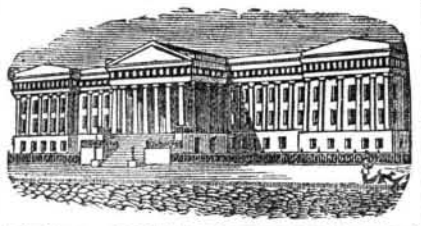

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LIST OF PATENT CLAIMS
Issued from the United States Patent Office.
FOR THE WEEK ENDING MAY 20, 1851.

To Frederick Leypoldt, of Philadelphia, Pa., for improvements in Scarificators.

I claim the use of the said hollow pivot, lever, and slide racks, combined and arranged as described, secured in their proper places by the plate and screws, and operating in connection with the trigger and springs, substantially as herein before specified.

To J. W. Osgood, of Columbus, Ohio, for improved Compound Coupling for Hose or Pipes.

I claim the manner, if desired, of keeping the several threads or screws always in contact, whether the coupling be formed or disconnected, for obtaining the advantages set forth, by the employment of an interior box, situate in an outer box, and having a loose ring or collar, or its equivalent, on it, in combination with a washer, connecting nut, and box, formed with lips for locking the coupling, the several parts constructed, fitting, and operating together, substantially as shown and described.

[This is one of the most unique couplings we have ever seen, and has some absolute advantages not before attained.]

To Nelson Platt, of Ottawa, Ill., for improvement in Smut Machines.

I claim, first, in connection with a close case surrounding the machine, the arrangement of the fan, as herein described, in the annular space surrounding the beaters, between the outer case and the fluted cylinder; and at the entrance of the pipe through which the dust is discharged, so that the currents of air will set into the machine through any cracks or openings in the same, from the room in which it is placed, by which means the escape of pulverized dust or smut, into the room, is effectually prevented.

Secondly, I claim the arrangement of the air chamber, having currents of air passing through and across it, between the upper part of the beater and the space through which the descending current of air passes to the fan, for the purpose of collecting any portion of the grain, accidentally thrown out of the scouring cylinder by the blast or beaters, and returning the same, so that it may pass through the machine with the rest of the grain in the proper direction.

Third, I claim the conical ring, or shield, for the purpose of protecting the conical screen below it from abrasion by the descending grain, and at the same time keeping the pores of the screen open, for a free passage of air through it into the fluted cylinder.

Fourth, I claim the tube or passage for discharging the cleaned grain as set forth, and also for receiving and transmitting air to and through the tube, as described.

To G. W. Beardslee, of Buffalo, N. Y., for improvement in Planing Machines.

Having thus fully described my invention, I claim the yielding stock and cutter, when made to yield upon an axle, the centre of which is in line with the cutting edge of the knife. And this I claim whether the socket bolt, hinged bar and nut are or are not used, for the purpose of graduating and adjusting the cutters as herein set forth.

To H. H. Day, of Jersey City, N. J., for improvement in India Rubber Shoes.

I claim the manufacture of india rubber boots and shoes, without cloth, being made of separate pieces of different degrees of elasticity, and each piece having its peculiar and requisite degree. The shoe, to possess different degrees of elasticity in different parts and uniform elasticity in each different part, and having no part without some elasticity in every direction, by the means herein described, or any other substantially the same; whereby I lessen the cost, obtain a shoe not liable to break, which can be kept clean, stretched in every direction, at the same time easier to the foot, adjustable to large boots and yet not rendered useless to wear over smaller, light and elegant, and retain permanently their shape.

To Lawton J. Ware, of Warren R. I., for Coupling for Cars.

I claim the use of half couplings, each of similar shape and construction, formed with lips, having slots into which projecting hooks fit, having notches serving for the bolts to enter and lock the coupling, or constructed and operating fsr the purposes shown, in any manner substantially the same.

[We have seen this improvement and believe it to be a very excellentone.]

To Robt. Jobson, near Dudley, England, for improvement in Reflecting Fire Places.

I claim the extension of the curved reflector entirely around the fire grate, in combination with having an opening through it, immediately under the fire grate, for the passage of the ashes, as specified.

And in combination with the fire grate and the extension of the reflector under or below the grate, essentially as explained, I claim the ash guard, the same being applied in the manner and for the purpose as set forth.

And in combination with the reflector, and its sustaining frame, I claim the hinged slide and the sustaining rollers or their mechanical equivalent, the same being applied so as to enable the reflector to be moved outwards for the purpose of providing easy access to the chimney for convenience of removing the ashes, whenever such may be deemed necessary.

To Luther Boardman, of East Haddam Ct., for improvement in the manufacture of Wire-strengthened Spoons, &c.

[By this arrangement block tin ware spoons are made so as to conceal the wire entirely.]

I claim the manner, substantially as herein shown and specified, of enclosing a wire of the required exact length within the handle, by supporting it on pivots secured to the moulds, and projecting midway or partly into the form.

To Chas. M. Guild & John Brown, of New York, N. Y., for improvement in Steam Traps.

We do not claim to be the first to remove the water of condensation from steam warming or other apparatus, by means of a float and valve or cock, but we do not know of any means by which this water of condensation is taken off through the float by a cock; but we claim the construction and application of the float, with its mouth, opening, pipe, and barrel, on the plug, with two openings for the purpose of retaining the steam in warming apparatuses, or in other steam pipes, and passing out the water of condensation through the float near the bottom, substantially as described and shown.

To Samuel Pierce, of Troy, N. Y., for improvement in Hot Air Furnaces.

I claim the arrangement substantially as herein described, of the heating chambers, in connection with the furnace, when this is combined with the method substantially as described, of connecting the heating chambers with each other with the furnace and with the exit pipe leading to the chimney, whereby the gaseous products of combustion are carried into and through, and made to spread out in thin films in the said heating chambers, and therein retained to give out heat, without seriously impeding the draught, substantially as described.

To Levi Bissell, of New York, N. Y., for improvement in Carriage Springs.

I claim the constructing of springs, whether of wood or part wood and part metal, or other elastic or non-elastic substances, as adapted and applicable to carriage springs and springs for other purposes, in the manner substantially as herein described.

To Albert Hebbard, of Worcester, Mass., for improvement in Cast-iron Car Wheels.

I claim the above described improvement or wheel, made with a chilled rim, either a solid hub, or one divided cross-wise of its axis, two plates or discs united in a serpentine curve at their outer peripheries, a third plate not only made serpentine concentrically with the hub, but curved in radial directions, as described, all cast or founded and combined together in one piece, substantially in the manner herein specified.

To Purnel Jefferson, of Bridgeton, N. J., forimproved gauging and heading movement for Spike Machines.

I claim the combination of the spring gauge and catch, constructed as described, with the dies and with the header, for the double purpose of gauging the length of the spikes or nails, and aiding in forming the heads thereon, substantially as set forth.

To Isaac Van Kuran, of Boston, Mass., for improvement in Cast-iron Car Wheels.

Having thus explained my invention, I claim a cast iron railroad wheel, constructed with a solid hub and a tube, the tube being united to the hub by a curved plate, with curved projecting braces on it, and connected to the tread by a curved plate, with the curved braces on it; the whole being constructed substantially as described, for the purpose set forth.

[This is the second patent which Mr. Van Kuran has secured on very valuable improvements on Railroad Car Wheels.]

To Henry Ruttan, of Coburg, Canada West, for improvement in Ventilating Furnaces. Ante-dated Jan. 31, 1851.

I claim the arrangement and mode of operating the valves in reference to the air-heating space around the stove, by which the amount of air from within and without is graduated by a single movement.

I claim also the arrangement of the horizontal air-heating trunk, the vertical leading thereto, and its valve, in combination with the air-heating space.

[Mr. Ruttan has expended a great amount of time in perfecting his Ventilating Furnace, besides paying our Government $500 as Patent fees. Next week we shall present a length article on Mr. Ruttan's system, accompanied with numerous engravings illustrative of his theory.]

To Wm. Watson, of Chicago, Ill., & E. S. Renwick & P. H. Watson, of Washington, D. C., forimprovement in Grain Harvesters and Binders.

We claim, first, the method of raking and binding grain at one operation, by the mechanism herein specified, or its equivalent, substantially as herein set forth.

Second, we claim the arms, in combination with the levers, by means of which the rake teeth are alternately raised and depressed, as the rake is moved alternately in opposite directions, by endless rake chains, which move continually in the same direction.

Third, we claim the method of adapting the binding apparatus to the length of the cut grain by varying the respective positions of the cutting and binding apparatus, substantially as herein set forth, that is to say, by moving the front of the platform with the cutting apparatus, backward or forward, or by moving the binding apparatus nearer to or farther from the front of the platform, in such a manner that the sheaf may be bound near the middle of its length, whether it be long or short.

Fourth, the method of binding grain by the mechanical devices herein specified, or their equivalents, acting in connection, and automatically by motion derived from or dependent upon the movement of the machine to which they are attached.

Fifth, we claim the cord finger operating substantially as herein set forth, by the aid of which the grain is encircled by the binding cord.

Sixth, we claim the tying forceps or the equivalent thereof, operating in connection with mechanism for encircling the grain with cord or band, substantially as herein set forth.

DESIGNS.

To James Wager, David Pratt & Volney Richmond, Troy. N. Y., for Design for Stoves.

To P. M. Hutton, of Troy, N. Y., for Design for Bedsteads.

(For the Scientific American.)

Practical Remarks on Illuminating Gas.

[Continued from page 286.]

Water Rosin Gas.—Much excitement has been caused in this country as well as in England recently by the statements which have been brought forward, tending to show the immense advantages derived, in point of economy, quantity, and great superiority in quality of the manufacture of an illuminating gas from rosin combined with water. This new gas was sustained by many people, and like all new and speculative projects, gained converts rapidly. A company was supposed to have been formed in a neighboring city to carry this new scheme into effect; many of the unwary were brought into the association; large amounts of money were said to have been subscribed for this project, and I have understood that an apparatus designed for experiment was erected. The supposed company have, however, relinquished the undertaking. This gas is generated in a similar apparatus to the rosin gas, and is in fact the same thing; but in addition to the rosin a quantity of water is also allowed to enter into the retort, and by the admixture of the hydrogen contained in it, with the rosin gas, it is maintained that it adds to the quantity, improves the quality, and reduces the expense. But if we look at the effect for a moment we think it must be seen that, as the hydrogen has no illuminating power in itself, and as the quantity contained in the rosin is ample when combined with its carbon, to form a gas suitable for illuminating purposes, that by adding more hydrogen, we only decrease the illuminating power and thereby deteriorate the quality of the gas. That people should embark upon an enterprise, which, even at the outset, must seem most absurdly enveloped with inconsistency, is not easily to be accounted for.

Dr. Andrew Fife, Professor of Chemistry at Kings College University has investigated this subject very fully, and his able report, which appeared in the Journal of the Franklin Institute for October and November, 1850, has placed this matter in its true position; an extract of which I will take the liberty to append to this article. He says, with regard to the gas referred to, and which is stated to be hydro-carbon gas, that is (water and rosin gas) "I maintain that it did not contain a particle of water gas; it was not even rosin gas; it was procured from a mixture of resin and fat, the latter I have no hesitation in saying, in by far the largest proportion. Strange that gas, said to be water rosin gas, should be of specific gravity ·936, contain 28 parts of olifient gas, and have durability 82′ 40″; while gas which I saw prepared by the same apparatus from a mixture of equal parts of rosin and fat, should be only ofspecific gravity ·716, have 13·5 of olifient gas and durability only 54′. Does not this show that I am correct in saying, that the gas thus emblazoned forth as water and rosin gas, was prepared from fat and rosin only, the former in very large proportion.

There is only one other circumstance to which I would advert, also stated in the papers referred to. It is often said that the most important part of a letter is contained in a postscript, and in one of the printed papers issued by Mr. White [Mr. White here alluded to is the inventor of this new gas] there is a P. S. which is certainly very important, because it is contradictory of a previous statement, and seems to let out the secret regarding the enormous quantity of gas obtained. He there states 'one cwt. of rosin yields, by my system, if wrought up, 2,000 feet of gas or more, possessing an illuminating p ower 26 per cent. superior to Manchester gas. I find it, however, more economical not to convert the whole of the resinous matter into gas.' 'It may be found more profitable not to push the quantity of gas beyond 2,000 feet from each cwt., of rosin, although at the works erected by me at Bristol they regularly obtain 3,500 to 4,000 feet from the same quantity, by fully working up the residuum." In a P.S. itis said, 'Some may not understand me, why I obtain only 2,000 feet from each cwt. of rosin, while at Bristol 3,500 to 4,000 feet is produced from the same quantity. This is easily explained: the gas at Southport is 26½ per cent. superior to that of Manchester, by therefore merely adding that additional percentage of my water gas (and they add still more at Bristol) you have about 3,500 feet, equal still to Manchester gas.'" J. B. B.