



Reported expressly for the Scientific American, from the Patent Office Records. Patentees will find it for their interest to have their inventions illustrated in the Scientific American, as it has by far a larger circulation than any other journal of its class in America, and is the only source to which the public are accustomed to refer for the latest improvements. No charge is made except for the execution of the engravings, which belong to the patentee after publication.

### LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING SEPTEMBER 23, 1851.

To G. B. Clarke, of Leonardsville, N. Y., for improvement in Churns.

First, I claim the employment of a revolving vessel containing the cream or milk, with or without cleats, constructed either plain or with pins, or having any other suitable internal projections, and operating in combination with a toothed or plain stationary cross-bar, removable or permanently secured to the fixed axles, and situated in the space forming the upper half of the vessel, at any desired distance from the centre thereof.

Second, I also claim the employment of a tempering cylinder and tubes, in combination with the revolving vessel and cross-bar, for cooling or warming, and agitating the milk, by its precipitation thereon, as caused by the circular motion conveyed to the milk, and interruption or arresting effect produced, substantially as described.

To O. W. Grimes, of Paducah, Ky., for improvements in machines for Scutching and Hackling Hemp and Flax.

I claim the method described, or any other means essentially the same, of throwing the teeth in and out of the cylinder or drum at pleasure, whilst in motion, so as to present a greater or less length of teeth to the hemp, or of drawing them entirely within the cylinder, in case the hemp should become entangled and likely to break up the machine.

Second, I claim, in combination with the bar holding the teeth, the spiral spring for allowing said bar to yield to knots or other obstructions, and for drawing back into proper position the said bar, after it is released from said obstruction.

Third, I claim, in combination with the bar and teeth, arranged as described, the adjustable guides for setting the teeth at such angle as will give them more or less hold upon the hemp, as described.

To L. D. Grosvenor, of South Groton, Mass., for improvement in machines for Stripping Seed from Broom Corn.

I claim the endless bearded belt, constructed of any proper material, and having lugs or spikes, as described, in combination with the comb rollers set diagonally upon the frame, in the manner and for the purposes substantially as set forth.

To Wm. Merrell, of Randolph, O., for improvement in Lath Machines.

I do not claim mounting a rotary cutter on the same spindle of the rotary saw, as described; nor do I claim the returning table, consisting of a series of rollers arranged and operated in the manner described; but what I claim is the director and carrying belt, in combination with the apparatus for registering, substantially such as described, for delivering bundles ready counted.

I also claim the rounded surface of the receiving table, in conjunction with the bent form of the strip, which effects, in the simplest manner, the delivery on the returning rollers of the unsawed slab, to the attendant, for another cut.

To Patrick O'Neil, of Brooklyn, N. Y., for improvement in Easy Chairs for Invalids, etc.

I claim the manner of combining the jointed chair with the jointed ottomans, whereby the whole is made to subserve the several purposes described.

I also claim furnishing the back of the chair with an additional joint, whereby the back of the chair is rendered susceptible of such adjustment as to form a support to the spine of the occupant of the chair, as described.

I also claim the employment of the triple jointed hinges, in combination with the spiral springs, for securing the flexible bolster by which it is steadied and retained in its proper position, when expanded and contracted, as set forth.

To A. J. Sexton, of Brooklyn, N. Y., and Wm. Ennis, of New York, N. Y., for improvement in Ventilating Ships.

We do not claim to have invented either the caboose, water back, ventiducts, or valves, although we do not know of the several parts referred to having been used for the purpose described; but what we claim as our joint invention is the combination and application of the caboose, water back, ventiducts, and valves, in connection with our water surface and the cowl and vane, for the introduction of pure air, and the expelling of impure air, as described and for the purpose mentioned.

To T. J. Sloan, of New York, N. Y., for improvement in machinery for threading Wood Screws and Feed Apparatus therefor.

I claim the employment of two cams in combination, substantially as described, for the purpose of operating the fingers, which supply and present the blanks to the gripping jaws, as described.

I also claim the employment of one cutter to form the thread on the conical point, when combined and operating simultaneously with a second cutter, for forming the thread on the main part of the shank, substantially as described and for the end specified, provided the motion of one of the cutters is extended into the track of the other, to insure the making of the thread on the conical point, a continuation of the thread on the main part of the shank.

To Wm. Mt. Storm, of New York, N. Y., for Engine, in which compressed air or other gas, heated and expanded by admixture therewith of a heated fluid, is used as a Motive Agent.

I claim actuating an engine, such as is now usually driven by steam, or of any convenient form, by means of a measured or detailed quantity of air, previously compressed, and having had its tension due to such compression, highly increased and augmented by the jetting or flashing into or commixture with it, of a measured or detailed quantity of a medium, or, in other words of a heated liquid, as water or a vapor, (simple or super-heated), as steam; said jetting of the steam into the air (or vice versa, the air into the steam, which I claim as equivalent,) and their commixture being effected in a vessel or vessels, disconnected previous to and during that process, or at least prior to its consummation, from the reservoir or main source of compressed air, and from that of the steam, &c., and each separate and distinct charge or detailed quantity of compressed air, heated by its corresponding charge or detailed quantity of steam being allowed to act upon the piston or its equivalent, prior to the admission or introduction of another charge of air and steam into the vessel or vessels in which their commixture is effected, the whole operation being carried on by means of mechanism, in substance such as represented, or any more fitting mechanism that shall effect the same in the manner here claimed.

To Isaac Banister, of Newark, N. J., for improvement in Shoe Latchets.

I claim confining a shoe to the foot by means of a flexible latch secured to one portion of the said shoe, acting in conjunction with a socket or eyelet, and a catch or hook secured to other parts of the shoe, and operating substantially in the manner set forth.

To Asa Willard, of Boston, Mass., for improvement in the Churn and Butter Worker.

I claim the combination of one or more fluted rollers with one or more floats, to operate so as not only to aid in the process of separating the butter from the cream, but afterwards, and when the motion of the dasher is reversed, to throw into ridges the butter spread on the bottom of the floats.

And I claim the improvement of giving a longitudinal hollow, or curve, to the external surface of each float, for the purpose of gathering the spread butter towards its middle, and preventing the butter from adhering to the ends or the reservoir, as specified.

To L. H. Brown, of Boston, Mass., for improvement in Pianofortes.

I claim, first, arranging the sounding board in a springing form, and supporting its back on a straining lever, made to bear with more or

less force against it, in the manner and for the purpose specified.

Second, I claim the combination of the short subsiding iron frame, having a rectangular socket on its front rail, with the long main iron frame, having a wooden block on the under side of its front rail, which fits and is glued into the aforesaid socket, as set forth.

Third, I claim casting the bridge of the long iron frame, with curved brackets, so as to have it raised above the level of the bottom of the front rail of said frame, and permit the strings to be strained, or strung under the same, as explained.

Fourth, I claim easing the escapement of the fly of the jack from under the centre block of the hammer, by means of a spring combined with said block and the stem of the hammer, as stated.

Fifth, I claim arranging the back catch on a lever having a fulcrum in the jack, and arranged so as to cause the catch to follow the hammer in a stroke of the same, and cause it to repeat the stroke or note, if desired, when the fly of the jack fails to operate, so as to effect said second stroke.

Sixth, I claim using a piece of gutta percha on the top of the hammer head, in lieu of some of the layers of leather, in the manner and for the purpose specified.

To Benj Chambers, of Washington, D. C., for improvement in Letter Stamps.

I claim so making and operating the detruing rods, or followers, of a letter stamp, so as to act wholly within the body of the stamp block, whereby I avoid cutting away the handle, and the weakening which would be caused thereby.

I also claim making the detruing rod, wing, and thumb slide, in a single piece, whereby I greatly economize the labor of making this part of the stamp, as set forth.

To J. H. Manny, of Waddam's Grove, Ill., for improvement in attaching cutter bars to Harvesters.

I claim hanging the cutter bar of a reaping machine to the side of a triangular frame, in such manner that neither extremity of the cutter shall be liable to sag below the other extremity, as set forth.

To Jacob Worms, of Paris, France, (assignor to Jacob Phalen, of New York, N. Y. Patented in France, (in part), May 19, 1849, and (in part) Sept. 27, 1849, for improvement in Printing Presses.

I will here observe that engraved or sunken cylinders have been already used for the printing of woven fabrics; but these are very expensive to manufacture compared with the cylinders prepared as I have described. I wish it also to be understood that, in the apparatus described, I do not confine myself to the exact details set forth, for these must necessarily vary with the size of the matter to be printed, or with the greater or less rapidity with which the movements are to be executed.

It must also be understood that I do not claim, individually or separately, any of the parts of the apparatus or machinery; but I claim, first, in combination with the ink troughs and printing cylinder, the arrangement of the cam cylinders, reciprocating cylinders, (two) operated by levers; and two cylinders for receiving, carrying and distributing the ink from the said trough to the said cylinders.

Second, I claim, in combination with the printing cylinders, two other cylinders, provided with a spring knife or saw, operated by cams, and also with ribs, or projections, and grooves, for the purpose of nearly severing the filaments of the paper, as it passes through between said rollers, and for the purpose also of creasing the paper for the more easily folding of it.

Third, I claim, in combination with the partially cutting and creasing cylinders, the different sized cylinders, C D, geared together for the purpose of tearing apart the partially cut paper—the cylinders, C, holding, and the increased motion of the cylinders, D, at their periphery (they being the larger), drawing the paper sufficiently to separate it.

Fourth, I claim, in combination with the selinders, the tunnel for guiding, and the wheel divided into a suitable number of compartments for receiving the sheets as they are delivered from the machine, the whole being constructed substantially as described and for the purposes set forth.

To Washburn Race, of Seneca Falls, N. Y., for Blind or Shutter Fasteners.

I claim the combination of the fast and free

hooks with the inner plate, the same being arranged as set forth, in such manner that the fast hook forms the pivot for the free one, and the two are connected to the inner plate in such a manner, that the movement, breakage, or removal of the free hook, does not affect the security of the fastening, while, at the same time, the two hooks are secured to the inner plate by the fastening of the latter to the shutter. [See engraving of this invention in No. 49, Vol. 6, page

To S. P. Ruggles, of Boston, Mass., for improvement in Hand Stamps.

I claim securing the plate of a hand stamp to the shank or handle, by means of a universal ball and socket, or other joint, so as to allow the stamp to make a fair impression, at whatever angle it may strike the material to be stamped, as set forth.

### Steamboat Question.—Pacific and Atlantic Tides.

MESSENGERS. EDITORS.—Respecting the "Steamboat Question," on page 389 of the last volume of the Scientific American, suppose the current equal to 5 miles per hour, and let us suppose, also, that a steamboat, or other body, placed in the current would acquire a velocity equal to that of the current, (not greater, as contended for in the "Floating Raft" question); such a body, although moving at the rate of five miles per hour, would be actually at rest with respect to the current. Suppose again that this steamboat will run fifteen miles per hour in still water, and be set in motion against the current, will not her distance be lessened by exactly the velocity of the current, that is to say, her speed will equal 10 miles per hour, and conversely, if running with the current, it will equal 20 miles per hour: this appears to me to be self-evident, and that the effect of the current on the paddles is nothing.

Your "Conversations on Mechanics" leads me to the query, whether there is any positive evidence of what has been so often asserted, that the Pacific is higher than the Atlantic. Were we to draw inferences from existing facts, it would seem that the reverse should be the case, and that the Gulf should be higher than the Pacific, else why this out-pouring of the waters between Florida and Cuba, which had been piled up in the Gulf by the equatorial trade winds. G. L. ANDERSON.

[We did not state what quantity of effect the current would have, in the article referred to by Mr. Anderson, for that we do not know—experiment alone can determine it—for in hydrodynamics there is still much to learn. If the paddles did not act on the water and pass through it to propel the boat, then the effect of the current would be nothing, as stated; but if the current does affect the velocity of the boat, it must affect all that belongs to it, which passes through the water; but the effect of a moderate current upon paddles having a high velocity, must be very small indeed.

Our opinion about the difference of height in the waters of the Pacific and the Atlantic, coincides with that of our correspondent. It was held at one time to be an established fact, owing to a bad survey of a French engineer, that the waters of the Red Sea were thirty feet above those of the Mediterranean: this was found, last year, to be a great error, by a new survey of the English engineers, when laying out the new railroad route for the East India Mail. It is our opinion that the same error will be found to have been committed in respect to the waters of the Atlantic and Pacific: we should like, at least, to have every doubt removed, and clear evidence of the fact or falsehood set before the public. Would it not be well to have a new survey made?

### Milton's Daughters.

The Chatham Society has published papers, showing that Milton's eldest daughter, Anne, could not write; that his second daughter, Mary, could not spell; and that his third daughter, Deborah, was much in the same condition, though it has been so often said that she was her father's amanuensis, and that she read to him in Hebrew, Greek, Latin, and Italian, without understanding a word of any one of the languages.

The Fair of the American Institute opened at Castle Garden, this city, on the 1st inst.