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Moss Paper.

In 1825, a Hollander named Van Houten obtained an English patent for a new species of paper or felt made from moss. The process of manufacture is quite simple, and applicable, we presume, to various kinds of mosses growing in this country. The patentee, in his specification, gives the following information:

The material to be employed for this purpose is moss, such as grows upon low heaths and moors in Holland; and which may be found, as the patentee supposed, in many parts of England. This moss is to be gathered, washed, cleaned, and dried, and then cut into short lengths in an engine, such as is employed for cutting tobacco. The cut moss is then to be mixed up in the manner of preparing pulp for making paper, and when so mixed, is to be molded into sheets, in a frame, as paper is molded. The sheets are then to be pressed, in a heap, between blankets, and afterwards hung up to dry upon lines, as paper. When perfectly dry, the sheets are to be again pressed, in order to bring the material into close contact; and they may be considered as fit for use.

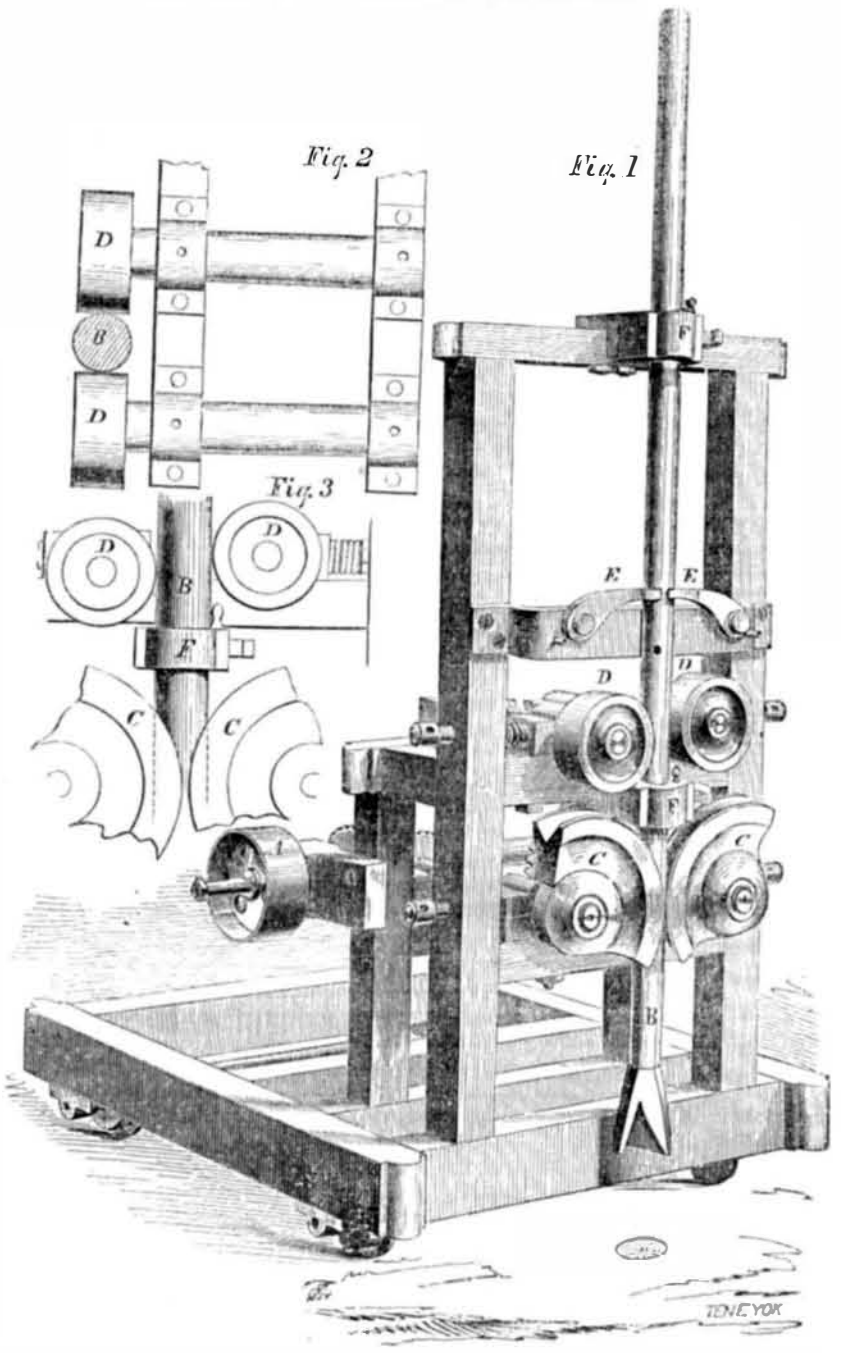
This paper, or felt, was proposed to be employed for sheathing of ships' bottoms, between the wood work and the copper; and also for lining between the thicknesses of planking; and likewise as an infallible preventive against leaking, as, upon the insinuation of water between the joints of the copper or wood work, this felt or paper absorbed the wet as a sponge, and thereby swelling, filled the vacant spaces, and rendered the vessel water tight.

Such a material was employed, for some time, in the Dutch navy, and found perfectly efficacious is keeping the vessel dry; and so extremely durable is moss, that the patentee considered that it would never decay, but would remain sound and effective as long as the wood work of the ship lasts.

American Spiral Bullets in England.

English papers state that the interior spiral bullet of J. W. Cochran, of this city, described by us in the last volume of the SCIENTIFIC AMERICAN, has been highly approved in England, where the inventor now is, for the purpose of introducing it there. This bullet, having three spiral grooves in its interior chamber, and a very minute passage at the point, receives a whirling motion round its long axis when discharged from a smooth bored fire-arm, and has, therefore, the same direct flight as a ball discharged from a rifle. Numerous plans have heretofore been tried to give bullets such a motion from smooth bored firearms, but they all failed, because they (the bullets) were formed with projecting spirals, and were, therefore, constructed upon wrong principles. The projections met with such a resistance in passing through the air, that their extent of range was greatly reduced. Cochran's bullets are smooth outside and of conical form, so that they offer less resistance to the air than a common rifle bullet. It is stated that he has received orders from the British Government for manufacturing a great number of his shot for cannons.

GOULDING'S PATENT ROCK DRILL.



The accompanying engravings represent the Rock Drill for which a patent was granted to H. Goulding on the 20th Jan., 1853.

Fig. 1 is a perspective view of the drill. Fig. 2 is a top view, showing the position and bite of the friction rollers which turn the drill; and fig. 3 is a direct front section, showing the position of the clamps which lift the drill, and also that of the two turning rollers, D D.

It consists simply of a drill spindle supported by a proper frame, and raised between and by the action of two grooved wheels or cams, and allowed to drop when at the proper elevation; the drill being turned, as it falls, by the action of two small rollers, set at an angle, and operating as an additional guide to the spindle.

The views presented show a machine for operating a single drill perpendicularly. A is the drive wheel. B is the spindle, with drill attached. C C are the two grooved cams, or part grooved wheels. They are secured on separate shafts, and receive a rotary motion by bevel gearing connected with the shaft of the driving pulley, A. These cams alternately lift and set free the spindle, B, of the drill; D D are two small rollers set at an angle; they press against the spindle of the drill, and thus impart to it a rotary motion (to any required extent) as it falls. E E are two movable clamps, which, when in the position shown, catch the spindle as it is raised, and prevent it from falling; so that successive revolutions will raise it from a shaft of any depth. These clamps are thrown open during the act of drilling. The drill and spindle, B, can be removed entirely from the machine without disturbing the position of the frame. This is done by confining it to work in the frame by two clasps, F F, which have but to be unlatched to remove the spindle. This is a very convenient arrangement for putting in and taking out the long drill spindle. As the section grooved pulleys, C C, rotate, they lift the drill spindle to the hight of their described peripheries, and set it free, when it immediately drops down by its own gravity.

When descending it receives a slight turn from the angular set rollers, D D, and strikes a new spot every stroke, as shown by the star-shaped hole, figure 1, beneath the drill. This is a very simple and unique method of lifting and turning the drill. This drill can also be set to bore horizontally, or at different angles, by a simple appliance in addition to those described. For stone quarries this drill can be so arranged as to operate a series of drills in direct line with each other. It is also adapted for Artesian wells, as it bores accurately and rapidly, and is easily managed. For Artesian wells, where it is sometimes required to pass through strata of earth, clay, and rock, the ordinary scoop and auger-shaped borer generally used for the two former, may be attached to the spindle, B, and the necessary rotary motion being applied by hand or simple mechanism. Its principal advantage is the accuracy of the work, and the rapidity with which the auger can be withdrawn.

From the testimony of those who have used this drill, and from a close examination into the mechanical construction of the machine, we think most of the difficulties which are experienced in other machines are overcome in this, and we would recommend its trial by those who are wanting a drill for the purposes for which this is adapted.

The patent is owned by a company in Boston, who inform us that a machine calculated for boring holes six inches in diameter, can be worked to bore granite at the rate of twenty-four inches per hour.

Further information may be obtained on application to Nathan Haskins, at the machine works, corner of Haverhill and Traverse sts., Boston, or T. H. Leavitt, Treasurer of the American Rock Drill Co., No. 1 Phœnix Building, corner of Exchange Place and Devonshire sts., Boston.

Statistics of Cincinnati.

The city of Cincinnati is a prosperous place, as the annual statement of its trade and commerce—by Wm. Smith, Superintendent of the Merchants Exchange—shows. The annual value of its manufactures is $52,109,374. Its imports annually are valued at $75,000,000, and its exports at $60,000,000. There are 6000 miles of railway now diverging from the city, and 4000 miles under construction.

The natural site of Cincinnati is very favorable. It is near the center of the rich Ohio Valley; which comprehends an area of 220,000 square miles, and railroads now spread out from it like the spokes of a wheel. Its manufactures are rapidly increasing, and must increase for ages, as it is situated in a great coal and iron district, which has untold millions of wealth reposing beneath its surface.

To Clean Sponges.

The best sponges imported are received from Smyrna, and from the shores of the islands in the Grecian Archipelago. When imported, they are full of sand, and in this state it is the best way to purchase them; then afterwards to beat out the sand with a stick, and well rinse them in cold spring water. Nothing is better adapted for cleansing the skin than a good sponge; hence surgeons prefer it to any other material. In the regular way of using a sponge with soap for washing, they rapidly become greasy, and are then frequently thrown aside, before half worn out. The peculiar cellular fibrous tissue of sponge enables it to decompose the soap, retaining the grease and oil, which render it slimy; when such is the case, a ley of soda should be prepared, of the strength of half a pound of soda to half a gallon of water, and the sponge placed to soak in it for twenty-four hours; it should then be washed, and well rinsed in spring water, and afterwards in water containing a little muriatic acid (a wine glassful of the acid to half a gallon of water is strong enough.) Finally, again rinse the sponge in plenty of spring water. The best sponge being worth from 40s. to 80s. per pound, renders it fully worth while to keep them clean. If trouble be taken to well rinse a sponge every time after using, the cleansing process will rarely be necessary.

SEPTIMUS PIESSE.

A Huge Propeller Screw.

The propeller for the U. S. new steam frigate *Wabash*, was recently cast at the foundry of Messrs. Merrick & Son, Philadelphia, and weighed 11 tuns. It is composed of copper and tin—25,000 lbs. of the former, and 2,500 of the latter—the well-known gun metal. It has two blades, has a pitch of 23 feet, and is 17 feet in diameter—the largest propeller in the world.

[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING DEC. 18, 1855.

LOOMS FOR WEAVING PILE FABRICS—E. B. Bigelow, of Boston, Mass.: I claim the employment of a latch or hook, for successively drawing the pile wire from the cloth, when said latch or hook is constructed and operated substantially as specified.

I also claim, in combination with said latch, or hook, for drawing out the pile wires, the apparatus which receives the outer or head end of the pile wires, from said latch or hook, and transfer them to the face of the cloth, when said apparatus is constructed and operated substantially as specified.

GRAIN CLEANING—J. L. Booth, of Cuyhoga Falls, O.: I claim, first, in combination with the fan box, D, enclosing the fan, H, and provided with the hollow shaft through which the grain is fed, the cylinder, G, shell, A, and conical basin, K, arranged in the manner described for the purposes specified.

Second, I claim the inverted conical basin, K', with tube or pipe, L, provided with apertures, i, attached, in combination with the shell, A, cylinder, G, and fan box, D, substantially as shown and described.

Third, I claim feeding the grain into the space between the shell, A, and cylinder, G, by means of the hollow shaft, E, and arms, h h, arranged as shown, whereby the grain is evenly fed into said space, without interrupting or obstructing the current or blast which passes up through the cylinder, and the machine also rendered compact and efficient.

[In this invention there is a shell, having within it a revolving cylinder armed with scouring projections. The grain passes between the cylinder and shell, and is thus scoured. A blast of air from a fan above is also introduced between the shell and cylinder, passing down under the bottom, up through the interior of the cylinder, sucking up the dirt and impurities, while the clean grain falls out through an opening in the bottom of the shell. This is a compact smut machine, and apparently very effective.]

PIANOFORTES—S. B. Driggs, of Detroit, Mich. Patented in England, Nov. 1, 1855: I claim, first, securing the sounding board within a metallic frame, or its equivalent, substantially in the manner and for the purpose set forth.

Second, I also claim combining the sounding board and its enclosing frame, with upwar l projections from an open metallic base frame, and with a wrest plank, and an upper metallic frame, or hitch plate, by which I am enabled to make a pianoforte without using wooden blocks, or other wooden supports for the wrest plank, sounding board, and upper metallic frame, substantially as set forth.

Third, in connection with the combination of the upward projections from the open metallic base frame with the metallic sounding board frame, the wrest plank and the upper metallic frame, I also claim comtining a thin bottom board, b, with a shallow wooden frame, which encloses the said open metallic base frame, substantially as set forth.

Fourth, in connection with the enclosure of the thin sounding board within a metallic frame, and the combination of said frame with the upper metallic frame, the wrest plank and the open metallic base frame. I also claim the combination of the said inclosed sounding board with the thin bottom board of the instrument, by means of a sounding post, for the purpose of adding additional stiffness and vibratory power, to both of said boards, substantially as set forth.

Fifth, I also claim supporting the strings upon metallic saddles, which stride the sounding board bridge, and are combined with said bridge, and with the sounding board, substantially in the manner and for the purpose set forth.

[Much of the expense involved in the construction of a piano is spent upon the case. The bottom board is required to be very thick and rigid, in order to give proper support to the hitch plate, on which one end of the wires are attached, and the tuning block, or where the wires are wound or tightened. Other parts of the case are required to be proportionately strong.

The present invention consists in a new arrangement of frame-work for supporting the hitch plate, tuning block, &c., independent of the case; and in making the case very thin, so that its top and bottom shall become sounding boards, capable of vibration, like a violin; the volume of the instrument is thus said to be much increased and improved.

We understand that these improvements are of a very practical nature, that they materially reduce the cost of pianos, and at the same time improve their quality. A large company, it is said, has been formed or is forming to work this patent.]

SAW SET—T. C. Bush, of New London, Conn.: I claim the additional guard or stop, J, so constructed and arranged as to enable the operator to set the teeth of a saw alternately in each direction, without reversing the instrument or the saw, substantially as described.

NOZZLE FOR EXHAUST PIPES OF LOCOMOTIVES—W. E. Cooper, of Dunkirk, N. Y.: I am aware that in the various multiplied forms of exhaust nozzles, the steam of escaping vapor has been already formed into various shapes, one of which is, in effect, a ring, a conical plug being fitted in the orifice, to regulate the area of the opening, by varying its position, but none of these have been with the intent, nor have they produced the effect of mine, inasmuch as the blast has never been efficient, except on its outer surface.

I claim the blast nozzle described, which forms the escaping steam into a circle, or its equivalent, and permits the products of combustion to pass up both sides of the annular steam track, or current, as set forth.

ADJUSTABLE CRANK PIECE FOR AUGERS—J. Gourlay, of Ogdensburgh, N. Y.: I am aware of W. P. Barnes' invention, and therefore only claim the particular method of varying the length of leverage in handles, as set forth.

[The above bit brace is made like those in ordinary use, with this exception: the breast knob instead of being directly attached to the upper part of the crank arm, is fastened to a sliding piece, which moves in a groove in the arm. This permits the elongation of the upper part of the crank arm at pleasure. When thus elongated, a double crank is, in effect, produced; but at other times the tool is employed as a single crank brace. In commencing to bore a heavy piece of stuff the tool is used singly, but after the bit has taken hold, the slide is moved out so that both bands may be effectively employed. The improvement we regard as a good one.]

PADDLE WHEELS—F. W. Capon, of Newton, Mass. I claim the combination of one or more alleviators or skeleton paddles, constructed essentially as described, with each or any main paddle, or float of a paddle wheel, or propeller, the same being for the purposes as specified.

MOLDS FOR CASTING BELLS—Eber Jones, of Troy, N. Y.: I claim the so making of flasks for casting bells, the bodies of which are made of metal, so that the guides by which they are put together shall be turned or molded from the same centers from which the flasks themselves are coated with the lining, or covering of clay or loam, and forming said guiding surfaces, where they are constantly under the ready inspection of the molder, substantially as described.

AUTOMATIC FEED MOTION FOR SAW MILLS—Henry C. Green, of Clarence, Wis.: I claim the combination of the cones, L L, governor, D, and pulleys, S S, arranged and operating substantially as shown, for the purposes specified.

[All logs are more or less tapering in their form; they are larger at one end than at the other, consequently, in sawing, the saws have less work to do at the smaller end than the other. If a given quantity of power be applied to the saw it will move faster at the small end and diminish in speed as it progresses towards the butt of the log.

Mr. Greene's invention consists of a regulating apparatus, intended to maintain the same speed in the saw, and to increase or diminish the quantity of power applied, in accordance with the work; it is also intended, in case of stoppage by choking up of the saw, instantly to throw off the belts, shut down the water gate, &c., and so avoid accident. The apparatus comprises a series of cone pulleys and other connections ingeniously arranged. It appears to be an invention of much utility.]

FIRE ARMS—Joseph C. Day, of Hackettstown, N. J.: I claim, in addition to my former claims, granted to me in letters patent, first, connecting the two side pieces, B' and B2, between which the barrel is hung by a hinge, B3, and locking them by the projection, B4, and a corresponding recess, substantially as set forth.

Second, making the face of the sliding collar, D, of the shape of an arc, with a cutting edge, so as to act in combination with the rear end of the cartridge, as described.

Third, I claim the Groove, C', and A2, in the breech and the rear end of the barrel, for the purpose set forth.

REGISTERING MUSIC—H. B. Horton, of Akron, O.: I claim, first, attaching the markers, b b, by which the notes are registered, to light springs or flexible bars, g g, which are so supported by the keys, when the latter are raised, or not in operation, as to hold the points out of contact with the roll, D, or other traveling sheet, upon which the notes are registered, until their respective keys are depressed, when losing that support the points fall, or are gently pressed upon the surface of the sheets substantially as set forth.

Second, the within described method of operating the bar marker, o m, by which the bars are registered, by making it sufficiently elastic to hold the point off the sheet, while it is left free, and striking it down in contact with the sheet, at intervals of time, bearing a proper relation to the movement of the sheet, by means of a hammer, applied substantially as described, and operated by a cam, S, on one of the rollers which supports and moves, or is moved by the sheet.

Third, the revolving vibrating indicator, a, arranged so as to be visible by the player, and operated substantially as described, and the cam, c, on the axle of one of the rollers, which drives, or is driven by the sheet, for the purpose of marking the time to lead or guide the player.

Fourth, attaching all the note markers and the bar marker, and the upper guide of the rods through which the keys support the note markers, to a frame, k k, so that the whole can be moved simultaneously, in a lateral direction, to mark in different lines, substantially as and for the purpose set forth.

[Composers and extemporizers of pianoforte music have long been in want of some contrivance that should register the notes of a musical composition as fast as they were struck upon the instrument. Many attempts have been made to produce such an apparatus, but never, we believe, with real practical success. Their parts have generally been too complicated and uncertain for utility. The present invention is believed by the inventor to have overcome all previous difficulties. It consists in placing across the top of the piano a frame, in which an endless apron of paper or other substance is made to revolve by means of a weight or spring. A series of light perpendicular rods extend down from the frame, the lower ends of which rest, one upon each key. The upper ends of the rods are furnished with markers; whenever a key is pressed the rod which rests upon it also falls, and its marker touches the revolving paper, leaving a mark indicative of the note touched. When the finger is removed the key rises and carries up the marker away from the apron. If the paper is lined off laterally and longitudinally, the composition may be easily read and copied by the operator. The length of the notes will be shown by the length of the mark.

The expense of this apparatus is not great. It is applicable to pianofortes, organs, melodeons, &c.; it involves no alteration in the construction of an instrument, and is easily attached to those in common use.]

MODIFYING FOCAL LENGTH OF THE EYE—Daniel Parish, of New York City: I claim the improved optical instrument described, for the purpose of improving and restoring the sight, by giving greater convexity to the eye when flattened, and also by depressing that organ when too convex, in the manner specified.

MILL SPINDLE STEPS—Isaac N. Parker, of Lewiston, Me.: I do not claim the step described in W. P. Coleman's patent, dated Oct. 1, 1851, as such are well known.

I claim the formation in the step of the oil reservoir, F, surrounding but separated from the spindle, and communicating with it by the opening, G, at its bottom, with the periphery of the spindle, substantially in the manner described, and for the purposes fully set forth.

SPIKE MACHINES—A. M. George, of New York City: I do not claim the jaws, B B', nor the toggle, C'', with the heading die, D, attached, for they have been previously used.

But I claim the friction roller, f, and lever, I, to which the cutter, k, is attached, when said roller and lever are placed upon adjustable centers, or pivots, or rods, e i, arranged substantially as shown, for the purpose specified.

[Spikes are required to be more or less sharp at their points, according to the stuff into which they are to be driven. The present improvement relates to a means of easily altering the cut of the point during the operation of making, so that the spike shall be sharp or blunt, as desired. The cutter which separates the spike from the rod out of which it is made, is attached to a swinging horizontal arm, so arranged by the inventor that its center may be quickly shifted. A change in the center of the arm causes a change in the angle to which the spike point is reduced. The patentee is the originator of several other very valuable patented inventions relating to spike machinery.]

PLANING FELLIES—Wm. W. Johnson, of Clifford, Pa.: I claim the combination of the lever, E, sliding in the arms, A, graduated as shown, with the graduated lever, F, and hollow cylinder or barrel, G E and F, being hinged, for the purposes set forth, or any device which is substantially the same.

POLISHING AND BURNISHING THE EDGES OF THE SOLES AND HEELS OF BOOTS AND SHOES—Jean Pierre Molliere, of Lyons, France. Patented in France, Jan. 5th, 1855: I claim, of even date with the French patent, the rotary hollow tools, capable of being heated to any degree by the admission of steam, or other heating medium, into the chambers through the hollow shaft on which they turn from the regulating valve cocks, v, for the purpose of polishing and burnishing the edges of soles and heels of boots and shoes, the whole constructed and operated, substantially as described.

MOUNTING THE "UPPERS" OF BOOTS AND SHOES ON LASTS—Jean Pierre Molliere, of Lyons, France. Patented in France, Aug. 19th, 1854: I claim the arrangement of the adjustable frame, I, and thumb screw, G, armed with its toothed clamp, H, which, pressing vertically upon the inner portion only of the heel, holds the last securely in its position, and gives free access to the parts thereof on which any work is to be done by the apparatus, the whole substantially as described.

SAW SET—Isaac Spaulding of Saratoga Springs, N.Y.: I claim the construction of the slides, E, substantially as set forth, and their arrangement with screws, B D, and B, and punch, F, operating in the manner described.

AUTOMATIC GATE FOR RAILROAD CROSSINGS—Geo. B. Pullinger, of Philadelphia, Pa.: I claim the combination of the mechanism attached to the railroad track, and operated upon by the locomotive or cars for detaching from and bringing in contact the notched end of the lever, M, with the end of the vibrating lever, K, with the upright spring levers, H, studs or projections, G, on the ends of the flaps, E, and the means of operating the flaps, F F, and gates or barrier bars, so as to enable the said gates or barrier bars to be depressed by the weight of the horse or other object, when no danger is to be apprehended from the near approach of the locomotive or cars, but prevent the said gates or barrier bars being depressed, to allow the passage on the track of any object, after the locomotive or cars having reached a point on the track sufficiently near the crossing to render the passage of such object unsafe, and yet allow the said object to depress the gate or barrier bar, through the agency of the inner flaps, F, to get out from between the same, in case the locomotive or cars should have reached the point where it operates on the inclined bars, N, to prevent the depression of the outer flaps, E, and consequently of the gates or barrier bars through this agency until after the passage, by the crossing of the said locomotive and cars, in the manner and for the purposes described.

PLANE FOR FINISHING GROOVES IN PATTERNS, &C.—John P. Robinson, of Matteawan, N. Y.: I claim constructing the plane stock, A, of triangular or three-sided prismatic form, the two lower sides forming a greater or less angle with each other, and the plane iron, B, fitted in the stock as shown, for the purpose set forth.

[The above invention consists in having the stock of the plane made in a triangular or three-sided prismatic form, the cutting edge of the iron being at the junction of its two lower sides, and shaped to correspond to the form of the sides, whereby half round and other grooves of different sizes may be cut. For pattern makers it is a very desirable tool, as there is scarcely any kind of groove that it will not cut.]

STONE DRESSING MACHINES—Oldin Nichols, of Lowell, Mass., and Ammi M. George, of Nashua, N. H.: We do not claim the use of fixed cranks or eccentrics to work the tools of stone dressing machines, for they have been used before.

But we claim the combination of the movable and adjustable eccentrics with the toggle joints for operating or driving stone-dressing tools, arranged and operated substantially in the manner and for the purposes fully set forth.

STUFFING HORSE COLLARS—S. B. McCorkle, of Greenville, Tenn.: I claim the cylinder, L, provided with teeth or rods, h, and operated by the roller, K, lever, Q, arm, O, and ratchet, N, for the purpose of feeding the straw to the plunger, C, substantially as shown and described.

[Horse collar blocks are stuffed much after the same fashion that sausage skins are filled. The leather for the collar is sewed up into tubular form, and placed lengthwise before a sort of cylinder and plunger. The old plan is to take a small bundle of the straw, which is cut into lengths of sixteen or eighteen inches, double the same in the middle by hand, and place it before the plunger; the latter sends the straw down into the leather, and packs it solidly, nest in nest. The present improvement consists in a contrivance which feeds the straw up in proper quantities, when the plunger comes forward, doubles the straw and rams it down into the leather. The hand operations before mentioned, are in this way avoided, and the work is better done. The invention effects an important saving of time.]

HORSE POWERS—Saml. Pelton, of New Windsor, Md.: I am aware that triple gear horse powers, constructed and arranged upon the same general principles as mine, is not new. I therefore do not claim this arrangement.

But I claim the improvement fully described, consisting in centering the wheels and pinions upon their several axles and bearings by beveling or dishing the wheels and extending their bearings in the manner described, whereby the pressure is equalized on the journals above and below each pinion and wheel, thereby preventing the unequal wear of the axles and journals, consequently avoiding every tendency of the gearing to twist and break.

I claim the mode of constructing and attaching the levers, U U U U, and levers, V V V V, substantially as described, for the purposes set forth.

SHINGLE MACHINE—Joel Tiffany and Milo Harris, of Painesville, O.: We claim providing a primary and secondary set of knives, B B', a primary and secondary set of feed rollers, C C', and obliquely grooved driver, D D' D2, a primary feed carriage, E, and a pair of secondary feed grippers, F F, and arranging and combining the whole, in the manner and for the purpose specified and shown.

[In this machine the shingle is placed edgewise on a short horizontal primary carriage and fed forward a certain distance, and being thus fed forward, passes between a primary pair of guide rollers, and comes in contact with a primary pair of strong planes, which takes off the rough. It then passes between a secondary set of guide rollers, and comes in contact with a secondary set of planes, which finish it. Both pair of knives are caused to gradually approximate and cut the taper by means of oblique grooves in the driver. As soon as the top of the shingle escapes from between the secondary planes, it is caught by a secondary carriage and drawn forward until its butt escapes from between the secondary planes, when it is discharged on the floor, finished in the most excellent manner.]

FELTING HAT BODIES—Isaac Searles, of Newark, N. J.: I do not claim the construction of a wooden cone, or of a set of planking tables, having their lower faces grooved, separately, nor yet the construction of a horizontal revolving bed, inside of a tube.

I claim the combination of the circular revolving bed, B, with one or more planking tables and one or more cones, constructed and operating, substantially as described.

HORSE COLLAR—Samuel Shattuc, of Henrietta, Ohio: I am aware that horse collars, in one unjointed piece, have been known and used.

I claim the key, F, screw key, E, and sections, A A', provided with the projections, D D', arranged as set forth, and combined with the washer, C, constituting a jointed collar, for the purpose described.

SEWING MACHINES—I. M. Singer, of New York City: I claim the mode of operation, substantially as described, for forming seams, by alternately making a long forward and then a short back stitch, by means of an eye-pointed needle, which merely carries a part of its thread through the cloth, or other substance, that it may be interlaced or concatenated, as set forth, whether the said mode of operation be applied, by the means specified, or any equivalent therefor, as set forth.

[We have seen a specimen of the work done by a machine made under the above patent. The seam appears to possess greater strength and elasticity than ordinary machine sewing. We are told that it will neither rip ravel, or pull out, nor can the thread, by any stretching of the material, be made to break.]

SUCKERS FOR PUMPS—Joseph Weis, of Bor lentown, N. J.: I do not lay claim exclusively to cone-shaped elastic substances as self-packing apparatus for pump buckets, the same having been used before.

But I claim the wedge-shaped block, G, with any convenient number of wings, in combination with the perforated hollow cone, C, and the similarly shaped piece of gum elastic, or other similar substance, E, arranged and constructed substantially as specified, the same to be applied as buckets or valves for pumps.

LOCKS—Thos. Bowles, (assignor to Robt. M. Patrick,) of New York City: I claim the shutter, o, so arranged, that being brought into action, when the bolt is withdrawn it shall cover the key hole, while the bolt is so withdrawn, as set forth.

I also claim the arrangement for withdrawing the bolt by a distinct movement of the key, after the tumblers have been set, such arrangement consisting of the lever, m, in combination with the link, k, and the bolt, n, as described.

ATTACHING HUBS TO AXLES—E. S. Scripture, of Green Point, N. Y.: I claim the plate, H, jointed or formed of two parts, and provided with flanches, f, as shown, in combination with the shield collar, F, and gasket, G, arranged substantially as shown and for the purpose specified.

[The common "patent axle" so extensively used for carriages, consists in securing the hub to the axle by means of three or more screw bolts. On the axle there is a collar, behind which is a round plate of iron. The bolts pass the whole length of the hub through this plate, where they are secured by small nuts. There are several objections to this mode of securing wheels to axles; the removal of the wheels for lubrication is very inconvenient, the collar wears away, &c.

Mr. Scripture's plan consists in hinging the circular plate and making it wider, in the form of a clasp, so that when closed it grasps the collar, and thus dispenses with the screw bolts. A hempen gasket moisted with oil is placed against the back of the collar and covered by the clasp plate—this insures perfect lubrication for a long time. To remove the wheel, it is only necessary to open the clasp plate.]

GALENA, OR LEAD ORE—Julius E. Schwabe, of New York City: I claim the method of treating galena, by means of common salt or its chemical equivalent, and sulphuric acid, in the manner and for the purposes as described.

PIANOFORTES—Hubert Schonacker, of Detroit, Mich. I claim constructing the instrument so that the strings shall rest on a fret at the nodal or octave points, or substantially similar rest, upon the bridge of the sounding board, whereby free vibration is allowed to the whole length of string, between the hitch pins and bridge on the wrest plank, substantially as described.

Second, though I do not, of itself, claim connecting the two strings of a note, with a single horizontal turning screw, I claim the connection of the two strings with the same screw, when that is combined with the employment of a fret, c, or other rest, merely supporting the string on the sounding board, at single points, and not confining it, substantially as set forth.

[Musical strings are not sonorous unless struck at certain points called "nodal points." In pianofortes it is common to arrange the strings in such a manner that the hammers shall always strike on one of these "nodal points." One feature of Mr. Schonacker's improvements consists in resting a "nodal point" of the string on a bridge attached to the sounding-board—an arrangement which insures the production of the proper sound, no matter in what part the hammer strikes. The other feature relates to a method of tuning or tightening the strings, which, without a diagram, could not be conveniently described. Both appear to be useful inventions.]

REGULATING VELOCITY OF WINDMILLS—Jeremiah Burnit, (assignor to himself and James Clark,) of Pascyville, Pa.: I claim, first, causing the vanes or sails to traverse automatically, from or towards the center of the wind wheel, by means substantially such as described, and for the purposes set forth.

I also claim, in connection with the centripetal and centrifugal traversing of the sails, or vanes, the vertical adjustment of the same, viz.: causing the double lattices of which the vanes are composed, to expose more or less surface to the wind, by making the slats of one cover more or less the openings in the other, substantially as described.

WOVEN FABRICS—John Healey, of Bolton le Moors, England, (assignor to James Bishop, of New Brunswick, N. J.) Patented in England, Nov. 17, 1846: I claim the improvement in the woven fabric described, in which the weft is placed in a diagonal position to the warp.

COOKING STOVES—J. B. Lancaster, (administrator of J. R. Lancaster, deceased,) of Tampa, Fla.: I am aware that the space round a portable bake oven, heated by hot air has been divided in a manner to form two chambers, the outer one of which served for non-conducting material, and the inner one for the circulation of hot air. Also, that steam has been employed for the purpose of cooking, being generated by means of a cylindrical casing to the fire pot. I therefore I only claim as the invention of the deceased, the arrangement of parts as described and shown, for the purpose set forth.

[Mr. Lancaster's stove is intended for use in climates where the natural heat of the atmosphere is so great as to render it very desirable to avoid any artificial elevation of the temperature. The cooking is done by steam. The oven is surrounded by a water-tight jacket, communicating with a boiler below, in which the fire is placed. Both the oven and boiler are covered with another jacket, with an intermediate space which is filled with fine charcoal or other non-conducting substance. This prevents any external radiation of heat, and at the same time increases the temperature within the oven. Bread can be baking in this stove while, externally, the presence of fire would hardly be suspected. For the purposes intended it appears to be "just the thing."]

ORGAN MELODEONS—T. F. Thornton, of Buffalo, N.Y.: I claim providing an additional set of valves, F, and one or more additional sets of reeds, E E, arranged as described, in a position the reverse of the usual arrangement of valves and reeds, and extending the keys backwards, in rear of the fulcrum, to actuate the additional set of valves through push up pins, to play on the additional set or sets of reeds, at the same time as they actuate the other sets of valves, D, through the push down pins, to play the C C, which are below them, substantially as described.

[In ordinary melodeons the keys are quite short; they do not extend back like piano keys, but terminate just at the fulcrum. Attached to the under side of each key, in a melodeon, is a wire projecting downwards, known as a "push-down pin;" when a key is pressed, this pin comes in contact with a pair of corresponding reed valves opens the same, and musical sounds result. In the best melodeons each push-down pin opens two valves, so that for each pressure of a key, two different sounds are produced.

Mr. Thornton's invention consists in elongating the rear end of the key, and placing upon the upper surface of the extended part a "push-up pin," arranged in connection with an additional set of reeds and valves. The result is that whenever a key is touched, four musical sounds, forming a chord, are produced, instead of two, as heretofore. This is a striking improvement. The instrument is styled by the inventor an Organ Melodeon.]

LAMP EXTINGUISHERS—Elijah Richmond, (assignor to Ira Noyes,) of Abington, Mass.: I claim attaching to the cap or extinguisher a tube placed any desired angle with the same, leaving a clear space between the cap and its tube, as described, whereby the cap or extinguisher can be applied to or removed from the wick, without removing the said cap tube from the wick tube, as set forth.

DESIGN.

SHIPS CABOOSE STOVES—A. A. Lincoln, Jr., of Norton, Mass.

NOTE—More than one-third of all the patents granted last week, were obtained, as usual, through the SCIENTIFIC AMERICAN Office.

Persons wishing to apply for patents, or to consult with us respecting the patentability of new inventions, can do so at any time, free of charge. The present is an unusually auspicious time for inventors.

The Springfield (Mass.) *Republican* gives a history and engraving of the new City Hall in that city, which it claims to be the handsomest in New England. Cost of land and building, $100,000.