure 1 is a perspective view of the valve apart from its seat and casing; fig. 2 is a longitudinal section of the same applied to a double cylinder steam engine, and fig. 3 is a transverse section in the line, *x x*, figure 2. Similar letters refer to like parts.

This invention consists in a hollow cylindrical or conical valve of novel construction, which receives a rotary motion corresponding with that of the engine shaft, and may control the induction and eduction of steam to and from one, two or more cylinders. It also consists in an appliance to the said valve, to serve the purpose of a variable cut-off; and furthermore, it consists in a certain manner of arranging the said valve, whereby the steam passages leading from the valve to the cylinder or cylinders are shortened to the greatest possible degree.

A is the valve casing or seat, consisting of a tube of about the same length as the engine cylinder, which is bored out very slightly conical in order to grind the valve in tight and allow the wear to be compensated for. This casing is arranged parallel with the cylinders, B B, and bolted securely thereto, and has openings, *a a*, and *a a*, made in it at either end to match with the steam ports, *b b b b*, at the ends of the cylinders. C is the valve which is fitted steam tight to the casing, and is bored out from end to end cylindrically or slightly conical, and has journals, *c c'*, working through stuffing boxes in the closed ends of the casing, A. It is intended to have steam supplied constantly to its interior from the induction pipe, *k*, which enters the casing, A, at one end, and for that purpose openings, *l l*, are made in or near the end which is next the steam pipe. It has near the ends, but on opposite sides, two openings, *d d'*, in the interior, each extending nearly half around it, and being of such length as to cover the openings or ports, *a a*, in the casing. Opposite to the openings, *d d'*, are two cavities, *e e'*, which also extend nearly half way round the valve, corresponding exactly in that respect with the openings, *d d'*, and are united by a cavity, *f*, which extends all around the valve so as to communicate at all times with the eduction pipe, *g*, which is placed at or near the middle of the length of the casing. These openings and cavities in the valve only leave for its bearing surfaces the two rings, *h h'*, at or near the ends which bear outside the steam ports; the divisions, *i i* and *j j*, between the steam openings, *d d'*, and their corresponding exhaust openings, and the guards, *m m'*, on the inner ends of the steam openings. The cut-off consists of a spindle, *n*, with journals fitted to turn in bearings within the journals of the valve, carrying two semi-cylindrical heads, *o o*, fitting to the interior of the valve opposite to the steam openings, *d d'*, the said heads carrying two plates, *p p*, which fit lengthwise to the openings, *d d'*, and which fit to the interior of the valve casing, B. The heads, *o o'*, and their plates, *p p*, are capable of contracting the openings, *d d'*, to any desired extent in a circular direction, by being turned to a suitable position within the valve, The turning of the cut-off is effected by means of an endless screw, *q*, of very quick pitch, on the end of the spindle, *n*, which projects through the journals of the valve, and a nut, *r*, which fits to the said screw, but is prevented turning by pins, *s s*, or their equivalents connected with the valve. By sliding this nut back or forth by means of a slider,

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t, connected with it, the endless screw is caused to turn within the nut. A graduated scale upon the slider, *t*, will serve to adjust the cut-off of any point in the stroke.

The operation of the valve and cut-off will be best understood by reference to fig. 3, which shows its relation to the ports, *a a*, at one end of the casing. The cut-off is there supposed to be adjusted to cut off at about half stroke. The right hand engine is supposed to be just passing the center, the left hand one to be at half stroke. The valve makes one revolution in the direction of the arrows for every revolution of the engine shaft. The bearing, *i*, of the valve is just passing the port, *a*, of the right hand cylinder, and commencing to admit steam from the interior of the valve through the opening, while the bearing, *g*, is just opening the opposite port, *a*, of the same cylinder to the exhaust. The port, *a*, of the left hand cylinder, which has been receiving steam, is just being closed by the plate, *p*, while the opposite port, *a*, is full open to the exhaust cavity, *e'*. The ports, if properly proportioned, are opened wide for receiving steam, and exhausting very early in the stroke, and the exhaust remains wide open till near the end of the stroke. The cut-off may take place very early in the stroke, or steam be admitted during the full stroke by changing the position of the cut-off. The variation of the cut-off is illustrated by dotted lines in fig. 3, representing it set to cut off later than it does in the position represented in black. If this valve and cut off are applied to a single cylinder, no change of construction is required except that only one port will be required at each end of its casing. It will be readily understood that steam might be admitted to three, four, or even more cylinders by one valve, with the cylinders arranged all around it, the only change in its construction being the provision of a proper number of ports in the casing, A. The valve will work otherwise than parallel with the cylinders, but the arrangement in that way shortens the passages, and thus saves steam, and also makes the engine more compact than any other arrangement.

The inventor is confident that this improved valve is of especial importance for locomotives, and all fast running engines, saving a great deal of power to operate it in comparison with that which is required to work the cut-offs in common use.

More information may be obtained by letter addressed to him at Providence.

[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office,

FOR THE WEEK ENDING JUNE 19, 1855.

STONE SAWING MACHINES—Joseph Adams, of Fairhaven, Vt.: I claim the application to the saw frame hanging from cords so as to move of necessity in the arc of a circle of the counterbalancing weight which, at the same time, permits it to feed itself at all parts of its motion, substantially as described, and combined therewith, the guides constructed and operating as specified.

TWO-MOTION CONE VALVES—Horatio Allen, of New York City: I claim so constructing a cone valve, that in the operations of opening and closing the same, two motions shall be imparted to it, in or nearly in succession, and in directions at a right angle with each other, the first of said motions effecting the withdrawal of said valve out of contact with its seat, and retaining it so withdrawn, while the second motion shall be given, whereby it can, by that second motion, be turned without friction against the seat, as described, and this I claim, irrespective of the mechanism employed, as this may be considerably varied without changing the character of my invention, the whole being constructed and operating substantially as set forth.

CUTTING IRREGULAR FORMS—Avery Babbett, of Auburn, N. Y.: I claim the machine specified, for the purpose of producing angular irregular forms, substantially as set forth.

CORN PLANTERS—Uriah Beebe, of Oakland, Mich.: I claim the shafts, I, and supports, L, combined, arranged, and operated in the manner and for the purposes set forth.

RECIPROCATING RAILWAY PROPELLER—Henry Boynton, of Hinesburgh, Vt.: I disclaim as any part of my invention the working beam stopping apparatus as now used upon the Cornishengine, commonly called the bumper.

I claim, first, the double wheeled car truck, provided with wheels rotating in opposite directions on the same axis and running between upper and under simultaneous acting railways, constructed and applied substantially in the manner and for the purpose described, by which a longitudinal propeller for water craft is held or confined to its designed railways.

Second, I claim, in combination with two sets of railways—one for the forward and the other for the back stroke, the ascending and descending railways, so arranged that the one wheels of the truck run upon one track, and the after wheels upon another track, whereby the truck is free to ascend and descend at either end of the main railways, in such a manner that a line drawn through its axles will be always parallel, or nearly so to the main horizontal rails, substantially in the manner and for the purpose described.

Third, I claim the lower rising vibrating rails and the upper pivot moving rails, constructed and applied substantially as set forth.

Fourth, the combination of levers in their adaptation to railway propellers, by which the upper pivot rails, at either end of the railways being moved by the truck wheels; those at the opposite end are similarly moved at the same time, and the addition of safety levers, by which if the pivot rails upon either side end are moved, all the others are similarly moved at the same time.

Fifth, the combination of levers by which the catch bars or fastenings to the upper pivot rails are governed, and disengaged, by the truck wheels, and by which, if either one is disengaged, the others are also.

At the same tim I claim the combination of the curved toe rocking shaft, with the oscillating riding bar, sustaining a weight or spring with any reciprocating arm attached to the engine, for the purpose of gradually, and rapidly retarding the piston and bringing it and the car truck to a state of rest, as described.

RAILROAD CAR SEATS—J. H. Cocke, of Bremo, Va.: I do not claim a back capable of turning from one side of a seat to the other. Nor a back capable of being placed in an erect or inclined position.

But I claim a back possessing all these properties, constructed with a rigid arm, the guide pins of which turn in a curved slot provided with a catch, while the back hinges upon the support for its lower edge, substantially as set forth.

In combination with a reclining reversable back, I claim a concave seat, so that persons occupying the seat will not be liable to slide off, as they would if the seat were flat or convex.

REPLACING RAILROAD CARS UPON THE TRACK—S. Park Coon, of Milwaukie, Wis.: I claim the construction of a windlass, pulley, chain, or rope, and foot stocks, in such manner as to adapt and attach them to a section or length of railroad rail, substantially as set forth, to form an apparatus that can be used for replacing railroad cars upon the track, and when this duty is done, the parts of which can easily be separated for more convenient transportation, and packed in the tool box of the tender or other appropriate receptacle.

[The parts of the machinery embraced in this claim are very convenient, as stated, to be carried on every train of cars, and are therefore ready for every emergency of running off the track. It embraces a section adjustable track, to raise the run off locomotive or car upon it, and move it forward on the track by capstan and jacks. The apparatus is simple and efficient for the purpose.]

FISH HOOK—R. F. Cook, of Troy, Ala.: I claim the combination and arrangement of the steel strips, A A A A, having barbs, b, formed on their collar or plate, c, rod, B, spiral spring, C, ring, e, and bait hook, D, substantially as and for the purposes set forth.

[There are two spring barbs, one on each side of the shank of the hook, confined by a ring, which, when a fish bites on the bate hook, is drawn down, and the two barbs being relieved from the ring, strike into the jaws of the fish and fasten themselves with great force. This is a certain and sure catching sockdologer.]

PLOWS—L. G. Evans, of Springhill, Ala.: I claim connecting and arranging the mold board, d. land side, m, and coulter, c, in such a manner that they are together capable of a vertical and lateral adjustment in addition to the particular adjustment of the mold board, as described.

COAL SCREEN—J. P. Fennell, of Philadelphia, Pa.: I am aware that a rotating screen in a tight box with a single drawer which was used in common for the ashes and coal both has been used. This I do not claim.

But I claim a portable coal screen, composed of a tight box, within which are arranged a rotating screen, and two drawers, the openings into which boxes are provided with doors, so that the box shall remain tight when either or both the drawers are taken out, as described.

CUTTING THE INSIDE HOLD OF SHOVEL HANDLES—Geo. Feiler and J. L. Pennock, of Holmesburg, Pa.: We claim, first, cutting the inside hold of D-shaped handles for shovels, spades, etc., by means of a curved cutter, O, so operated as to pass one half way round one end of the hold, the cutter smoothing or rounding a portion of said hold equal to its width and then remaining stationary, while the handle is moved to force the remaining uncut portion of the hold past the cutter.

Second, we claim operating the cutter, O, by means of the cam, G, frame, H, geared sector, I, and half cylinder, M, to which the cutter is attached.

Also operating the carriage, P, to which the handle, V, is attached by means of the cam, T, and racks, R S. The above parts being arranged and operating conjointly as shown and described.

[These claims express very clearly the nature of the invention. It will be understood that the shovel handle to be operated is clamped on a carriage, which feeds it to the action of the curved cutter, the frame of which is operated by a cam, G, as is the feed frame of cam, T, to change the positions of the handle and cutter, to effect the objects described in a rapid and superior manner. The improvement is certainly a good one.]

SPRINGS FOR HINGES, &c.—Erasmus French, of Waterbury, Conn.: I do not limit myself to the form or application specified, so long as the same mode of operation is attained by the substitution of mere equivalents.

But I claim the method substantially as specified, of composing a spring of a series of elastic rods connected at each end to plates, or their equivalents, and at or nearly at equal distances from the center of the plates, and surrounded at or nearly at the middle of their length by a collar or ring, so that they shall be held nearer together at the middle than at the ends, substantially as specified.

SCAFFOLDS—A. C. Funston, of West Philadelphia, Pa.: I claim making the back upright of one or all of the sections or frames forming this particular scaffold in two parts, and providing the lower part with a slot, and uniting it to the upper part by a set screw, which plays in the slot and allows of the lower part being raised, substantially as and for the purpose set forth.

[This improvement is designed to facilitate the raising and lowering of masons' scaffolds, and making them adjustable with facility, to suit circumstances. The scaffold is made in section frames, with adjustable metal braces, to expand or contract the size of the scaffold. By the use of screws working on rods which move in slots in the frame, the scaffold is raised or lowered by simply turning the screws, as stated. This scaffold is certainly far more convenient and adaptable than those in common use, and it should meet with favor.]

EXPANDING BLOCK FOR HORSE COLLARS—R. R. Gray, of Crawfordsville, Ind.: I do not claim any device in the machine separately and alone considered.

But I claim the arrangement of the two sets of jaws, B B C C, by which the inner jaws, C C, alone are actuated directly to the screw, G, while the outer, B B, are actuated by the expansion of the inner, C C, and the pressure of the springs, H H, both jaws being guided by the slots, D E, in the manner and for the purposes set forth and described.

STUMP MACHINE.—Stephen Gorton and Francis Morris, of Crawfordsville, Pa.: We claim the construction of our machine after the manner described, to wit, with a main shaft and wheels, as described with the larger wheel, B, fastened on to the shaft and the lesser wheel, C, constructed so as to turn on the shaft, or any other construction substantially the same.

MODE OF HANGING BELLS—G. W. Hildreth, of Lockport, N. Y.: I claim the round tapering shank, b, and corresponding hole in the yoke, a, in combination with the bolt, c, and cap, d, to secure the bell firm into the yoke.

Second, I claim the doweling of the cap, d, to the yoke, a, also the manner of securing the bolt, c, from turning in the cap, d, for the purpose set forth.

DOORS—O. C. Hill, of Malone, N. Y.: I claim inserting springs and strips into grooves in the beveled top, bottom, or outer edge of a door when the said door is made to fit into a casing which is correspondly beveled, by which the joints of the door are made wind and water proof, substantially as set forth.

PIANOFORTE ACTION—R. M Kerrison, of Philadelphia, Pa.: I claim solely the means I employ to check and hold the hammer after the blow.

I claim as part of those means the impeller made of the form described, substantially in the manner and for the uses set forth

I also claim the hammer butt of the form described, suitable and proper to receive the action or pressure of two parts or branches of the impeller at two different points, in the manner and for the purpose substantially as set forth.

I claim the impeller and the hammer butt, as described, or their equivalents, and acting conjointly in the manner substantially as set forth.

I claim them conjointly as a means of checking and holding the hammer after a blow.

HOT AIR FURNACE—J. L. Kite, of Philadelphia, Pa.: I am well aware that spiral flues and air passages have been commonly used in connection with hot air furnaces, which however, have generally been made hitherto in the shape of pipes, or by means of loose scraps introduced into the flues and passages. Therefore I do not claim exclusively the use of spiral passages for hot air furnaces.

But I claim the combination of castings, B and D, with their vanes and with the outside casing, A, constructed and operating in the manner shown, for obtaining a great amount of heating surface at the expense of a small quantity of fuel.

TAKING STEREOSCOPIC PHOTOGRAPHS—J. H. Marston, of Philadelphia, Pa.: I do not claim the using of guides or frames or angles on a camera board, as such have been used before.

But I claim the particular arrangement of two frames or guides or boards that shall work on and be fastened or pivoted on the camera board, A, at the center and front of the camera board, A, at a a'. the frames or guides to be at right angles, so that when closed together they form the raised ledge, b b'. parallel with each other, by which to adjust and center the angle board, A, previous to setting the angles for stereoscoping.

Also the application of the spring, c, to hold the frames together, the right and left screws, e e', and nuts, d d', and eye plates, f f', to force apart, and hold the frames, B B', in any desired angle.

I claim the described apparatus for moving the camera box and giving the true stereoscopic angle at one and the same time.

[These claims embrace an improvement in the camera board, which allows of the camera box being adjusted more expeditiously and correctly, for taking stereoscopic pictures than can be done in the common way. They also embrace an improvement in the camera box by the use of the devices named in the second claim for expediting the process and taking two pictures easily on the same plate,—a good improvements.]

FASTENINGS FOR CARPETS—Felix Miller, of New York City: I claim the method of laying and securing carpets down upon floors by means and use of the claw hook, substantially as described, operating and combining with the carpets and eyelet on the floor, substantially in the manner and for the purposes set forth.

CUTTING LEATHER INTO STRIPS FOR BOOT AND SHOE SOLES AND HEELS—J. P. Molliere, of Lyons, France. Patented in France July 22, 1853: I claim the cutting up of the sides of leather into sole and heel strips of any required breadth, by means of the self-arresting carved knife blade, o, driven alternately to the right and to the left by the Vaucanson chain, H, while the leather is held in its place against the adjustable pins, 3, by the spring ruler, M, the whole constructed and operated substantially as described.

SECURING CUTTERS TO ROTARY DISKS—Jonah Newton, of New York City: I claim securing the cutters, a, to the disk or plate, A, as shown and described, viz., having the cutters of semicircular form with ledges or projections, d, on their back or convex sides, the ledges or projections being fitted in grooves, c, in the semicircular edges of the projections, b, of the plate, A, the front or concave sides of the cutters having grooves, e, in them to receive the nuts or segment heads, f. The projections, b, cutters, a, and nuts or heads, f, having screws, h, passing through them, for the purpose of allowing the cutters to be adjusted properly, and also securing firmly the cutters to the disk or plate.

[The mode of securing the cutters embraced in this claim, prevents them from becoming loose by lateral motion, the ledges on their backs fitting in the grooves, c, accomplish this difficult object. As the cutters are worn down in consequence of being often sharpened, they can be moved further out, by relaxing the screw, h, so as to have their cutting edges always in correct line, to act upon the timber at the proper angle.]

CUTTING LOCKS AND TAPERING ENDS OF WOODEN HOOPS—Royal Farce, of Pitcher, N. Y.: I do not claim the use of gauges for obtaining the length of hoops between the locks, but only as used in connection with my machine, but not being aware that there is in use any device or machine for cutting locks, other than the edge, saw, or knife.

I claim the whole combination, as described, and especially the principle of cutting locks in wooden hoops by means of knives or other cutting apparatus, having substantially the form of the lock required to be made, and cutting both transversely and longitudinally by the same movement, no matter in what other combination found.

ICE HOUSE—W. D. Parker, of New York City: I do not claim making an ice house with double sides, and packing a non conducting substance between the sides, for that is well known.

But I claim the construction of the ice house, as shown and described, viz, having the ice house formed with double sides, a a, and double roof, c, with a suitable non-conducting substance packed between them, the house being provided with a slotted floor, g, having an ice chamber underneath it, and also provided with a double inclined floor, i i, at its upper part, underneath which a screw, j, is secured, on which charcoal and other absorbents, k, are placed.

A flooring, l, being placed on the flooring, i i, and having holes or traps, n, provided with doors, n', made through it, and also through the flooring, i i, and screen, j, the flooring also consisting ice, substantially as described and for the purpose set forth.

[The object of this improvement is the construction of a perfect ice house for the preservation of fruit, &c. For this purpose the atmosphere must be of a low but uniform temperature, with a dry atmosphere, so as to prevent incipient decomposition or fermentation, and also to absorb impure gases, if through inadvertence, any injured fruit, etc., may be placed in it. These objects are accomplished by the construction of this ice house, and the absorbents placed in it We have seen and partaken of fruit preserved in one of them during a whole year, and it looked as fresh, and tasted as delicious as if just plucked from the tree.]

WOODEN WARE—David Pierce, of Woodstock, Vt.: I claim, first, the application and use of a cutter or cutters in gangs attached to a sliding rest, as described, or their equivalents.

Second, the apparatus for forming and finishing circular or elliptical heads or bottoms, as described, or its equivalent.

Third, the apparatus for turning out the inside of the cylinders and cutting the croze, as described.

FAN BLOWER—David and J. R. Pollock, of Lancaster, Pa.: First, though we do not of itself claim the employment of a hollow shaft, we claim making the shaft hollow with open ends and with apertures, g g, in the sides within the blower casing, as set forth, for the purpose of inducing a current of air through the shaft to keep it cool, and at the same time to increase the supply to the fan.

Second, we claim making the pulley, F, which receives the driving belt, hollow with closed ends and a perforated face and providing openings from its interior into the shaft, as set forth, for the purpose of causing the displacement of the air between the belt and the face of the pulley and at the same time increasing the supply to the fan.

[The wings of this blower are so made as to be adjusted at different angles. The objects of the improvements are clearly stated, and their advantages pointed out. They are good, and commend themselves to the attention of all those who make and use blowers.]

SOCKET HANDLES FOR CHISELS—L. T. Richardson, of Worcester, Mass.: I do not claim a die of any particular form, neither do I claim simply forming or constructing sockets by means of a die, for dies are used for analogous purposes.

But I claim constructing the sockets, A, with a die so formed that a transverse partition or ledge, a, is left within the socket, said partition or ledge dividing the recess, b, which receives the handle of the implement from the recess, c, which receives the shank, so as to obtain a sufficient body or weight of metal at that part of the socket which is welded to the shank, d, of the tool or implement, for the purpose of forming a strong and durable connection of the socket and shank, as set forth.

[The ordinary mode of constructing such socket handles for the cheaper kind of such tools, is to forge the socket of sheet metal, welding the joint, and then inserting the shank within the smaller end and welding it to the socket. This forms a very imperfect connection, because the shank has a very small bearing within the socket, and because there is not a sufficient weight or body of metal at the small end of the socket, to be incorporated with the shank. This explanation will render clear the value of the improvement embraced in this claim.]

PRODUCING INTERMITTENT ACCELERATION OF MOTION IN HARVESTER RAKES, &C—John Richardson, of Buckeystown, Md.: I am aware that an accelerated motion has been given to grain rakes on harvesting machines, this I do not claim.

But I claim a device for producing an accelerated motion whether in rakes or for other purposes, said device consisting of the cam, a, on the drum, H, and the ratch and pawl, I b, and friction wheel, V, arranged and operating substantially as set forth.

GRAIN CLEANERS—H. D. Reynolds, of Pendleton, Ind.: I do not claim the devices described, separately considered.

But I claim the openings, q, in combination with the conductor, r, and scouring cylinder, 3, arranged substantially as described for the purpose specified.

CHUCK FOR TURNING ECCENTRICS—Jno. W. Russell, of Springfield, Mass.: I claim the application of a chuck to irregular objects and points eccentric from the center, using for that purpose the jaws, C C, and the screw, E, in combination with the nuts or collars, D D, in all for the purposes substantially as set forth.

SEED DRILLS—James Selby, of Lancaster, Ohio; I claim distributing the seed by means of the transverse slides, f, in combination with the reciprocating slides, E, operated by means of an adjustable crank formed by the sliding bar, j, as shown and described.

[The slides, f, in the claim regulate the quantity of seed discharged; this is effected by their position under the apertures through which the seed passes down. The method of distributing the seed by the devices claimed, is simple, and is believed to be a good improvement over other modes in use, to obtain the same results.]

MOVING STEREOSCOPIC PICTURES—A. S. Southworth & J. J. Hawes, of Boston, Mass.: We claim giving to the pictures of a stereoscope or other analgous instrument a panoramic motion into and out of the fields of vision, by means of mechanism substantially as described, or by any other equivalent means.

ROTARY ENGINES—Sylvester Stevens, of Boston, Mass.: I claim the revolving disk, D, with its valves, b b', operating in the manner substantially as set forth.

SELF-ACTING BRAKE FOR VEHICLES—Peter Ten Eyck, of New York City: I do not claim a brake formed by placing shoes between the wheels and the surface of the ground, irrespective of the peculiar arrangement or connection shown between the shoes and the draught pole or shafts, for they have been previously used for railroad brakes.

But I claim the employment of the shoes, F F, attached to the back axle of the vehicle by the jointed arms or levers, B D, where said shoes are connected to a sliding draft pole, G, by rods, g g, and chain, h, said pole, G, having a spring, K, attached to it.

The above parts being arranged substantially as shown and for the purposes as set forth.

[The shoes of this brake are self-acting; they drop by their own gravity when the speed of the team is checked, and move into place to wedge and bind between the peripheries of the back wheels of the wagon and the ground, and thus stop the vehicle. It will be understood that the brake is especially adapted for wagons and carriages in hilly regions.]

SELF-OPERATING CIRCULAR GATE—Wm. Thompson, of Nashville, Tenn.: I am aware that many modifications of the described gates may be made, I therefore do not confine myself to the precise form shown.

I claim constructing the gate, B, of circular form, and having said gate rest upon a vibrating rail, C, which is connected to a platform, D, or arranged in any proper way, so that said rail may be inclined either by the weight of the person, vehicle, or animal, which is to pass through it, or by any other device, and cause the gate to roll down the depressed end of the rail, and consequently leave a free or open space between the posts, said gate closing or returning to its original position between the posts, when the rail is relieved of the weight or pressure which first actuated it.

[This gate is of the form of a wheel and rests on a vibrating rail, so that whetever side this rail is inclined, the gate will roll—to right or left—and thus it is opened and closed. By treading on a platform in approaching the gate, the gate is made to roll to the one side and open, and when a person has passed through and off the platform, a balance weight tilts the vibrating bar, so as to make the gate roll into position and thus be closed. The invention is a peculiar one.]

BRICK—Levi Till, of Sandusky, Ohio: I claim the making of bricks with channels or grooves, and with spurs or conical projections for the purposes and substantially in the manner set forth.

STEAM BOILERS—Chas. F. Thomas, of Taunton, Mass.: I claim the improvement of extending the tube sheet, c, smoke tubes, P P, and boiler, M, or its enclosing sheet, R, into the fire place, I, and over the fire grate, K, as described, in order not only that the part so extended may serve as a beam or strut to support the crown sheet against the superincumbent pressure of the steam, but that the flame and gases from the fire may not only pass against the tube sheet and enclosing sheet, R, of the extended part of the boiler, but also through the extended parts of the tubes within such projected part of the boiler, as specified, the same serving to greatly increase the extent of heating surface exposed to the fire.

HOSE COUPLINGS.—A. M. Waterhouse, of New York City: I do not claim the pipe as represented in figure 1, with two or more projections or ears; but I do claim the slotted nut with the female screw on its inner surface.

I claim the pipe represented in figure 3, with straight or vertical slots (one or more) and with a screw on its outer surface.

I also claim the combination of these parts as described, or their equivalents, each with the other, and altogether and all other combinations substantially the same.

JOINTS FOR STOVE PIPES—Alva Worden, of Ypsilanti, Mich.: I claim the inclined tapering semi circular grooves, constructed in the manner and for the purpose specified, all of which are fully demonstrated.

JOINTZ OF PIPES FOR ARTESIAN WELLS.—Jesse Norris Bolles, of Philadelphia, Pa., (assigner to H. J. Ockerhausen, of Baltimore, Md.): I claim the mode of rendering cylinders or tubes flush, or upon a line on their exterior surfaces for Artesian wells, or for other purposes as described, or any other mode substantially the same which will produce the same effect.

MILL DRESS.—George L. Dulaney, of Mount Jackson, Va., (assigner to Reuben Allen, of Shenandoah Co., Va.,) I claim the construction of what I call a compound elbow, mill dressed, by the divisional mode of calculation described, having main elbow leads, gutters or groves, formed with secondary or branch elbow leads or conveys, communicating directly therewith, instead of being a distinct or separated series. The said compound elbow dress being formed upon the face of a mill stone, having an inward sloping or depressed surface, together with an outward sloping feed or supply circle, specifically as described and for the purpose set forth.

THE MANUFACTURE OF ARTIFICIAL STONE.—Thomas Hodgson, of Brooklyn, N. Y., (assigner to Robert L. Wright, of New York City.) Patented in England, May 9, 1854: I do not claim the admixture of blood with sand or other earthy or mineral matter, except in the manner and for the purpose herein specified, as I am aware that such mixtures have been used for mortar, cement, stucco, &c.

But I claim the composition formed by the admixture of sand or pulverized stone, plaster of Paris, and beast's blood, when these ingredients are mixed in the manner, and in about, (without limiting myself precisely to) the proportions herein set forth, to be molded or cast while in a plastic state, substantially as herein described into blocks, architectural ornaments or devices, statuary, or ornamental or other

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