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LIST OF PATENT CLAIMS

Issued from the United States Patent Office. FOR THE WEEK ENDING FEBRUARY 26, 1851.

To John Pepper of Portsmouth, N. H., (assignor to Charles Warren and H. G. Sanford, of Boston, Mass.) for improvements in Knitting Machines. Ante-dated Aug. 25, 1850.

I claim the half jack vibrating on the comb bar, connected with the sinker frame, and with the movable cross bar and springs, for the purpose of depressing the tail ends of the jack, and thereby raising their forward ends with the jack sinkers, as aforesaid.

I also claim the movable cross bar, containing the springs, connected as aforesaid, and for the purpose aforesaid.

I claim the cams in combination with the cross bar, with the projections thereon, hanging bars, vibrating pivots, the cam bar, and the half jack, connected with the sinker frame, and for the purposes aforesaid.

I claim the combination of the cam, and the shoe and shoe plate, for the purposes aforesaid.

I also claim the combination of the cam with the shoe, the movable shoe plate, the chains, the semicircles and hub, or wheel and hub, the bar connected with the slur carriage and the slur knob, and the horizontal bar, the carriage connected with the carrier needle, for the purposes aforesaid.

I also claim the combination of the cams, with the levers connected with the frame, and with the ribbed needle bar, for the purposes aforesaid, also the same in combination with the presses, connected, moved, and operating and for the purpose aforesaid.

To Moses Pond, of Boston, Mass., for improvement in Cooking Ranges.

I claim the improvements by which the hot water back is connected with the plate, and by means of which said hot water back may be either readily removed at any time or applied in such manner that the directions of its water pipes may be disposed so as to accommodate the bath boiler, into which they are usually led; or whatever side of the range the said bath boiler may be placed, the said improvements consisting, first, in the connecting piece, and the attachments of it and the hot water back, the whole being made to operate together substantially in the manner as above set forth; second, in a second set of attachments (fixed in the opposite face of the water back), in combination with the first set thereof, as described.

I also claim the peculiar arrangement of flues which lead the smoke and volatile products of combustion, directly around the oven, the said arrangement of flues, causing the heat to course against one half of the bottom of the oven and into another flue, which takes it backwards and against the other half of the bottom of the oven, thence up a flue against the back of the oven; thence through a flue extending over and against half of the top of the oven, thence into and through the flue, which carries it backwards and over and against the top of the oven, and conveys it to the chimney or discharge flue, not meaning to include in such arrangement the radiating chamber or space hereinbefore mentioned.

And I also claim the two recesses and two flue plates, applied to plate R, in combination with the valve opening, their damper and cam plate, as applied to the top plate of the oven frame, and used under an arrangement of over flues, substantially as described, the same allowing of the adaptation of the oven to either

side of the fire place, or the use of two such and their frames in connection with the fire place, all essentially as before stated.

I also claim the improvement by which the oven can be raised and readily removed, and by which the smoke is prevented from passing underneath the partition which separates the flues on the top of the oven, the same consisting in the sliding or gravitating plate affixed to the partition and made to operate substantially in the manner specified.

To Marvin Smith, of New Haven, Conn., for improvement in the bellows for Musical Instruments.

I claim the method, herein described, of making or constructing the wind chest commonly used in seraphines, melodeons, and all similar musical instruments, with one or more sides made of gum elastic materials, and in such way and manner as to be capable of expanding and contracting, or of being increased or diminished in size, and with the aid of metallic or other springs, to answer all the purposes of the common bellows generally used in these and similar instruments, substantially as described.

To J. B. Wilson, of Townsend Inlet, N. J., and Stacy Wilson, of Kensington, Pa., for improvement in applying friction rollers to hub and axles.

We claim the herein described method of applying friction rollers to the axles of the wheel carriages the interposition between the bearing of the axle and the faces of the friction rollers, of a loose sleeve, through which the axle is free to slide endwise, while it at the same time carries the sleeve round with it, in its rotation, the sleeve having a groove in its outer periphery, to receive the friction rollers and prevent them from moving endwise on the collar.

To J. D. Boers & Isaac Winslow, of Philadelphia, Pa., for improvements in Planing Machines.

We claim the combination of the shifting bed plate with the planes, constructed in the manner herein described, the planes presenting any desired part of their edge for cutting the surface of the board, after the tonguing and grooving has been performed by the circular saws.

We also claim the rotating arms with their cover, combined with the plane, substantially in the manner and for the purpose herein set forth.

To T. C. Avery, of New York, N. Y., for improvement in Electro-Magnetic Engines.

I claim the use and manner of arranging the helices and poles of the electro-magnets, in combination with the revolving bars or sets of bars; that is to say the helice being upon the bends of the magnets, from which the poles of the magnets extend towards and near to the centre of motion, and the revolving bars, or armatures, extending outwards from the centre of motion, and embracing the poles of the magnets, successively, as it rotates, for producing a magnetic, multiplying power engine, substantially in parts and principle as herein set forth.

To Joseph Banks, of New York, N. Y., for improved connection of the beams and columns of iron buildings.

I claim the method, herein described, of securing together the beams and columns of cast iron fronts for houses, by means of the lugs, with their flanges on the upper and under sides of the ends of the beam, and the projections on the inside at the top and base of the columns, as herein fully shown.

To Edward Clapp, (assignor to Edward Clapp & George Alden), of Dedham, Mass., for improvement in Sad Irons.

I claim the construction of the bottom of the polishing iron, the same consisting in making it with ridges or projections and concavities, substantially as described.

To T. F. Engelbrecht, of New York, N. Y., for improved Double-Acting Spring Hinge.

I do not claim the combination of an adjustable, curved inclined plane, with a portion of a hinge, and an adjustable bearing roller, with the other portion of the hinge.

But I claim the manner of combining the helical springs (two) with the cylindrical, rotating tumbler, and cylindrical, sectional case so that, by the rotation of the cylindrical tumbler, the heart-shaped projection will be made to traverse over the inclined plane, and cause the tumbler to rise and fall, and thus compress and expand the helical springs lengthen-

ing their coil, and simultaneously therewith, wind and unwind said helical springs, around the spindle, and thus cause them to act (by the motion of the door in either direction,) by torsion and expansion, to close the door, when it shall have been opened, as described.

To Francis Hoguet, of Philadelphia, Pa., for improvement in Extension Tables.

I claim the arrangement of a screw, or other equivalent device, in combination with the slides in such a manner, that a screw, or its equivalent, of sufficient length to move out one pair of slides, will move out any number described, substantially in the manner and for the purposes set forth.

To Wm. Sours, of Mount Jackson, Va., for improvement in Cooking Stoves.

I claim the transverse partition, in combination with the arrangement of front and back flues, as above described, for causing the several currents to unite after having traversed courses of nearly equal length, as set forth.

To Abner Lane, of Killingsworth, Conn., for improvement in machinery for turning irregular forms.

I do not claim merely the employment of two or more cutter wheels, cutter shafts, or cylinders, provided with any number of cutters of any required form, for cutting the whole surface and forming articles of any irregular form, without the use of the model of the article to be formed.

But I claim this only when the cutting cylinders are sustained, revolved, and carried to and from the block to be twined, by a revolving cylinder, in whose periphery they are placed, without any longitudinal or lateral motion, substantially as described.

To H. W. Sabin & Geo. Draw, of Canandaigua, N. Y., for improvement in Spring Hinges.

What we claim is the piece to one side of which the spring is attached, and which has, on the other, a projection, with a hole therein, by means of which and a pin, the spring can be engaged and disengaged, when the door is shut, substantially in the manner and for the purposes described.

To J. Sloan, of New York, N. Y., for machine for arranging and feeding screw blanks.

I claim the lifters which select and lift the blanks, &c., from the hopper, substantially as specified, in combination with ways or conductors, or the equivalents thereof, substantially as specified into or onto which the blanks, etc., are transformed, as specified.

I also claim giving to the lifters, or to the inclined ways, or their equivalents a lateral motion, in combination with a stop or detector, substantially as specified, for the purpose of arresting the operation of the lifters, until a further supply is required, as specified.

RE-ISSUES.

To Horace Boardman, of Plattsburgh, N. Y., for improved arrangement of Steam Boiler and Furnace thereof. Originally patented Aug. 14, 1849.

I claim the combination of a fire chamber and a water casing, the upper horizontal sections of both of which are greater than their lower, with a descending flue, the fire chamber and water casing being so arranged with respect to each other, that both the larger sections of the one adjoin the larger sections of the other, substantially in the manner and for the purposes herein set forth.

I likewise claim the injection of a jet or jets of air, at the flues or passages, which connect the combustion chamber, with the descending flue, for the purpose of igniting the gases and retarding the progressive motion towards the bottom of the gas chamber.

[We believe the principle of the last claim is at least ten years old.]

DESIGNS.

To S. H. Sailor (assignor to Warwick, Leibbrandt & Co.), of Philadelphia, Pa., for Design for Cooking Stoves.

Music and Painting.

Music has been given us, by our bountiful Creator, to assist in smoothing the path of human life. The same being who has covered the face of nature with bright and beautiful colors, has filled the air with sweet and expressive sounds. He has taught us to listen to the melody of the birds, the sighs of the passing breeze, and the accents of the human voice, with feelings akin to those with which we gaze on the glorious heavens, the verdure

of the woods, and the meadows enamelled with a thousand flowers. And He has taught us, too, to make our senses of the beauties of nature, derived from the eye or the ear, the foundation of two exquisite arts, by which not only our perceptions of these beauties are quickened and enhanced, but our intellectual and moral qualities are called into action. Painting and music perform much higher parts than that of merely ministering to human pleasure.

The Wants of Man.

Man is the most needy of all creatures. The horse constructs for itself a winter's dress, which is equally fit for wet or dry, day or night, out of the food it eats. The birds and fowls drop their feathers, but neither applies to the tailor or milliner for another suit; out of the seeds they consume, they produce robe and plumage of a texture and beauty which throw the apparel of a Solomon into the shade. The animals require neither plowing nor sowing, neither weaving nor cotton-spinning—mines, factories, furnaces, fires, workshops, nor bake-houses; but man is full of wants. Houses, fuel, furniture, clothing, cookery, vehicles, and books are necessities of life, if we would make him what a human being ought to be. The productions of one country are rarely sufficient to supply his need. Animals have no wants which the soil on which they were born does not supply. The silk worm can live and rear its family, and construct its cocoon, in a mulberry tree. A few yards of space will suit it better than the range of the universe. The white bear, the reindeer, the elephant, the horse, the eagle, and the hippopotamus, have their own locality, from which they cannot move without risk. But if you confine man to a small circle, you may starve him in body and mind. He is the creature of all climes; he was made for all the world, and all the world was made for him. Wherever he goes he has something to sell or something to buy. Barter and traffic are no small part of his calling on earth, in which not only his physical, but also his intellectual and moral nature are called into full play. Were there no trade and intercourse between mankind, there could be no morality. Justice and benevolence are intended to sanctify the relations, associations, and dealings of the human family. Give us cultivated fields, skillful artisans, good manufactories, industrious workshops, well-manned ships, unrestricted commerce, free trade with all the world, and pure morality and philanthropy to regulate our proceedings, and we can place every comfort within the reach of every child of Adam, and thus mutually enrich and bless each other.

For the Scientific American.

The Terms "As Heavy" and "Heavier."

If a square foot of water weighs 1,000 ounces, and a square foot of iron weighs say 8,000 ounces, does it not follow that iron is eight times as heavy, and seven times heavier than water.

If the above terms are not synonymous, why is it that "heavier" is used instead of "as heavy" in many popular and scientific works, including your own journal lately, in your article on Hydrostatics? Partington's "British Cyclopædia" would say that iron is eight times as heavy as water, and not eight times heavier, which in my opinion would be one too many.

W. B.

Old Cambridge, Mass.

[Our correspondent is correct about the precision of the terms which he speaks about, as can easily be proved, thus, say water 1, iron 8: 8—1=plus 7, or seven times heavier, eight times as heavy.]

Chasm Tower Blown Down.

The Niagara Falls Iris of Saturday says this Observatory on Mount Eagle, was lifted by the wind from its foundation, on Saturday last, when the wire cables by which it was stayed were broken, and the whole mass fell to the ground a heap of ruins.

Crows.

It is but little more than forty years since the first crow crossed the Genesee river westwardly. They, with the fox, the hen hawk, swallow, and many other birds and insects, seem to follow in the track of civilization.