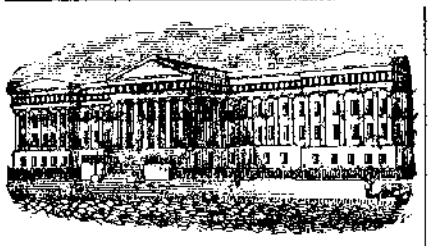

[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

FOR THE WEEK ENDING SEPTEMBER 5, 1854.

MILL STONE DRESS FOR CLEANING GRAIN—Wilson Ager, of Rhoadsburg, Pa.: I claim the described dress, consisting entirely of cracks, having inclinations, as shown, for causing reverse draughts, so as to turn the grain and revolve it both on its longest and shortest axes, for the purpose of cleaning and scouring it.

FLOUR BOLT—W. H. Akins, of Ithaca, N. Y.: I claim the connecting rod, in combination with the vibrating bracket and pulley, over which the belt passes: said bracket being secured to an axle, serving the double purpose of giving the bolt a short, quick, horizontal vibratory motion, and at the same time giving it a rotary motion. The whole being arranged as described.

SPRING ROLLERS FOR WINDOW CURTAINS—Benj. Bray, of Salem, Mass.: I claim providing the tubular or hollow curtain roller, with a long spiral spring within it, when said spring is used for the purpose not merely of drawing up the curtain by its recoil, as that is not new, but of balancing it in any position in which it may be placed, as described.

ATTACHING PULLEYS TO SHAFTS—Chas. Clareni, of New York City: I claim the method of fastening pulleys to shafts by having a cam cavity, or recess in the pulley, and introducing therein a roller, as set forth.

CHIMNEY CAPS—John Clark, of Washington, D. C.: Disclaiming the invention of chimney caps with pendant valves, I claim constructing chimney caps, having balance compensating valves, with a lever or weight or its equivalent, together with the valve opening at the top, whereby is prevented the undue accumulation of smoke within the space, thus affording the speedy escape of the smoke in its ascent upward through the chimney, as set forth.

SEED PLANTERS—Chas. H. Dana, of West Lebanon, N. H.: I am aware that a seed planter like the following has been constructed, and therefore I do not claim it, viz.: a seed planter composed of a seeding box immovably attached to a handle, and having a tube passing from the lower end of said handle downwards through and some distance below the bottom of said box, and depositing seeds by means of a hole in said tube, inside the box, and a movable stem with a seeding recess in its side, working reciprocatingly within and beyond the lower end of said tube by means of the alternate action of a spring at its upper end, and the pressure of the ground against its lower end, as the said planter is operated.

But I claim my improved seed planter, composed of the staff and the reciprocating seeding box and apparatus, arranged in such a manner that the reciprocating movement of the seeding box and apparatus be upon one side or face only of its staff, will cause the seeds to be deposited by means of the measuring cavity in the staff, in connecting with the depositing cavity, and the brush or elastic partition of the seeding apparatus or their equivalents, combined and operating with each other, as set forth.

I also claim the triangular measuring cavity in ths staff in connection with the brush or elastic partition. and the depositing cavity of the seeding apparatus, arranged and operating to deposit the seeds by means of the reciprocating movement of the seeding box, and being upon one side or face only of its said staff, as set forth.

SEED PLANTERS—Louis Daser, of Washington, D. C.: I claim the seeder, cut, and slot, in combination with the drill, the flared hole, spring, and cylinder, as set forth.

RIBBON OF STRIPS OF CLOTH—A. M. Eastman, of New York City: I claim forming upon the edges of strips of velvet a firm artificial selvedge, by means of a brush or cushion, as described, charged with a suitable adhesive compound, as specified.

REEFING AND FURLING TOPSAILS FROM THE DECK—W. H. Foster, of Portsmouth, N. H.: I claim the arrangement of the jack stay and batten with the main and minor reefing lines, furling or spilling lines, the lines for manœuvring the dog's ears, with the necessary sheaves and blocks, whereby the square sails of a vessel may be reefed and furled by the lowering of the yard from the deck of the vessel, as set forth.

MACHINERY FOR WORMING RIGGING—J.C. Ginn, of South Thomaston, Me.: I claim the combination and arrangement of the helical traveler, the box or tubular frame and the bobbins or reels, the whole being constructed as described and composing a band machine for the purpose specified.

PORTABLE DOOR FASTENER—G. W. Griswold, of Carbondale, Pa.: I am aware that several forms of portable door fastenings, composed of two or more pieces have been made and patented. I do not claim any of these.

But I claim a portable or removable door fastening made in one piece, and having two or more arms at right angles to each other, with one serrated and one smooth edge, so that when either of said arms are introduced into the crack between the door and its frame, and turned one quarter round its teeth will be pressed into the frame, and the smooth edge of one of the other arms be brought against the door to prevent it from being opened.

BREAKING FLAX AND HEMP—John Hinde, of Schenectady, N. Y.: I do not limit my invention to the employment of the apron rollers, in connection with the pairs of fluted and screw rollers in the machine represented, but intend to use them either alone or connected with any other apparatus for performing a preparatory breaking operation.

But I claim the employment of a moving ribbed sheet or endless apron, with a series of rollers working upon it, as described.

I also claim giving to the said rollers a reciprocating motion backwards and forwards upon the sheet or apron, as set forth.

I also claim giving to the said rollers a reciprocating motion backwards and forwards upon the sheet or apron, as set forth.

[See notice of this invention in No. 41, Vol. 9, Sci. Am.]

HANGING PLANE STOCKS—M. G. Hubbard, of New York City; I claim the mode of suspending the plane stocks below the edge of the planes by which I insure the pressure on the heel of the stock, as the resistance increases, as set forth, and decrease the size of the springs and the amount of friction attendant thereon.

I also claim the gauge for preventing the insertion of a board of improper thickness, as specified.

RIVING MACHINE—Adoniram Kendall, of Cleveland, O.: I claim, first, the sliding knife, brace, springs, driving arms, the upper arm being separated from the lower, and the planes for raising the upper arm from the knife, while the lower arm passes under.

The several parts named I claim in combination, for the purpose of cutting a block from a bolt and conveying it to the knife, to be divided into two blocks ready to be carried forward by the drivers, to be again divided by the knives.

Second, the combination of the upper springs, the lower springs, knives, and the reciprocating drivers, for the purpose of conveying the blocks divided by the knife from it to the knives, by which they are again divided.

Third, the two side pieces provided with grooves or channels, with the tumbler, the middle channels being of such inclination, that the drivers ascend in passing from the knife, P to W, and return by means of the tumbler in the channel. The driver descends in passing from the knife and returns in the channel, and is thrown up in place by the springs.

I also claim the combination of the grate plates with the tumblers and springs, or other equivalent devices, for the purpose of giving the proper direction to the reciprocating drivers, as set forth.

WHEELS OF LOCOMOTIVES FOR ASCENDING INCLINED PLANES—Josephine Morss, of Washington, D. C.: I do not describe in detail the various clutches, stops, &c., and their combinations, that may be necessary in carrying out the various modifications of my improvement, for such I do not claim.

But I claim the use or employment of inclined driving wheels upon locomotive engines, or their equivalents, in combination with the curved rails, constructed and arranged as set forth.

ICE CREAM FREEZERS—Thos. M. Powell, of Baltimore, Md.: I claim the manner described of constructing ice cream freezers with three or more cylinders, arranged as described, for the purpose of more speedily and effectually freezing the cream, as set forth.

[See notice in No. 34, Vol. 9.]

TABLES—Chas. Rowland, of Belleville, Ill.: I do not confine myself to the precise construction set forth; but I claim constructing the supports of the table so as to form seats capable of being closed, and withdrawn, as set forth.

FEEDING PAPER TO PRINTING PRESSES—B. A. Ruggand E. H. Benjamin, of Oak Hill, N. Y.: We claim the combination of one or more and less aprons, in such a manner that the sheets of paper in approaching the printing cylinders shall be rolled around a roller, and thus caused to overlap each other, the arrangement and combination of respective parts, by which this overlapping is produced, being the same as set forth.

Second, we claim the combination of the dropping board, operated as described with the apron. as set forth.

DRESSING FLAX—David Warner, Jr., of South Hadley, Mass.: I claim the construction and arrangement of the heckling and scutching drums; that is to say, drums having a series of heckling bars, or bars armed with teeth set at an angle with the radius, in combination with the blunt edged or scutching bars, and the drums so made and arranged in rows one above the other with the centers of their shafts diagonally placed, so as to cause the flax in passing between to be acted upon by both sets of arms, as described. The whole being constructed and operating as set forth.

STRINGED MUSICAL INSTRUMENTS—G. L. Wild, of Baltimore, Md.: What I claim does not consist simply in the employment of screws or their equivalents for tuning and keeping stringed musical instruments in tune. Neither do I claim any particular shape, arrangement or form.

First, I claim the employment of a supporting projection or its equivalents, of the tuning screw, for the purpose set forth.

Second, I claim the use of the slot and guides, or their equivalents, for the purpose described.

Third, I claim the bridle or its equivalents, operated by the harmonizing screw, or its equivalents, for the purpose specified.

[This improvement is noticed on page 132, Vol. 9.]

DOORS FOR BAGGAGE CARS—H. L. Clark, of La Porte, Ind.: I claim having the door placed between ways which are secured to the side os the car by hinges, and forcing the door outward by the device shown, or its equivalent, so as to cause the outer ends of the bi ged ways, to be in contact with stationary ways, between which said door is shoved when opened, as described.

[This invention is noticed in No. 40, Vol. 9.]

RAILWAY LAMPS—L. S. White, of Chicopee, Mass. (assignor to himself, Lewis White, of Hartford, Conn., Lyman White, of Springfield, Mass., and A. G. Stevens, of Manchester, N. H.: I do not claim the employment of a tube or passage descending through the burner so as to admit air to the interior of the wick tube and flame.

But I claim the arrangement of the filling orifice, and the air tube leading out of the closed secondary oil and carbon receiver or chamber under the wick tube, such arrangement consisting in placing the filling orifice on the upper part and at or near one end of the lamp, as described, and carrying the oil tube in an inclined direction through the main oil chamber, and out of the top thereof, whereby the contents of the secondary oil receiver may be emptied from the said receiver and through the tube, without danger of spilling the contents of the main oil receiver out of the filling orifice thereof.

BRICK PRESSES—A. H. Brown, of Georgetown: D. C.: I do not claim the broad device of constructing molds which close before receiving the clay, and open when discharging the bricks.

But I claim the peculiar construction of my mold, as described, for this purpose, each separate frame or link in the chain of molds forming a part of two molds, the projecting plate, as the molds pass over the first octagon, closing so as to form the bottom of the preceding frame and the side, closing against the ends of the preceding frame so as to form a perfect mold when the chain is horizontal: as the frames pass over the second octagon, the sides and the ends releasing themselves from the plate of the preceding frame, leaving the brick free upon the plate, so that it may be easily discharged, the lugs gearing into the octagons for propelling the molds.

Second, I claim, for the purpose of compressing dry clay into brick, the combination of the two plungers with the cams, the cams revolving and the plungers moving in unison, the first cam having the longitudinal radius and causing the first plunger to descend the greatest distance upon the easily compressible clay: the second cam, which actuates the second plunger having a smaller radius than the first cam, so that the greatest force of compression is applied to the clap already partially compressed where the greatest power is required.

New Tanning Process—Leather, Shoes.

On the 18th of July last, a patent was granted to Roswell Enos, for tanning sole leather by a new process, and from specimens of leather produced, placed in our hands for examination by the patentee, as well as from reading the specification we are convinced that the process is a good one. No new substances are employed, those which the patentee uses having been long known to tanners; he only employs them in a different manner from that which has been practised heretofore.

"The hair is first removed from the hides in any usual manner, and the hides thoroughly cleansed in either pure water or in a solution of salt and water. A batch of fifty sides are then placed in a liquor composed by steeping 40 pounds of Sicily Sumac, or 150 pounds of unground native Sumac, in 250 gallons of water, and adding 25 pounds of salt thereto. The sides remain in said liquor from twelve to twenty-four hours—the length of time depending upon the temperature of the said liquor and the condition of the sides.—About blood heat is the best temperature for the aforesaid liquor. After the sides have remained the aforesaid length of time in the salted infusion of Sumac, the liquor is strengthened by adding thereto somewhere about 200 gallons of strong oak or hemlock liquor, and fifteen pounds of salt, and the sides allowed to remain in this strengthened liquor for the space of from twelve to twenty-four hours. The sides should then be withdrawn, and placed in about the same quantity of a strong cold oak or hemlock liquor, containing twenty pounds of salt in solution, and allowed to remain in it for five or six days. They are then withdrawn, and placed in the same quantity and quality of liquor—save that it should be of about blood warm temperature, and are allowed to remain therein five or six days, which latter operation should be repeated for six or seven times, when the side will generally be found to be completely tanned. Whilst passing through each stage of this said Tanning Process the sides should be repeatedly handled, as all tanners are fully aware."

This is a description of the process. Practical tanners will perceive that neither acids nor alkalies are used for raising the hides, but that the salt sumac liquor is employed for the preparatory, and the common tan liquors for the finishing process. The inventor is an old experienced tanner, and he says: "the salt sumac liquor enters at once into the pores to the very heart of the sides, and so acts upon them, as to give them an exceedingly pliable yet firm basis, and so prepares them that the strongest liquors of oak or hemlock, &c., may afterwards be applied without binding or injuring the hides."

Tanning is a chemical process, and consists in applying such substances to the skins of animals as will combine with them, and form a compound firm, pliable, and insoluble in water, which we term "leather." It is easy to make leather, but there are as many qualities of it as there are of cloth. The tanning processes, to make good leather, are tedious and expensive, requiring months to complete all the operations. To shorten the time required in the process, many plans have been employed, and numerous substances used to bloat the hides, so as to allow the tanning to combine rapidly with their gelatine. Some of these have, indeed, shortened the process, but at the expense of the quality of leather, it being rendered very brittle; hence a general, and perhaps a just prejudice exists among practical tanners against new processes in this art. No such prejudice can exist against this new process, as no new substances are used. The sole leather which we have seen made by it will bear the most severe scrutiny. We have also been assured that the sole leather made by this process, from sweated Buenos Ayres hides, will make sewed work equally as well as the limed slaughter hides. The leather is also tough and strong. The length of time required for tanning a dry Buenos Ayres hide is ninety days, with seventy-five per cent. gain. The time required for tanning an Oronoco hide is much less, with a gain of eighty or eighty-five per cent. This method will tan slaughter sole leather in thirty days; harness or upper leather in the rough in twenty days, and calf-skins in from six to twelve days."

We believe the public is more deceived, and gets less real value for their money, in common boots and shoes than any other article used as parts of human covering. The lighter kinds of shoes especially, sold in the stores, are a disgrace to the trade both as it respects the sewing and the leather. The uppers are generally made of glazed sheepskin, about as thick and strong as old-fashioned brown paper, and the sewing, which is now performed in many instances by machines, is so carelessly executed as to bring into disrepute—unjustly, we think—the character of those machines. In conversation, a few days ago, with a journeyman carpenter, in our city, who has a family of five children, he declared it impossible for him to keep his family in such shoes as were sold at the stores." He had, from necessity been compelled to learn the art of making boots and shoes for his children, and one pair of his own making, he assured us, lasted four times as long as a "market pair." This should not be, for we are convinced that the lighter as well as the heavier kinds of leather can be made far better than most of that which is now generally used, and we hope this new process of tanning will be the means of effecting a total reformation in the character of the material for making common boots and shoes.

Information respecting the rights of Mr. Enos' process, may be obtained by letter addressed to him, at Binghampton, N. Y.

The Mammoth Steamer.

MESSRS. EDITORS—In your number for August 12th, is a paragraph respecting the Mammoth Steamship now building in England for the Eastern Steam Navigation Co.; and as I have no doubt that any authentic information respecting this great undertaking will be interesting to yourself and readers, I send herewith an extract from a letter received by me from my friend W. S. Garland, principal draughtsman to the firm of James Watt & Co., of Birmingham, England, who are constructing one set of the engines for this ship:—

"You will probably have heard of the Eastern Steam Navigation Co.'s great ship now building by Scott Russell at Millwall, but in case you have not seen any authentic particulars of her size, I will give them to you. Her length is 680 feet (double the length of the *Himalaya*,) 83 feet beam, and 58 feet deep in hold; capacity 10,000 tuns register; 23,000 tuns builder's measurement. She is to have screw engines, which we are making, having four 84-inch cylinders 4 feet stroke; and paddle wheel engines, making by Scott Russell, having four 74-inch cylinders and 14 feet stroke (oscillators.) The power of the screw engines taking them at 7 lbs. and 45 revolutions =1692 horses; the paddle-wheel engines at 12 revolutions=1228 horses, making 2920 nominal horse power; but as steam of 25 lbs. is to be used, we may assume that the actual power exerted will be four times the nominal, or nearly 12,000 horses. Screw is proposed to be 24 feet diameter, with a 40 feet pitch, and the speed is calculated at 18 or 19 miles per hour—draft about 28 feet."

R. H. DAVIES.

Philadelphia, Aug. 28th, 1854.

Piston Packing and Lightning.

MESSRS. EDITORS—On looking over your valuable journal of the 19th, I noticed an arricle headed "Piston Packing and Lightning," which is in most part correct except the "pumps," which contain no valves whatever; the chest containing the valves is seperate from that containing the piston.

I will here state that the engine is non-condensing, and at the time of the occurrence was working quite slow. There was one of the most terrific storms, accompanied with continuous lightning. Very suddenly the engine changed her motion, as stated in the former article. On examining the valve chest, I found both suction valves (5 feet apart) entirely off, which must have been instantaneous, as, if one valve had remained in its proper condition, the head of water would have been partly maintained, the pump being double acting.

After repairing damage, &c., I found the rubber was nearly melted. The idea that lightning had melted the valves was first suggested by several scientific gentlemen of this city; the only question with me is, what could have melted the rubber, which is always covered with water when the engine is in motion? I will also state that I have found other proofs of lightning. D. C. CREGIER, First Engineer.

Chicago Water Works, Aug., 1854.

Explosive Well.

The *Buffalo Democracy* says that a singular occurrence, resulting in a melancholy manner, took place recently, in the town of Hamburg, in this county. An Irishman was engaged in digging a well, and after getting down to the depth of some eighteen or twenty feet, found signs of water very perceptible. At last he struck his pick through a thin layer of slate, and with a noise like thunder, sufficiently loud to be distinctly heard all over the neighborhood, a stream of mingled gas and water burst through the orifice, instantly killing the unfortunate man, and filling the well to the depth of ten or twelve feet of water. Gas still escapes profusely, and the water is in constant and violent motion, resembling a large cauldron of boiling fluid.

Use of Soluble Glass.

A soluble glass has been applied to the woodwork and scenery in the Munich Theater, for the purpose of preserving, and as far as possible, rendering them incombustible. This glass is, in fact, a solution of free silicia in caustic alkali; and if the wood is properly seasoned, there can be no doubt of the value of the application.