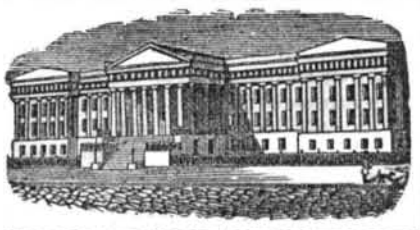

Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING JUNE 29, 1852.

MILL STONE DRESS—By Wilson Ager, of Kohrsburgh, Pa.: I claim the rounding off of what is usually termed the feathered edge of mill stones, for grinding buckwheat, so as to present a round smooth surface, instead of a cutting edge, as set forth; and this I claim, whether said furrows are polished, sharpened, or straightened by rubbing the same with a burr block, after said furrows have been roughed out with a pick or other tool, or by any other means substantially the same.

HULLING BUCKWHEAT—By Wilson Ager, of Kohrsburgh, Pa.: I claim the method described of scouring or hulling buckwheat, by passing it through between horizontal stones, the runner having furrows on its face, substantially as represented, and cut in the direction of the motion of the stone, with the design of keeping the grain from leaving the stone too fast, and for rotating both on their short and long diameters, and the bed stone left without furrows, in the manner and for the purpose set forth.

SAIL HANK—By Samuel Barker, of New York City: I claim the construction of a divided hank, so formed that one part may embrace the stay, and the other part enter the eyelet of the sail, and the parts be connected together by the socket, or one receiving the shank of the other, and be confined by the bolt, for the purpose of securing sails to the stay, substantially in the manner set forth.

APPARATUS FOR PROPELLING VESSELS—By M. A. Crooker, of New York City: I claim the combination of the radius bars, upright lever, cranks, horizontal lever, carrying paddles, and curved slots, arranged with respect to each other, and connected and operating substantially as set forth.

REVOLVING LAST HOLDER—By Henry C. DeWitt, of Napanock, N Y.: I claim, first, the revolving stock, constructed, arranged, and operating in the manner set forth.

Second, the revolving last holder attached to the revolving stock, and having an adjustable rest or arm, the whole being constructed, arranged, and operating in the manner specified.

RAILROAD CAR TRUCKS—By C. B. Disbrow, of Bath, N. Y.: I claim the construction of a truck with independent wheelframes, strengthened by braces, and connected to the opposite side wheel frame, by the bar extending across the truck, upon which said wheel frames may vibrate, substantially as set forth.

POTATO DIGGERS AND STONE GATHERERS—By J. T. Foster, of New York City: I claim the use of the roller, having a series of rows of pins in the periphery, and secured on an axletree of a cart or other moving apparatus, in combination with an adjustable apron, having teeth in it, and a discharging plate having teeth in it, substantially for the purpose of gathering stone, potatoes, fruit, or other substances, or articles, and depositing them in a box, as set forth.

LOCK—By Francis Garachon, of New York City: I claim the arrangement of the lever, and its accessories, for latching and unlatching the bolt relative to the lever W, or locking the revolving key plate, whereby the auxiliary kev acts upon the former, by being lifted endwise and upon the latter by its bit, when revolving in the usual manner, substantially as set forth.

HANGING STEPS OF MILL SPINDLES—By Gideon Hotchkiss, of Windsor, N. Y.—I claim the manner of connecting the tram-block foundation with the stone bearers, by means of stanchions and screw bolts, as specified, in combination with the method of suspending the lighter lever from the shell, which guides and sustains the pot containing the step of the spindle by means of the shell, the sway bar, and the knife edges of the sway bar and pot, or their equivalents, in the manner and for the purpose substantially as described.

[We are glad to see Mr. Hotchkiss still in the field of invention, after his severe accident on the New York and Erie Railroad last year.

BEDSTEAD FASTENINGS—By Jasper Johnson, of Geneseo, N. Y.: I do not claim a bedstead fastening composed of a stub bolt, drawn tight on an inclined plane, as that is well known; but I claim the combination of the fastening, composed of the stub bolt, and the inclined plane, or their equivalents, drawn tight by the cording of the bedstead, with the endless screw, acting upon the inclined plane by means of cogs, or other equivalent device, in order, by turning the inclined plane under the bolt, to loosen, separate, or tighten again, the fastening, without the necessity of slacking the cording.

MOULDING HOLLOW WARE, Etc.—By J. J. Johnston, of Cincinnati, O.: I claim the moulding hollow ware or other similar castings, with a flaring rim, or its equivalent, such as the lip of a cannon, stove or other tubular castings, by using third patterns, attached to suitable match plates or hollow boards, and so devised that, in connection with the first and second patterns, which form the exterior, I mould therefrom the top edge, a portion of the interior of the desired casting, and a true seat for the core, thus, with the core, forming the entire mould, substantially as described.

METHOD OF HEATING SHEET IRON, WHILE IN THE PROCESS OF MANUFACTURE—By Henry McCarty, of Pittsburg, Pa.: having described my improvement in the manufacture of sheet iron, by which it is made to resemble the imported Russia sheet-iron, and possess that beautiful mottled gloss and smooth hard surface:

I claim heating the sheets of iron in a bath of hot lead, instead of heating them in an oven, by which the surfaces of the sheets are protected from the oxygen in the atmosphere, during the heating process, preparatory to the rolling operation.

COMPOUND ANCHOR—By S. N. Miller, of Roxbury Mass.: I claim the anchor, as described, for holding ships.

MIXING MORTAR—By Isaac Peck, of Buffalo, N. Y.: I claim mixing of the lime and sand together, before straining, substantially as set forth.

LOCOMOTIVE ENGINES—By H. R. Remsen & P. M. Hutton, of Troy, N. Y.: We claim the combination in a locomotive engine, of three cylinders whose cranks are at angles of about 120 degs. to each other, with valves, valve chests, escape pipes and steam pipes, provided with throttle valves, substantially such as are described, whereby the steam acts only on one side of the pistons, when the locomotive is advancing, and upon the other, when it is backing, and the reversal is accomplished by such change in the operation of the steam, without recourse to any of the ordinary means of reversal.

SKATES—By N. C. Sandford, of Meriden, Ct.: I claim making the runner out of a plate of steel, and of the form substantially as specified, the plate being turned or struck, the desired form, by means of discs, or in any other desirable way.

BELT CLASP—By A. M. Smith, of Rochester, N. Y.: I claim the making clasps to fasten belts or bands together, to run on machinery or around pulleys, by using jaws or plates of metal, constructing and adapting them to that purpose and then confining them together with screws, so as to hold the belts solid, and thereby introducing a new and useful manner of fastening machine belts together.

METHOD OF RINGING BELLS—By T. V. Stran, of New Albany, Ind.: I claim the combination and arrangement of the levers, C and D, and the compound levers, so connected and attached to the axle as to give motion to the bell clapper, in the manner and for the purpose set forth.

BRICK MACHINES.—R. A. Ver Valen, of Haverstraw, N. Y.: What I claim, is, first, the employment or use of the lever, having step projections, on one of its sides, attached to the connecting rod, and arranged and described, by which agreater or less pressure of the plunger or follower, upon the clay in the moulds is obtained, as desired.

Second, I claim the arrangement of the levers rods, vertical lever, and the rod, O, with the levers, and upright shaft, for the purpose of operating the feeder, and vibrating bar, substantially as set forth.

Third, I claim the employment or use of the spring, attached to the vertical lever, and operated upon by the rods, attached to the lever, whereby the working of the machine is prevented, by any obstruction, as described.

Fourth, I claim the attaching together of the feeder and vibrating bar, the vibrating bar having a guide rod working in suitable bearings, or arranged in any other suitable way.

SOFA BEDSTEADS—By Alfred Walker, of New Haven, Ct.: I claim the manner of guiding the seat when it is raised and lowered, and of connecting the seat and bed, when extended, by means of the metallic bearings and the grooves which they traverse when the seat is raised and lowered.

RAILROAD CARS—By Chas. Waterbury, of Bridgeport, Ct.: I claim an enclosed passage or communication from one car to the other, as described, for the purpose of ventilating the train through the ends of the cars, from the forward part of the train, and for the safety of the passengers, while passing from one car to the other, and for the purpose of keeping dust out of the car, when the train is in motion.

CONNECTING COCKS WITH PIPES—By D. A. Webster, of New York City: ante-dated Dec 29, 1851. I claim the manner described, of making a tight joint, viz., by boring the hole in the pipe, as nearly cylindrical as may be, and making that part of the cock which is to be inserted, near the end and near the shoulder, of equal diameter with the holes, and the central part slightly larger, and then driving the cock into its place, the edges of the hole shaving the cock to its proper size and form.

SUGAR BOILING APPARATUS—By Juan Ramos, of the Island of Porto Rico, (assignor to J. C. Gallaher, of Philadelphia, Pa., & Wm. F. Tirado, of Ponce, Island of Porto Rico). Patented in Spain April 29, 1852: I claim the construction of the transverse canal, in combination with the hinged cover, for the double purpose of returning the froth to the receiving pans, and for preventing the syrup from falling into the canal, while being ladled from one part to the other.

I also claim the construction of the lower longitudinal canal, with its hinged board, for the purpose of more effectually removing the feculencies, as described.

I also claim the use of the movable plank in the coolers, which, when removed, leaves a vacancy or channel for the molasses to flow away to the discharge aperture through the bottom of the cooler.

PROCESSES FOR THE MANUFACTURE OF SUGAR—By Juan Ramos, of the Island of Porto Rico, (assignor to J. C. Gallaher, of Philadelphia, Pa., & W. F. Tirado, of Ponce, Island of Porto Rico.) Patented in Spain April 29, 1851: I claim the use of the plantain stalk and quicklime combined, substantially in the manner and for the purpose described, for defecating the cane juice.

I also claim the application of a fresh strike of concentrated syrup, from the battery to the molasses first drained off, for the purpose of crystallizing the sugar yet remaining in the molasses.

REVOLVING BOOT-HEELS—By Thomas Walker, of Birmingham, England (assignor to B. B. Thayer, of Quincy, Mass.: assignor to W. W. Churchill, of Boston, Mass., & Jos. Baxter, of Quincy, Mass.): patented in England July 18, 1849: I claim the combination of the four separate pieces, that is to say, the metallic ring, the leather or flexible disc, the leather annulus or ring, and the leather disc, the said combination being constructed, arranged, and made to operate together, substantially as described.

DESIGN.

COOKING STOVE—By J. H. Conklin, (assignor to Reuben R. Finch, Senr., and Reuben R. Finch, Jr.,) of Peekskill, N. Y.

[Out of the above number of patents granted, we are happy to say to our friends, that six were obtained through the Agency of this Office.]

To Prepare Yarns for Cord and Rope.

The following process, we have been told, makes improved cord and rope. The yarns, previous to their being made into cord or rope, are steeped in clear lime water, made by stirring one peck of lime in a large hogshead of water, allowing it to settle, and using only the clear liquor. The yarns should be steeped about two hours, then well washed in water, and then steeped in whiting and water, in the proportion of five pounds of whiting to twelve gallons of water. This process, we consider, is too troublesome and expensive for all the benefits it confers, for it merely helps to destroy the natural oil, or the gluten in the yarns. A patent was taken out in England, a few years ago, by a practical man but no chemist, for this process. It would be much better to boil the yarns in clear lime water for four hours, then take them out and wash them but this involves expense and trouble.

New Inductions in Agriculture.

In a number of papers, especially "leading agricultural papers," there have appeared some singular ideas of Dr. Baldwin, of Winchester, Va. He says:—

"It is not true that any plant which the farmer is interested in cultivating, derives its principal nutriment from the carbonic acid gas of the atmosphere. Although air is indispensable to vegetable as well as to animal life."

Nobody doubts this.

"That the only food of plants known to the practical farmer is manure, or the residue of putrefaction. Neither water, oil carbon, phlogiston, nor the sulphates, muriates, silicates, phosphates of soda and potash; nor the alkalies, have ever been proved to be aliment of plants, unconnected with putrefied substances which may contain them."

Some of this is sense, and some not. He talks strangely about phlogiston and putrefaction. What is putrefaction but decomposition? But plants will take up food as liquid manure without the act of decomposition taking place—the act of assimilation operates in the latter case. Again he says:—

"It is not true that different vegetable matters, during their growth, extract different fertilizing salts from the earth. For lands exhausted by continued cultivation in one kind of grain will not produce a more remunerative crop of any other kind."

This part surely contradicts itself, for if lands become exhausted by cultivation, it must be by extracting something from those lands. It is also well known that when some lands become perfectly incapable of bearing one kind of crop by repeated cultivation, they will bear another kind of crop without new manure.

"The residue of the decomposition of vegetable substances, of the 'ash of plants,' is not manure. Nor can manure be made of any substance without the aid of the putrefactive process."

This is not so with respect to clover.—Every farmer knows the advantages derived from *plaster* when sown on clover crops.

"That shade is the great fertilizing agent; the putrefactive fermentation cannot be produced without it; and, consequently, no manures can be made, and no fertility imparted to the earth, in any manner, independent of its influence.

That the earth itself is capable of being converted into the best manures; to effect this, it is only necessary that it should be located favorably for the generation of the putrefactive fermentation.

The difference in the fertility of the soil, in our own native forest lands, arises solely from the circumstance of the surface soil being more or less densely shaded. Pine, which have no leaves, and white and red oak, which part with theirs so reluctantly, never leave the surface soil so fertile as those trees which drop their leaves with the first frosts."

Here, we believe, is the true cause of such views, viz., a mistake in supposing that shade and not the decomposition of the leaves is the cause of the fertility. It would certainly be a clumsy and barbarous method of farming to introduce the shading process as a substitute for manuring and a rotation of crops. The shading of land is a very excellent plan to prevent a too rapid evaporation in warm climates, but shading has nothing to do with the food of plants; it is a mere process or plan to assist in the act of preserving plants or manures from the severe and injurious action of a hot sun. We venture to say that an acre of white sand merely shaded would not become fertile in a thousand years, but let it be manured well, and it will raise good crops. We have noticed only a few of the points set forth as the inductions of Dr. Baldwin. The modern principles of agriculture, viz., rotation of crops and regular manuring, has done more for farmers than Mr. Baldwin seems to be aware of, at least far more than he has given them credit for. Lands which have failed to realize good crops, have become productive when treated with the phosphate of lime without any shade. Plants feed upon that food exactly of which they are themselves composed; the great principles for observation in connection with this fact, is the proper method of their feeding—taking up their food. This is done by the roots drinking up their food in a liquid state, that being its proper state, for which they are adapted upon by their nature and organization.

Patent Cases.

U. S. Circuit Court, New York City. Before Judge Nelson and Betts. The following cases were decided:—The plaintiffs, Tatham and others against Le Roy and Smith, for infringement of a patent for making lead pipe, made an application for a new trial, because the case had been tried before, and a verdict given for the defendants, which the defendants said was not right, as the charge given to the jury in the said case was not correct nor explicit in defining what constituted a new and useful result. The former verdict was set aside and a new trial granted.

Another case was for a similar action—Cornell against Blatchford. A new trial was applied for but denied, and motion for injunction was suspended, until the re-trial of the above.

Brick Machine—Hall against Wilds. A verdict in a former case was given for Hall, and in this case defendant prayed for a new trial. New trial denied.—July 1, 1852.

Substitution of Rosin for Sperm Oil on Machinery.

The running of machinery is attended with immense expense for oil for purposes of lubrication. By a report of a committee appointed by the agents of the Lowell Mills, Mass., to test the relative merits of rosin and sperm oil, that on looms and other machinery of heavy bearings, one-half less power is required with a mixture of rosin with its bulk of pure sperm oil, than with sperm alone, and that its substitution will effect an annual saving of 3-4 of the quantity of sperm oil required in the Lowell Mills. Spinning machinery, or those with light bearings, require more power when rosin and sperm oil is used than sperm alone.

A very good grease for machinery is made by mixing dry quick lime with rosin oil. It makes a kind of soap, very cheap as a lubricating material. Sperm oil seems to maintain its character against all the lubricating compounds which within the past few years have been brought before the public.

Amalgamation of Telegraph Lines

We understand that the New York and Boston Telegraph Line, principally owned by Mr. F. O. J. Smith, and worked under the Morse patent, has been united with the New York and New England Line, better known as the Bain Line, and the united line will hereafter be known as the "New York and New England Union Telegraph Line," and will be managed by John McKinney, who has been long and favorably known as the efficient superintendent of the Bain Line. We also understand that the rates of tariff on despatches between this city and Boston will be raised on and after Monday next, from 10 to 25 cents, for the first 10 words, and 10 cents for each added word.

These lines must look out or there may be some prospects of an independent public line started. There is no patent for a signalling telegraph in this country, and it is totally distinct in principle from all our telegraphs, Prof. Morse has said it is different in principle from his.

High Pressure Steam.

Mr. Perkins, in his experiments on steam, heated a portion of confined steam, not in contact with water, to the temperature of 1400° Fahr., and still the pressure did not exceed five atmospheres (75 lbs. to the square inch); by injecting more water, although the temperature was lowered, the elastic force was gradually increased to one hundred atmospheres (or 1500 lbs. to the square inch), equal to ten times the pressure on any of the boilers of any of the Western steamers, or one hundred times that of any ocean steamer. In the confession of Ryan, the engineer of the ill-fated steamer Glencoe, he states the boiler was dry or nearly so, and as soon as he let in cold water the explosion took place.