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LIST OF PATENT CLAIMS
ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending September 3, 1850.

To Lambert Alexandre, of France, for improvements in sub-marine vessels.

I claim the method of effecting a circulation of the air, and of maintaining an atmosphere in the cabin of the requisite bulk to prevent the encroachment of water during the descent of the vessel, and of preventing the waste of air by its expansion and escape from the cabin during the ascent of the vessel, by pumping it either out of or into the cabin or air reservoir, as may be required, even when the density of the atmosphere in the compartment whence the air is drawn is less than that of the atmosphere in the compartment into which it is forced, as herein set forth.

I also claim the device, consisting substantially of the drop platforms, chains, and draw pin, for the purpose of carrying ballast on the exterior of a submarine vessel and of discharging it at will, as herein set forth.

To C. F. Brown, of Warren, R. I., for improved method of attaching lines to harpoons.

I claim the manner of attaching and securing the line to the harpoon by means of the ring sliding on the shank, and the rounded end of the socket or butt, in the manner substantially as herein described.

[This is a most excellent invention.]

To L. S. Chicheter, of Troy, N. Y., for improvement in machine for dressing staves.

I claim in the above described machine for shaving staves from rived bolts, the employment of two concave knives for shaving the outer or convex surface of the staves, substantially as herein described, in combination with a sine knife for shaving the inner or concave surface of the staves, when the said single knife is placed in a line midway between the other two, that is, opposite the space between the other two, substantially in the manner and for the purpose specified.

To S. A. Clemens, of Granby, Conn., for improvement in pressing cotton, and other substances into bales.

I claim the method of packing and compressing substance into bales or packages in a series of successive layers or strata by means of rolling pressure or its equivalent, substantially as herein specified.

I also claim combining with the laying and compressing rollers or cylinders or their equivalents, a bed which shall be gradually separated from the rollers or cylinders as the layers or strata accumulate, and which shall also reverse from end to end under the rollers or cylinders or vice versa, substantially as specified.

I also claim, in combination with the cylinders for packing and pressing substances in successive layers, a lapping apparatus for forming such substance or substances into a lap or laps, to be delivered to the rollers or cylinders or their equivalents, to be laid and pressed into the bed substantially as described.

I also claim, in combination with the laying and compressing cylinders or their equivalents, the series of rollers or their equivalents, for retaining the layers or strata as they are successively compressed, substantially as specified.

I also claim, the bed made without sides or ends substantially as and for the purpose specified, in combination with the carriage provided with adjusting plates at the ends, for the purpose and in the manner substantially as described.

And finally, I claim in combination with the adjusting plates at the ends of the carriage, the stationary plates at the ends of the frame under which the adjusting plates pass, to

remove the substance that may have accumulated on them, substantially as described.

To Samuel Colt, of Hartford, Conn., for improvements in repeating fire-arms.

I claim making the central bore of the many chambered rotating breech which fits and turns on a central pin or arbor, to extend from the rear part thereof to within some distance from the front end, and thus leave the front end closed, substantially as described, to prevent the access of smoke, when this is combined with the connecting of the barrel with the shield piece and lock plate, substantially as described.

To David Current, of Crittenden, Ky., for improvement in hand-spinners.

I claim the combination of the clamp lever with the cord and drum, for the purpose substantially as described.

To Wm. Field, of Providence, R. I., for machine for bevelling the surfaces of washers, &c.

I claim the method substantially as herein described of drawing out and giving a bevel form to metal clinch rings, washers, &c. by the action thereon of the surfaces of a series of travelling rollers turning on bearings, arranged about a common centre of rotation and combined with a spindle or mandrel, adapted to the reception of the clinch rings or washers, to be formed and provided with the means, substantially as herein described, for turning it to present in succession every part of the periphery to the action of the rollers, substantially as described.

I also claim, in combination with the spindle or mandrel for presenting the clinch rings or washers to the action of the travelling rollers, a gripe, substantially as described, for gripping and holding the said rings or washers on to the spindle or mandrel, whilst passing under the action of the travelling rollers as described.

To C. W. Finzel, of Bristol, England, for improvement in draining sugars.

I claim the mode of applying steam or liquids, to machines used for separating syrups or fluids from sugar by means of centrifugal force, for the purpose of clearing and keeping clear the meshes or apertures in the periphery of the revolving cylinders of such machines, in manner herein described.

To E. B. Forbush, of Buffalo, N. Y., for improvement in clamps for holding paper in writing and drawing.

I claim the clamping slides made to slide freely on the parallel rods operated by the lever and the springs, substantially in the manner and for the purpose as herein set forth.

To O. W. Hogle, of Somerset, N. Y., for improvement in fastenings of Hay Rakes.

I claim, first, the manner of holding the teeth firmly in their required positions against the sliding bar, during the operation of the machine, by means of the aforesaid combination of the ratchet wheel, pawl sliding bar, and stern helical spring fixed-bar and slide attached thereto, with the parallel guiding arms and revolving finger shaft, arranged and operating in the manner and for the purpose above set forth.

Second, I claim the combination of the slide helical spring strap and roller, with the parallel arms and fixed bar, for disengaging the sliding stop bar from the rake teeth, without moving the hand from its usual position on the hand roller, to allow the teeth to revolve to deposit the hay in windrows, as herein fully set forth.

To S. S. Jewett & F. H. Root, of Buffalo, N. Y., for improvement in Stoves.

We claim the jambs of stove or grate fronts or ends, constructed with a recess closed by doors, within which the doors of the fire place are folded up and concealed from view; the fire place doors being constructed and arranged to turn back into the recess, substantially as herein described.

To David S. Neal, of Lynn, Mass., for improvement in Car Couplings.

I claim the bearing roller (or rollers) placed within the body of the coupling, and the bearing roller located in one end of the connecting link, for the purpose of enabling the connecting bolt to be easily detached from the link when the cars are in motion; when this arrangement of the said rollers and connecting bolt is com-

bined with the loop, the catch head and cord, for uncoupling, in such a manner that the loop will be disengaged when force is applied to withdraw the bolt, but will prevent the connecting bolt from being accidentally thrown out of place when the cars are in motion.

To J. F. Ostrander, of New York, N. Y., for improvement in Planing Machines.

First, I claim the use and employment of the cutter made in form or any analogous manner, whereby the peculiar cutting, bevelled scolloped edge is obtained, for planing or dressing plank or other material, substantially as herein set forth.

Second, I also claim the use and employment of the cutter in combination with the compressing spring feed rollers and straight edge, or any one or more of them, in form and manner and for the purposes substantially as herein set forth.

To Barthelemy Thimonnier, Sen., of Amplepous, France, (Assignor to Philip Mayof London, England) for improvements in Sewing Machines.

I claim the hook, the surface, the tube or holder and thread carrier, working substantially as above described.

To John H. Towne, of Philadelphia, Pa., (Assignor to Solyman V. Merrick, of Philadelphia, Pa.) for improvements in the direct action steam-hammer.

I claim attaching the hammer to the sliding steam cylinder, substantially as herein described, the steam being admitted and discharged to and from the sliding steam cylinder, substantially as herein described.

To Wm. P. Tatham, of Philadelphia, Pa., for improvements in manufacture of lead pipe.

I claim the method, substantially as herein described, of setting or cooling the inside of the mass of metal within and throughout the length of the cylinder and before or preparatory to pressing out the pipe, by passing a cooling fluid into or through a long core or core-holder, extending through the length of the cylinder, as herein described, the said method having the effect at the same time to keep the said core or core-holder cool and stiff, as described.

To Seymour Tomlinson, of Washington Hollow, N. Y., for improvement in apparatus for Breaking Horses.

I claim the method, substantially as herein described, of breaking horses by means of the shafts which are connected together by a bow passing around in front of the horses breast, substantially as herein described, in combination with the two straps, one passing over the crest and the other under the breast, by which the horse is harnessed to the said shafts, substantially as described.

To Benjamin Welch, of Lakeville, Conn., for improvement in Surgeons's Splints.

I claim my improved surgeons splints, composed of thin strata of wood combined with some elastic adhesive substance interposed between them, substantially as herein set forth.

Magnetic Principles of the Solar System, or, Deductions from Experiments with the Solar Magnetic Engine and previously known Astronomical Truths.

BY WM. W. HUBBELL, ESQ.

On surrounding a solar magnet of six inches diameter, by eighteen equidistant planetary magnets, I found that by charging the solar magnet with magnetism, and leaving the planetary magnets or bodies uncharged by the batteries, the solar magnet would polarize them at the clear distance of one inch, (a greater distance I did not try.) This fact convinced me that magnetism diverged from the entire circumference of a solar magnet, similar to the radiation of light from the sun, or any body of light. It is also a known fact that the rays of the sun will, in a few minutes, cause a magnet to be more powerful than it will be when kept for a considerable length of time in the dark, showing that the sun-light is instrumental in the production of magnetism. These facts, together with almost universally known astronomical truths that will be recognized in what I am about to state, lead me to the following superstructure of material law, accounting for the variations and intensity of the magnetic needle; of all which I have no doubt.

In analogy to the solar magnet polarizing its planetary bodies when not polarized by a battery, I suppose the sun or solar centre to

polarize its planets by means of its divergent rays of light; that these rays of light, like the fluid of the solar magnet, diverge strongest at right angles from its axis; that the polar axis of the planets, or focus line of their poles, is always (about) parallel with the axis of the sun; that the attraction and repulsion existing between the sun and his planets, causing them to approach and recede, and revolve around him, are brought about by the alternate approximation of their poles, owing to the respective oscillating movements of the planets; by means of which, with the earth, (as we say,) the sun passes back and forth between the tropics;—this approximation in the solar engine is produced by changing the planetary poles at the points of aphelion and perihelion by means of the galvanic battery, being another mode of producing alternate approximation of the planetary poles.

My theory, or superstructure of material law, is this: That the sun, by means of his rays of light, polarizes the planets; and the earth being one of those planets, has, as it rotates on its axis, generated by the light of the sun acting on it, a belt or current of electricity strongest between the tropics, over the torrid zone, which polarizes the extreme parts of the earth, to wit, the north and south poles. Now, as the earth oscillates, and the axis or focus line of the poles must be parallel with the axis of the sun, it is evident that the focus of the poles and the axis of the earth can only be coincident when the sun is, as we say, on the equatorial line of the earth, and that at all other times, the focus of the poles must be moving in an approaching or receding spiral circuit about the axis of the earth; this precise conformity of parallelism of polar focus of the earth with the axis of the sun, would also be governed or influenced by the residuary or permanent magnetism of the earth, from which the attraction and repulsion must ensue in the alternate approximations of the poles to the sun; this would influence the degree of variation of the focus of the poles, but nevertheless, true it is, and in accordance with other astronomical truths, that the sun, by means of his light, polarizes his planets, and that the focus of the poles can only be coincident with their respective axes when he is opposite, or is passing the equatorial line; and that at all other times the focus of the poles is in a spiral circuit, either approaching, or receding from, the axis of rotation of the planets respectively; and as respects the earth, the magnetic needle at sea and elsewhere varies, always pointing to the focus of the poles, governed by that focus, and varying about the axis of the earth's rotation as it varies. Again, as the sun by his light polarizes the planets, and the earth varies in distance from the sun as it traverses its annular orbit, it follows necessarily that the intensity of the poles must change with the change of distance, and that the polarization is strongest when the earth is at its aphelion, and least when at its perihelion. This affects the intensity of the magnetic needle, and also another fact affecting it, is the varying distance of the polar focus, as it moves in its spiral circuit about the axis of the earth.

There is no law or demonstration that I can find to controvert this superstructure of natural law; the known variations, of course, and intensity of the magnetic needle, or compass itself, go to confirm it.

By a series of observations and calculations based upon this superstructure of natural law, made at our National Observatory, it is highly probable that the focus of the poles of the earth can be located at any given time on any future day, and thus greatly increase the security of navigating the ocean by the aid of the compass.

Philadelphia, Aug. 10th, 1850.

No less than \$26,000,000 are paid in duty every year, in Britain and Ireland, for home-made whiskey; the wholesale cost is \$40,000,000. For beer, rum, wine and whiskey, more money is spent every year than the whole income of the government—that which keeps up the immense fleet and army of the land.

At the present moment Electro Magnetism, is engaging a great amount of attention.