



Reported expressly for the Scientific American, from the Patent Office Records.

#### LIST OF PATENT CLAIMS

Issued from the United States Patent Office. FOR THE WEEK ENDING SEPTEMBER 17, 1850.

To S. T. Armstrong & C. J. Gilbert, of New York, N. Y., for improvement in the process of working Gutta Percha.

What we claim, under the first part of our invention, consists in the use of lime or other alkaline substance, with heat, in the manner substantially as herein described, in the cleaning of gutta percha, to neutralize the acid or acids contained in that substance in its crude or native state, and thus preserve and render more permanent its useful properties, as specified.

And in the second part of our invention we claim compounding lime with gutta percha, substantially as herein described, for the purpose of improving its qualities, preserving it wholly or partly from deterioration, and protecting it against the injurious effects of the atmosphere and heat, substantially as described.

To C. D. Birdseye, of New York, N. Y., for improvement in the process of preparing cream.

I claim the process described herein of distilling milk and condensing the same in sugar, for the purpose of preserving the flavor, as set forth.

To Wm. Blake, of Boston, Mass., for improvements in Spike Machines.

I claim the heading and carrying nippers in combination with the shears, the header and the gripping mechanism, the same being made to operate in connection therewith, substantially as above specified.

And in combination with the lower nipper I claim the spring catches, latching and unlatching apparatus, applied to it for the purpose above specified.

To F. A. Calvert, of Lowell, Mass., for improvement in machinery for Ginning or Picking Cotton.

I claim the combination of such parts as I have shown, forming a picking machine and their mode of action, as hereinbefore described.

To J. W. Carpenter, of Pontiac, Mich., for improvement in processes for preparing wheat for grinding.

I claim the application of an acidulous composition to wheat or other grain, the said composition being principally vinegar, but I do not limit my claim to the exact composition of acids, as herein described, while the same effects can be produced by the vinegar alone, or when combined with one or more of the other acids, especially with the sulphuric acid, for the purposes set forth.

[This, we have heard, is a most valuable discovery.]

To W. A. Colford, of Cincinnati, Ohio, for improvement in Paper Filers.

I claim, first, the arrangement and construction after the manner substantially as described, of a box or receptacle for documents and papers, having a lid fitting loosely within it, which is made to press down upon the papers by a spiral or other suitable spring.

Second, The rod, or its equivalent, attached to the lid, and moving in the guide slots or apertures in the sides of the box, the said slots terminating in a notch or shoulder at their upper extremities, for the reception and retention of the rod during the manipulation and examination of the file.

To Ebenezer Danford, Jr., of Geneva, Ill., for improvement in Grain Harvesters.

I claim the application to a reaping and mowing machine, of two sickles, working together in opposite directions, as set forth in the above specification and accompanying drawings, so as to throw the weight of the moving parts upon opposite sides of the centre of the crank or bit, for the purpose set forth.

To H. H. Day, of Jersey City, N. J., & R. McMullin, of Great Barrington, Mass., for improvement in India Rubber Hose.

We claim the making of flexible hose or pipe, by combining india rubber leather with a tube or rubber, substantially as herein described, the whole being united, forming one solid tube, making a strong, durable, and flexible hose, adapted as a substitute for leather and other similar pipes for the conveying of fluids.

To Gerrett Erkson, of Hobart, N. Y., for improvement in the Plow Clevis.

I claim so making a clevis with teeth or prominences, and cavities on the front surface of a socket matching with corresponding depressions or cavities and elevations on the surface of a movable bar, that the bar and socket when set together by a screw or other equivalent fastening in the required position, may have numerous bearings and be wholly prevented from either sliding or revolving in any direction without breaking the continuity of materials of which the parts are composed.

I also claim, in combination with a series of radial ridges, or a circle of cavities on the end of a clevis socket fixed at the extremity of the plow beam, a series of teeth or of conical points on a movable clevis bar, so adjusted to each other, that the guide hole of the clevis-bar may be held in any required position, and at any necessary distance from the axis of the beam, without relying on friction of the surfaces to prevent slipping, in the manner and for the purposes herein set forth.

To John B. Fairbank, of Leon, N. Y., for improvement in Printing Machines.

I claim the mode of representing letters and the sounds of letters, by means of characters made by changes wrought upon a less number of movable type than the number of letters or sounds of letters represented. The type being made upon, or attached to, the bottom of wires or rods, which are worked by keys at or near the top, substantially as herein set forth.

To S. L. Graves, of Springfield, Ill., for improvement in Corn Shellers.

I claim the device herein described, for twisting and forcing the ears of corn between spring shelling plates, substantially as herein set forth.

To Sylvester Groesbeek, of New York, N. Y., for improved tool for forming plaster cornices and mouldings.

I claim arranging a former, for making mouldings upon the walls and ceilings of a room, upon the diagonal of a square frame, and making an angle of forty-five degrees with each side of said square, for the purpose and in the manner described.

To George Mallory, of New York, N. Y., for improvement in Daguerreotype Plate Holders.

I claim the daguerreotype plate holder, constructed substantially as herein described, of a block with a spring edge, by which the plate is secured to it.

To Wm. Morrison, of Carlisle, Pa., for improvement in Spring-beams to Plows.

I claim, first, the adjustable spring-bar interposed between the point of draft and the frame of the plow, in the manner and for the purpose herein set forth.

To J. L. Mott, of Mott Haven, N. Y., for improved roadway for rail cars and ordinary vehicles.

I claim the method, substantially as herein described, of making rails for the road ways of streets, &c., by combining with the rails on which flanged car wheels run, outer faces of sufficient breadth for the wheels of common carriages to run, made curved or inclined from the top of the rail, substantially as described.

And in combination therewith, I also claim making wide faces on the inside of the rails, substantially as described, for the wheels of common carriages to run on, as described.

To Benjamin Severson, of Schoenectady, N. Y., for improvement in cast iron Railroad Car Wheels.

What I claim is a cast iron wheel in one piece, having the rim connected to the hub by two plates joined together at intervals, at points as small as may be, and nearly equidistant from the rim and hub, said plates being of such form that each section by the plane of the axes, passing through the points of union, shall present two pointed arches, uniting at the apex, the one springing from the ends of the solid hub, and the other from the edges of the rim—and a similar section between the points of union, shall bestow flat

curved lines bending towards each other, and joining the ends of the solid hub with the edges of the rim; and a circular section passing through the points of union of the two plates, shall produce a double series of flat arches, united to each other at their ends. The whole being constructed substantially in the manner and for the objects herein set forth.

#### RE-ISSUES.

To Anson Atwood, of Troy, N. Y., for improvement in Stoves: first patent dated May 14, 1850.

I claim the air chamber, in which the air is heated previously to its admission to the fuel, in combination with the apertures by which the heated air is caused to impinge on the upper surface of the fuel, substantially in the manner and for the purposes as described.

To Isaac Gregg, of Philadelphia, Pa., for improvement in Brick Presses: first patent dated June 6, 1848.

I claim the making the moulds of extra depth, in combination with the elevation of the bricks in the moulds, after they have been pressed a distance equal to the extra depth given to the same, and the removal of the surplus thickness of the bricks, raised above the tops of the moulds, by a knife, or its equivalent, for the purpose of giving uniform solidity and perfection of form to the bricks, prior to their final removal from the moulds, substantially as herein set forth.

To Stephen P. Ruggles, of Boston, Mass., for improvement in Printing Presses, first patent dated Nov. 10, 1840.

I claim a platen raised and lowered by machinery substantially as above described, in combination with the movable tympan plate on which the sheet of paper is placed, and the bed supporting the type with their faces downwards, the whole being arranged, and operating together, substantially in the manner and for the purpose herein explained and set forth.

I claim supplying the press with paper, and removing the same after it is printed, into a box attached to the tympan carriage, by means of a vibrating table, operated by a cam on the shaft, in combination with a frisket, as above described, connected to the frame of the tympan plate, and pressed down upon said plate by a spring, and raised when the tympan carriage recedes with the printed sheet by means of a cam on the shaft, through the intervention of a bar with a roller, shaft, and angular piece of metal, the whole being arranged and operating together, substantially as hereinabove explained and set forth.

I claim grooving or channeling the fountain roller or plate under the same, in the manner and for the purpose above mentioned.

I claim the peculiar combination of machinery for the lateral vibration of the distributing roller; said combination consisting of the pulleys on the shaft, B, band, pulleys, rods (two lever, shaft and distributing roller frame, the whole being arranged and operating together, substantially in the manner and for the purpose above mentioned.

I claim the use of the side and cross strips, or either of them, in combination with a tympan supported by the platen plate, the said combination forming a pair of nippers, as it were, for rigidly holding the sheet, however small the margin may be, until it is effectually free, or disengaged from the form, after an impression is produced.

#### DESIGN.

To John C. King, of Boston, Mass., for design for bust of Daniel Webster.

What I claim as my invention, or production, is the design of a bust of Daniel Webster, as represented in the annexed drawing.

[As we have had many enquiries about whether a drawing was necessary or not, for busts, and alto-relievs, the above claim will give the necessary information to two or three late correspondents. Every thing but chemical discoveries require drawings.]

#### Iron Direct from the Ore.

We see by some of our exchanges, that Mr. James Renton, of Newark, N. J., has erected, along with some associates, a furnace at Charlottentown to make iron, by his new process, direct from the ore. If this can be done, then we can beat foreign manufactures with, or without a tariff.

#### For the Scientific American. The Sinking of Ice.

The sudden disappearing of the ice in some of our northern lakes, at the approach of spring, has given rise to the notion that it sinks to the bottom. The well-known fact that the specific gravity of ice is less than that of water, nearly as 93 to 100, excludes the possibility of its sinking, as supposed.

As I observed that this theory of sinking was vindicated by a learned professor at the late meeting of the "American Association," I wished to show, in a few words, that this apparently singular phenomenon depends entirely on the specific gravity of ice being less than that of water. In consequence of this, ice must, in all cases, rise to the surface when left to float freely in water, however minutely it may be divided, as long as a crystal remains. The temperature of the deep water of those lakes, always more or less, counteracts the effects of the cold atmosphere of the winter around them. As the cold increases it first overcomes the temperature of the water in shallow places and along the shores, so as to form ice. This continues to extend and increase as long as the temperature of the atmosphere is so low as to absorb the caloric faster than it is supplied from below.

On the approach of a thaw the temperature of the atmosphere rises, and it ceases to absorb the caloric from the surface as before, while the heat from below reverses the process, and a thaw is commenced. The ice diminishes slowly at first, but as its quantity diminishes, the supply of caloric increases, and the melting will progress at a rapidly increasing ratio. During all the time of this process, all the ice that remains will constantly present itself at the surface, showing an immense sheet, while its depth is reduced to a mere pellicle, and the next hour it is completely dissolved. SILAS CORNELL.

Friends' Y. M. B. School, Providence, 9th M., 9th, 1850.

[There are some things about the sinking of ice, which our worthy correspondent has overlooked, viz., the suddenness with which very thick cakes of ice disappear. The sudden disappearance of ice is common on all the northern lakes—Champlain, St. George, Oneida, Ontario, and the River St. Lawrence. Prof. Olmstead was in error respecting the phenomenon being peculiar to Lake Champlain,—and we know, practically, that it is not reduced to a thin pellicle before it so suddenly disappears. There is what is called anchor-ice—ice seen lying at the bottom of rivers and ponds; we know considerable about such things. The anchor ice, as it is called at the North, will make a good subject for another paper to the next Convention, and it would be a benefit to science if some of our deep-thinking men would study, personally, the phenomenon next spring.]

#### Steam between Philadelphia and Liverpool.

The project of establishing a monthly steam packet line between Philadelphia and Liverpool is likely to be realized, through the enterprise and liberality of Richardson, Watson & Co. They have headed a list of subscriptions to this undertaking with the sum of \$100,000—one-third of the amount required to build two propeller steamships of 2,000 tons burthen, to run, once a month, to and from the places named, the passage to be made in 14 days; the number of steamers to be increased to four, if found necessary. The merchants of that city have long been talking of such a project, but this seems to be the first efficient step towards the enterprise. Its success will induce others to follow, and Philadelphia, through the agency of steam, may be again distinguished for her commercial prosperity.

Assuredly no city in the Union presents a better field for constructing steamships than Philadelphia, and it is not too much to say, that her anthracite coal will yet be used in preference to the bituminous, on sea as well as river steamships.

#### The Quickest Passage.

The Steamship Pacific arrived at this port on Saturday, the 21st inst., in 10 days and 4½ hours. This is the fastest passage ever made, between New York and Liverpool.