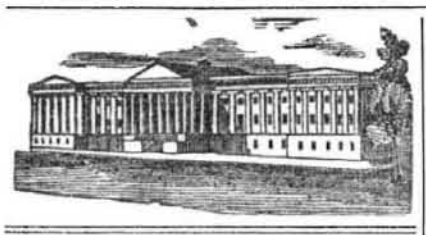

☞ Our weekly List of Patents and Designs contains every new Patent, Re-issue and Design emanating from the Department, and is prepared officially, expressly for the Scientific American, and for no other paper in the city, consequently other journals are obliged to wait the issue of the "Sci. Am." in order to profit by the expense to which we are subject, and of course must be one week behind. Those publishers who copy from this department in our columns, will, in justice to us, give proper credit for the same.

LIST OF PATENT CLAIMS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending August 13, 1850.

To N. Barlow, of St. Louis, Mo., for improvement in friction clutches.

I claim the sliding collar, connected to and in combination with the nut, substantially in the manner and for the purposes herein specified. [See engraving of this apparatus in No. 35, Vol. 5.]

To Bartholomew Beniowski, now residing in London, England, for improvement in Cylinder Printing Presses. Patented in England Oct. 14, 1847.

That which I claim is constructing a printing machine in which the form or forms of types or blocks are placed on or secured to the inner or concave surface of a cylinder or drum, which is made to revolve and carry the form or forms secured thereto from the inking rollers to the printing or impression cylinders, all of which parts are mounted inside the cylinder or drum.

Second, I claim the methods above shown and described of making the inking rollers or balls of printing presses or machines.

To J. G. Davis, of Buffalo, N. Y., (Assignor to A. B. Warren & J. G. Davis, for improvement in the manufacture of Candles.

What I claim is the arrangement and manner of operating the knives by which the cylinder of fat, with its central wick, is cut into suitable lengths for candles, and the fat removed from the end of the wick.

I also claim the device for regulating the length, and delivering the candles, substantially as herein desoribed.

To J. F. Tozen, of Rochester, N. Y., for improvement in instruments for Vaccinating.

What I claim is the sliding cylinder, in combination with the thumb-key, spring and piston, for the purposes herein described and set forth.

To Adam Hays, of Madison, Ind., for improvement in Splints for fractures.

What I claim is the cutting out a portion of the splint to afford an opportunity for dressing as often as may be necessary, the upper and lower portions of the splint being kept firmly united by means of a brace, so as by extensions and counter extensions, to keep, throughout the treatment, the proper relative position of the parts concerned, the slide being replaced after each dressing, or any other device substantially the same.

To G. Houston, of Washington, N. C., for improvement in weighing machines.

What I claim is the iron frame, together with the skids and regulating screw, used in combination, with a weighing beam, as described in the foregoing specification.

To Wm. H. Hovey, of Hartford, Conn., for imment in Packing Boxes and Axles.

What I claim as new is the oombination of the metallic packing ring, having its outer periphery of conical form, the arched springs having their ends inclined to fit the said ring, and the regulating screws, with the journal box and the axle, in the manner and for the purposes substantially as described. [This is a very excellent improvement, and is used by Tracy & Fales on the cars made by them in Hartford, Conn.]

To Allen Judd of Chicopee, Mass., for improvement in Pentagraphs.

What I claim is the instrument constructed and arranged as above set forth, consisting of a pencil, moving parallel with the eye tube, with which it is connected, as herein described, and marking on a vertical plane, or a plane, parallel with their axis of horizonta motion, such objects as the sight through the eye tube passes over. [See engraving in No. 1, Vol. 5.

To W. B. Kean, of Worcester, Mass., for improvement in Bench-hooks.

What I claim is forming the head with any suitable number of edges, of any required form, to suit various kinds of work, and having the spindle, of which the head formed part, ground and fitted in a socket, set at an inclination to the bench, so that any edge of the head can be set to the work and secured by a spring catch, and whatever edge is turned to the work will be higher than the back or opposite edge.

[This is a very unique device.]

To A. McKinney, of Montgomery, N. Y., for imment in apparatus for regulating the setting of Bows in Wagon-tops.

I claim the combination and arrangement of the rules, the rods, the pins, the adjusting screws and the holdfast bolts, arranged and adjusted upon a frame, in the manner and for the purposes substantially as herein described.

And I also claim the adjustable rule sliding in the swinging bar and attached to the same frame with the before described combination, in the manner set forth. [This invention is one of more than ordinary importance.]

To R. Milligan, of Rarden, Eng., for improvement in ornamenting textile fabrics. Patented in England March 18, 1850.

What I claim as my improvement is the new or improved ornamental fabric or manufacture made substantially as specified, viz., having any ground suitable or unsuitable for receiving and exhibiting bright color or colors when imprinted thereon, and having figures, stripes, or other portions of surface floated over the said ground in material and color suitable for representing such bright color or colors, and having such bright color or colors printed on the said boated surfaces.

To J. Pirsson, of New York, N. Y., for improvement in Pianofortes.

What I claim is combining two sets of strings operated by separate actions with one and the same sounding board, whereby I am enabled to produce greater effects both in quality of tone and in power than heretofore, and also to maintain the unison of the notes, and the tune to a degree not possible before; the whole being constructed and operated substantially in the manner described herein.

To W. Robinson, of Lebanon, Conn., for improvement in Ship Ventilators.

First, I claim the ventilating chamber constructed in the manner substantially as described, having a tube, or air passage, communicating with the cabin or between-decks of a ship or other vessel, entering it, and provided with a register, either for the purpose of admitting pure air, by long tubes to the lower parts of the cabins or between decks, or for carrying off the ventilated air by short tubes from their upper parts.

Second, I do not claim the use of a float valve in the ventilating tube, irrespective of the manner of applying them, but I claim having the two float valves attached together in the manner described, and each acting independently of the other upon a separate seat in the ventilating chamber, so that any water passing one valve may be shut off by the other.

To J. C. Tennent & J. Workman, of Philadelphia, Pa., for safety apparatus for steam boilers.

What we claim is the application of a rope, made of any combustible material (using for this purpose wool as prepared in the manner before noticed, or any other material which will answer the intended effect,) to the upper surfaces of one or more tubes or flues of a boiler, which, when said tubes or flues are uncovered of water, will burn off or part in the manner as before described, for the action of the excessively heated metal and surcharged steam, which rope is connected with, and by its parting actuates the apparatus herein described, or any part thereof, for the purpose either of giving alarm or putting in action means of safety, or both, substantially as herein described.

RE-ISSUES.

To J. Pecare & J. M. Smith, of New York, N. Y., for improved concealed trigger for fire-arms. Patented Dec. 4, 1849. Re-issued Aug. 13, 1850.

What we claim is the construction of a concealed trigger, capable of being disclosed and made ready to operate by simple pressure imparted by the hand to its rear end, as described herein.

To John Hinton, of Pack's Ferry, Va., for improvement in Harvesters of clover heads and other grain. Patented May 22, 1849. Re-issued Aug. 13, 1850.

What I claim is, first, the combination and arrangement of the transverse pendent finger bar, the mortised right-angled plates, the adjustive slide bars and knife or cutter, with the revolving axletree of spring conveyor bars, arranged and operating in the manner described, by which the heads of clover, wheat and other description of grain are severed from the stems or stalks, and delivered into a receiver.

Second, I also claim the combination of the right-angled rods, fingers and pendent bar, with the transverse timber for adjusting the knife and fingers, longitudinally and vertically in connection with the spring conveyor bars, as described and represented.

DESIGNS.

To W. Bryant, of Boston, Mass., for design for cast iron bracket.

To J. F. Rathbone, of Albany, N. Y., for design for Coal Stoves.

To R. J. Blanchard, of Albany, N. Y., (Assignor to B. P. Learned & G. H. Thatcher) for design for stoves.

To S. S. Jewett & F. H. Root, of Buffalo, N. Y., for design for stoves.

The Industrial Exhibition of 1850.

The N. Y. Herald says, "From the little we hear of the preparations on the part of our people to exhibit specimens of their industry and ingenuity in the great Fair, which is to be held in London next year, we are very much inclided to believe that the project does not meet with as much favor as might be expected. We do not know how to account for this apathy. It may be that our citizens are working cautiously, and are determined to take the world by surprise, in the beauty and elegance of the articles which they propose exhibiting, and are therefore silent. We hope sincerely that such is the case. American mechanics and artisans need not fear competition with any nation in existence, in any department of industry; and we are confident they do not. We cannot, however, account for the apparent apathy which exists on this subject. It must be recollected that the time for the opening of the Exhibition approaches rapidly, and that there are but a few months more within which to prepare for it. We expect to see our people secure their full share of the prizes, and will be much disappointed if they do not."

[In regard to the above, we can assure the Herald, and all others interested, that our mechanics are preparing to exhibit at the World's Fair some of the boldest and most striking specimens of their ingenuity. From our intimate association with the various branches of American industry, we are probably better able than any other journal to know the actual state of this matter. We are constantly receiving letters from different sections of the country, asking advice how to proceed, and it is a matter of some regret that no depository has been selected in this city for the receptacle of such articles as are already prepared. This is the point where the largest share will be delivered for shipment, and some responsible person should be appointed to take charge of them. Several of our acquaintance have already gone to England with operating machines, for the purpose of introducing them into use, prior to the Exhibition.

Coal Formations.

The purest coal often exhibits impressions of plants, agreeing in species with those found in a more perfect state in strata of shale accompanying coal. The vegetable origin of this fuel is still more unequivocally shown by its internal structure when seen under the microscope, consisting, as it does, of woody fibre, dotted and scaleform vessels, and cellular tissue. This structure is observable not only in bituminous coal, but even in anthracite, where the change from the original wood has been carried farthest. The various plants which, by their decomposition, have produced coal, were not drifted into their present position, but grew in almost every case, on the spots where the coal is now found. This is proved by the position of erect trees, the lower portions of which rest on seams of coal, and by the abundance of stumps and roots, occurring both in North America and Europe, in the underclays or floors of coal-seams. The name of stigmaria has been given to the vast abundance of these roots, which were first shown by Dr. Binney, of Manchester, to belong to fossil trees called sigillaræ, a conclusion previously thrown out as a conjecture, on botanical grounds, by M. Adolphe Bogniart. Sir C. Lyell described, in 1842, ten forests of superimposed fossil trees, at right angles to the places of stratification, on the shores of the Bay of Funday, in Nova Scotia; and recently Mr. Richard Brown has found, in a single coast section in Cape Breton, forty-one underclays with roots, and eighteen tiers of upright trees of the genera Sigillaria, Lipidodendron, and Calamite. These remains of fifty-nine submerged forests extend through a thickness of 1600 feet of strata. Their entombment implies the repeated subsidence of land, such as took place during the earthquake of 1811–12, when part of the alluvial plain of the Mississipi, called "The Sunk Country," near New Madrid, ninety miles long by thirty in breath, was submerged. Thousands of dead trees are still standing there under water, while a still greater number lie prostrate.

The manner in which the interlaced roots of the deciduous cypress are fixed in blue clay at the bottom of every large swamp in the Delta of the Mississipppi, affords some analogy to the old carboniferous underclays, and to explain the new admixture of earthly matter in coal. Sir C. Lyell refers to the exclusion from the central parts of those cypress swamps in Louisiana, of the turbid waters of the Mississippi. The margin of the morass supports a dense growth of reeds, canes and brushwood, through which the sedimentary waters must flow very slowly, parting with all their alluvial matter before they reach the interior of the vast timber covered swamps.

Recent artesian borings, 400 feet deep, have shown both in the deltas of the Po and Ganges, that the substance of ancient terrestrial surfaces, once supporting turf or a forest, have sunk far below the level of the sea. The number and richness, however, of the seams of coal stored up in the carboniferous strata, doubtless indicate a peculiarity of climate and vegetation more favorable than any which now exists for the accumulation of vegetable matter. As to the climate of the coal period, the evidence of palms having flourished at that time, which was formerly supposed to imply a tropical heat is now questioned by able botanists, and as tree-ferns abound in New Zealand, the caulopteris of the coal being wet, have required a high temperature. The absence of coal in winter may have caused the extension of certain tropical forms in the coal period far into high latitudes, and the absence of great heat in summer may have checked the decomposition of plants, till continuous masses of them were buried under sediment thrown upon them when the land was submerged. The length of time during which dead trees continue to stand erect in submerged areas in the plains of the Mississippi shows that the envelopement of upright carboniferous stems in shale and sands may have taken place very gradually.

Lake Superior Copper.

The Cliff and Minnesota mines have recently been turning out immense masses of copper ore, and great difficulty appears to be in getting it from the mines in peices small enough for shipment. Seven pieces taken from the Cliff mine weighed 29,852 pounds; four from the Minesota, 14,641. The masses are so heavy that it takes teams of ten, twelve and sometimes fourteen horses, to haul them the distance of three quarters of a mile from the mines to the lake. The copper is too tenacious and compact to be broken in peices in blasting, and it has to be cut up in peices with a long chisel, three-fourths of an inch in width, by chiping off piece after piece with a heavy hammer. By this slow and expensive process these large masses of copper are cut up into pieces for shipment. A schooner recently sailed for a port down the Lake, with upwards of sixty tons on board, and the docks are filled with masses of the most enormous size, waiting shipment. Is it not possible that this copper could be sawed much easier than cut with the chisel?