

in various countries. During the past 10 years the supplies from other sources than the United States have increased four per cent, but the demands have increased to no less than 45 per cent.

PRICES OF FOREIGN METALS, AUGUST 11.

Table with columns for metal types (Iron, Steel, Lead, etc.), quantities, and prices in £ s. d. and \$ a. d.

There has been a reaction in the Scotch pig-iron, which has fallen to 5s. 3d. [The above are prices within three per cent discount, the pound being valued at \$4.85.]

New York Markets

COAL.—Anthracite, from \$4.50, \$4.75, to \$5. COGNAC.—Manilla, 8 1/2c. a 8 3/4c. per lb. CORN.—The sales were more favorable this week, still the prices have somewhat fluctuated.

The stock of foreign canal coal for making gas is very light in our market, as there has been no arrival of cargoes lately from Liverpool. More Virginia canal should be furnished for this city.

been for two years past. We have been informed that several American brands which had been sent to our market and had proved as good as the Scotch, thus tending to supersede it, have lately depreciated in quality and cannot be used for fine castings.

RAILROAD STOCKS.—Missouri C's, 82 1/2 a 83 1/2; New York Central Railroad, 73 1/2 a 73 3/4; Erie Railroad, 5 a 5 1/2; Hudson River Railroad, 32 1/2 a 33; Harlem Railroad, 9 1/2 a 10; Reading Railroad, 44 1/2 a 44 3/4; Michigan Central Railroad, 43 1/2 a 44; Michigan Southern and Northern Indiana Railroad, 7 a 7 1/2; Michigan Southern Guaranteed, 24 1/2 a 24 3/4; Panama Railroad, 115 1/2 a 115 3/4; Illinois Central Railroad, 65 a 65 1/2; Galena and Chicago Railroad, 66 1/2 a 66 3/4; Cleveland and Toledo Railroad, 22 1/2 a 22 3/4; Chicago and Rock Island Railroad, 64 1/2 a 64 3/4; Illinois Central Bonds, 88 a 89.

The three steamers of the Collins Company have passed into the possession of the Panama Company and the Pacific Mail Company, forming a united company under the name of the North Atlantic Steamship Company. The Atlantic, Baltic, and Adriatic were sold for \$900,000—one-half in cash, and one-half in the stock of the company.

We are indebted for our home prices to our valuable and able cotemporary, the Shipping and Commercial List and New York Price Current, conducted by Autens & Bourne, No. 58 Pine-street.

ALBANY LUMBER MARKET, AUG. 24.

For the week the lumber market has presented but few new features worthy of notice. There is a slight improvement in the demand and rather more activity exhibited throughout the district. The stock is very large and steadily accumulating.

Although the detention of the boats on the canal has been nearly one-half the week, the receipts of boards and scantling exceed those of the corresponding week last year nearly 3,000,000 feet.

Table listing lumber prices at principal yards with columns for item, quantity, and price.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING AUGUST 23, 1859.

[Reported Officially for the SCIENTIFIC AMERICAN.]

** Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

25,168.—Peter Arneson, of Newark, N. J., for an Improvement in Machinery for Forming Hat Bodies: I claim the arrangement and combination of the adjustable plate, K K, perforated apron, C, case, M, feed rollers, L L, and pickers, D O, substantially as and for the purpose shown and described.

[The object of this invention is to distribute by a very simple means the fur on the usual former or perforated cone in a much more perfect manner than heretofore, so that the hat body when formed will be of a proper varying thickness from its crown to its brim. The invention consists in disposing, by means of a suction blast and adjustable register, the fur on an endless perforated apron or other carrier, in such a manner that the fur will be presented to the picker and through the latter presented to the cone in a volume varying in density, and corresponding to the varying thickness of the hat body to be formed.]

25,169.—Albert Betteley, of Boston, Mass., for an Improvement in Shipper-gear for Pulleys: I claim the combination of a brake-lever, a friction roller, and an independent brake applied and operating together, and with a shipping apparatus, substantially in the manner and for the purpose set forth.

25,170.—R. F. Billings, of Portland, Me., for an Improved Bed-bottom: I claim the arrangement and combination of the side-rails, A A, boxes B B, provided with the springs, C, and hinged lids, d d, and plate D, attached to the lids, d, by the straps, e, substantially as and for the purpose set forth.

[The object of this invention is to obtain a durable elastic bed-bottom, and one that may be readily taken apart, and packed within a small compass for convenience and economy in transportation, and also to facilitate its thorough cleansing when necessary.]

25,171.—A. Bingham, of Talladega, Fla., for an Improved Bed-bottom: I claim the arrangement and combination of the longitudinal slots, C, rocking foot rail, B, rising and falling hand rail, K, and segment guides, G, as and for the purpose shown and described.

[A series of inclined slats placed longitudinally at suitable distances apart from this bed bottom, and their lower ends are attached to the foot rail and their upper ends are fitted to the head rail, the ends of which are fitted in curved guides attached to the side rails, each slat resting on a spiral shaft, the whole forming a durable and elastic but simple bed bottom.]

25,172.—Seba Bogert, of New York City, for an Improvement in Finger Rings: I claim an extension or divided finger ring, having its ends provided with a catch, or fastening, substantially as and for the purpose set forth.

[The object of this invention is to obtain a finger-ring capable of being extended or increased in diameter beyond the size required for the portion of the finger on which it is worn, so that the ring may be readily slipped over the joints of the finger in being put on or taken off, and at the same retained by a suitable catch in a distended state while being slipped or passed over the finger.]

25,173.—Charles W. Brown, of Boston, Mass., for an Improvement in Grinding Mills: I claim, first, Regulating the adjustable stone of a grinding mill that the stone may have a vertical adjustment, so as to grind finer or coarser at the same time, so that the pressure of the runner, with respect to the stationary stone, will be automatically equalized, and be raised and lowered to free itself of any foreign substance getting between the two stones, by means of levers, J, J, and vertical rod, N, toggle, n n, sliding collar, m, and weighted arms, T T, acting upon the movable bearing plate, S, or the equivalents thereof, when the same are arranged and operate in the manner essentially as specified.

Second, I claim the method set forth, for regulating the flow of the grain from the hopper, M, by adjusting the same vertically, in the manner set forth. Third, I claim the dead-arc, E, arranged within the eye of the upper stone, A, and capable of being raised or depressed with the spindle, G, for the purposes and in the manner specified.

25,174.—C. P. Buckingham, of Mount Vernon, Ohio, for an Improvement in Cut-off Gear for Steam-engines: I claim the employment of the tripper, N, when constructed and arranged as shown, so as to be adjusted, and to trip both valves, in combination with drops, J, arms, K, and lifters, L, as set forth.

[In this invention an adjustable tripper is arranged in such relation to two spring levers and drops and to a vibrating lifter, that the time when the drops are set free can be arranged by raising or lowering the tripper, so that it strikes the spring arms sooner or later, and when these drops are connected to the stems of two valves which interrupt the communication between the steam-pipe and valve chest of the engine, and which are operated alternately by the same eccentric, the tripper can be so regulated that steam is admitted during the whole or only during a certain portion of the stroke, and if this tripper is connected with the governor, so that it is depressed as the balls of the governor fly out, it will cut off the steam sooner when the engine runs faster, and vice versa, to keep the speed of the engine perfectly uniform.]

25,175.—Wm. Burnet, of New York City, for an Improved Inkstand: I claim the construction of an adjustable apparatus, made substantially as described, connected with the cover and flexible bottom of an inkstand, so that at whatever height (above the lower office of the funnel) the ink on the main reservoir may be, there shall always be a sufficiency and never an overflow in the funnel, on opening the inkstand cover.

25,176.—J. Carl, of Grenada, Miss., for an Improvement in Grinding-mills:

I claim, first, The arrangement and combination of the pivoted lever, a, shaft, B, stone, C, and screws d, substantially as and for the purpose shown and described.

Second, The employment of a hinged top-bar, g, in combination with the shaft, B, and stones, C, D, as and for the purpose shown and described.

[Two stones operating in opposite directions can have their grinding surfaces brought closer together by means of a screw, and they are so arranged that the surface of the upper stone always adapts itself to the surface of the lower stone, and there are other arrangements to make this a good and efficient grinding-mill.]

25,177.—H. M. Coombs and L. W. Nelson, of Portland, Oregon, for an Improved Washing Machine:

We claim the construction of the clothes' cylinder, A, surrounded with air-tubes, having orifices for discharging air into the water, in the manner substantially as set forth, in combination with the drying and washing cylinder, B, and fire chamber, I, all arranged and combined in the manner and for the purposes specified.

[This invention consists in the arrangement of a peculiarly constructed cylinder within a cylindrical chamber surrounded by water, and also in arranging a stove below the arrangement in such a manner that it will answer the two-fold purpose of heating water in the boiler and drying the clothes after they have been washed and rinsed in the same machine.]

15,178.—C. W. Crandall, J. H. Crandall, and Hoza N. Hawkins, of Cameron, Ill., for an Improvement in Mole Plows:

I claim the combination of the opening or ditching piece, A, C, with the standard, F, and peculiarly formed hinged follower or former, constructed and operating in the manner and for the purposes set forth.

25,179.—E. H. Crane, of Burr Oak, Mich., for a Ratchet-trap:

I claim the arrangement of the platform, a, spring, c, strap, x, spring, i, and chuck, p, with arms, B, B, provided with projections, n, n, spring, H, and box, A, provided with hinged-door, l, when the usual parts are combined and operated substantially as and for the purpose specified.

25,180.—H. H. Day, of New York City, for an Improvement in Manufacture of Ribbed Elastic Cloth:

I claim the method, substantially as set forth, of manufacturing ribbed elastic cloth, that is to say, elastic cloth containing strands of rubber, by forming the strands of rubber upon the covering cloth, with which they are to be permanently attached, in contradistinction to forming the strands separately, and afterwards attaching the covering material to them.

I also claim the method, substantially as set forth, of spreading the gum upon the covering cloth, and dividing it into strands at one process, so that the two operations are effected simultaneously at different parts of the same apparatus.

25,181.—Lucius Dimock, of Hebron, Conn., for an Improvement in Machines for Winding Thread:

I claim the arrangement and combination with the guide, A, of two separate and distinct series of grooves, b, c, having their channels cut on opposite sides, as and for the purposes shown and described.

[In the ordinary method of winding thread on spools, it is laid spirally from end to end of the spool in opposite directions alternately by means of traveling guides. The guide ordinarily employed to direct the thread on the spools has cut on its face by means of revolving burrs a series of grooves for the purpose of spreading the thread evenly on the spools, but such grooves are always parallel with the planes of revolution of the spools, and consequently operate in an imperfect manner. This invention consists in a method of cutting the grooves, by which two separate and distinct series of grooves are arranged obliquely in opposite directions to the planes of revolution of the spools, the direction of one series corresponding with the direction which the thread has in one of its spiral layers, and the direction of the other series corresponding with the direction which the thread has in the next layer, and the two series being so arranged that neither interferes with the other's operation.]

25,182.—Joseph Ditto and Henry Van Bergen, of New York City, for an Improvement in Composition for Cement Roofing:

We claim the composition prepared and composed of the materials described, in the proportions set forth, for the purpose of forming cement for roofing purposes.

25,183.—Daniel Dodge, of Keeseville, N. Y., for an Improvement in Nail Machines:

I claim a gripper, having a reciprocating movement towards and from forging or pointing machinery, and opening automatically at the outer extremity of its stroke, so as to allow the introduction feeding forward, or removal of the rod, while it is in this position, but holding the rod fast at every other stage of its operation, and while in any other position, substantially as described.

And in combination with a so operating gripper, I claim the employment of a gage and a cutter or cutters operating in the described order of succession with respect to each other and the gripper.

25,184.—S. W. Eells, of Mansfield, Ohio, for an Improvement in Writing Fluids:

I claim the manner of combining the above materials, so as to prevent the oxidation of the indigo, and the other coloring ingredients, as specified.

25,185.—E. S. Eells, of Troy, N. Y., assignor to C. G. Keeney, of Manchester, Conn., for an Improvement in Knitting Machines:

I claim the combination and arrangement of the lever, e, arm, h, pin, j, and slot, x, with lever, l, detent, n, and springs, o and p, substantially as and for the purposes described.

25,186.—J. J. Essex, of Newport, R. I., for an Improvement in Elastic Bulb Syringes:

I claim so combining and arranging the bulb, air-chamber and delivery valve with each other, and with the flexible suction and delivery tubes, that the air chamber shall be above the delivery valve, and shall remain while in use, upright, or nearly so, and under the control of the hand which grasps and operates the bulb.

25,187.—Albert Fickett, of Rochester, N. Y., for an Improved Belt Fastening:

I claim the combination of the links, l, i, with the rivets, r, r, said links being inserted in the ends of the belt, in the manner and for the purpose substantially as set forth.

25,188.—Elbridge Foster, of Hartford, Conn., for an Improved Easy Chair:

I claim the application and insertion of the quadrant slide into the center of each of the arms or scroll of the side rail, so as to be unseen when the back is up, in the manner as described.

Also, the application of the spring, adjustable and extension back center-leg, in the manner and for the purpose substantially as set forth and described, the whole constituting a new article of manufacture.

25,189.—James F. Gamble, of Concord, Pa., for an Improved Method of Feeding the Saw to the Stuff in Sawing-machines:

I claim moving the saw forward when cutting, whilst the lumber is held stationary, substantially as set forth.

25,190.—Stacy A. Garrison, of Union, N. Y., for an Improved Hub-reamer:

I claim the arrangement and combination of the cutters, c, d, and the arbor, A, as and for the purpose shown and described.

[This is a very convenient and simple device, which bores hubs very efficiently.]

25,191.—William Goodale, of Clinton, Mass., for a Machine for Making Paper Bags:

I claim, first, The pasting apparatus, consisting of the roller, G, fitted to work in an opening in the bottom of a past-box, the spring, H, or its equivalent, and the adjustable stopper, a, all combined to operate substantially as described.

Second, The combination of the continuously-revolving measuring-rollers, J, K, and the intermittently-revolving feed-rollers, J, J, operating substantially as and for the purpose described.

Third, The drop, N, operating in combination with the cutter, B, and the feed-rollers, substantially as and for the purpose specified.

Fourth, Folding the paper around a plate, Q, or flat piece of any material narrower than the bag itself, or of the same width as but shorter than the bag itself, substantially as specified.

Fifth, The folders, R, R', applied and operating in combination with the inclined planes, I, P, at the sides of the folding table, C, substantially as and for the purpose set forth.

Sixth, The combination with the folding table and with a plate, Q, narrower than the bag, to fold the bag upon, of one or more movable inclined planes, I', and creasing-blades, U, operating substantially as described.

Seventh, The drop, Z, applied and operating substantially as and for the purpose described.

Eighth, The bar, S, applied to the vibrating roller-frame, and operating in combination with the knock-off, n, substantially as and for the purpose set forth.

25,192.—Charles Goodyear, of New Haven, Conn., for an Improvement in Porous-mapped Rubber Fabrics:

I claim a new porous manufacture or fabric, composed of a woven or other cloth, or equivalent therefor, and India-rubber or allied gum, rendered pervious to air and impervious to water, substantially as described, and with a face of socks, clippings, or shavings, of woolen or other fibers, or equivalents therefor, substantially as and for the purpose described.

25,193.—Rensselaer D. Granger, of Philadelphia, Pa., for an Improvement in Cooking-stoves:

I claim placing across the upper flue of a cooking-stove a hollow box-formed partition communicating with the external air, the said partition having two openings, arranged in respect to the boiler-holes in the top plate, as set forth, and the said openings having their inner surfaces perforated as and for the purpose specified.

25,194.—John S. Hawkins and Rezin Hawkins, of Greenfield, Ind., for an Improvement in Harvesters:

We claim the arrangement of the main frame and team-shaft, in combination with the adjustable frame, L, and hinged shoe or cutting apparatus, T, constructed and operated in the manner substantially as described for the purpose specified.

25,195.—Thomas R. Hopkins, of Petersburg, Va. (assignor to himself and R. E. Robinson, of same place), for an Improvement in Screw-presses:

I claim the use, in combination with a power-screw of a press, or other machine, of two revolving nuts, P, P', which are fitted to gear into the thread of said screw, and so arranged and operated upon, in order to give motion to the screw, that the upper one remains stationary while the lower one revolves, and vice versa, substantially as and for the purposes set forth.

[This invention consists in giving the follower of a press a progressive upward or downward motion, by means of two sets of cams, with friction rollers between them. The cams are arranged on disks, which have spur-teeth on their circumferences; the upper disk has one more tooth than the lower one. Into these teeth a long pinion gear, said pinion being moved slowly by a long lever, and as it turns, the upper disk gradually gains on the lower one, and, consequently, with the aid of the friction rollers, rises and forces up the follower with a powerful pressure, the gradual elevation being retained at all times by reason of the cams of the lower disk which has no vertical movement, acting antagonistic to the cams of the upper disk which both revolves and moves vertically up and down. This press cannot fail to operate well; and as it combines two of the most powerful and effective elements of mechanics for giving motion and power, we think it is just the thing for our southern cotton and tobacco planters. An engraving will be presented in our columns shortly.]

25,196.—Robert W. Hill, of Naugatuck, Conn., for an Improvement in Cooking Apparatus:

I claim the portable cooking or heating apparatus described, composed of the hot-air chamber, A, and fire-pit, B, when provided with ports, C, furnished with registers, with the partition, c, and draught-apertures, a, the whole being constructed and arranged as specified.

25,197.—Hermann Hirsch, of Berlin, Prussia, for an Improved Marine-propeller:

I claim the peculiar form and construction, substantially as described, of a propeller, whereby the centrifugal force obtained is made to co-operate with and increase the effect of the same.

25,198.—Hermann Hirsch, of Berlin, Prussia, for an Improvement in the Construction of Ships:

I claim the form and construction, substantially as set forth, of the hull of ships or vessels, whereby the possibility of breakage of keel is removed, and a normal form, giving a maximum of sleekness, without retardation of velocity, is imparted to the bottom.

25,199.—Richard M. Hoe, of New York City, for an Improvement in Feeding Paper to Printing-presses:

I claim the combination of the feeding mechanism, cutting apparatus and the printing-machine, or their equivalents, in the said combination for feeding the paper from a roll to a printing-machine, and cutting or partially cutting it into sheets, as it passes along to be printed, as set forth.

I also claim making the cutter so as to leave the several sheets united in certain places, substantially as described, in combination with the conducting tapes, as described, or the equivalents thereof, so that the conducting tapes may pass around the cutter-cylinder as set forth.

And I also claim, in combination with the cutter-cylinder and the grooved cylinders, substantially as specified, or the equivalents thereof, the employment of the two pressure-rollers, or their equivalents, as described, for keeping the sheet distended.

25,200.—Charles H. Hunter, of Shelbyville, Ind., for an Improvement in Machines for Weighing Grain:

I claim the combination of the scale-beam or lever, g, with the bag-holder, H, secured to one end, and the standard, c, e, with rack and pinion for elevating or depressing the scale-beam, when the whole is constructed and arranged substantially as described for the purposes set forth.

25,201.—Obed Hussey, of Baltimore, Md., for an Improvement in Harvesters:

I claim, first, The combination of the main ground-wheel seat and platform, when hinged to the main frame substantially as described.

I also claim the raising and the lowering of the entire frame, finger bar, and outside divider upon the two ground supports, in a horizontal position, by means of a lever and its connections therewith, operated by the driver from his seat, substantially as described and for the purpose set forth.

25,202.—Jacob Jenkins, of Lynn, Mass., for an Improved Mechanism for Protecting the Upper Part of a Boot or Shoe while Applying the Sole:

I claim the described arrangement of a shoe-jack, or mechanism for supporting the toe and heel parts of a boot or shoe, a guard or protector constructed essentially in the manner as set forth, the same being made to encompass the upper of a boot or shoe, or so much of it as extends above the bottom surface of the last, and a clamping-contrivance for adjusting the protector to the contour of the shoe, the whole being made to operate together as and for the purpose set forth.

I also claim the described application and arrangement of an adjustable guard to the protector, whereby the fitting of the outer sole to the insole and upper is not only greatly facilitated, but is rendered certain of being fixed in its true and proper position.

25,203.—Walter W. Kelly, of Reedtown, Ohio, for an Improvement in Scales:

I claim the adjustable rack, G, and platform, H, constructed and arranged as described, in combination with the center-piece, I, upon which the rack and platform are placed, so that either one can be used at pleasure in the manner specified.

25,204.—W. R. Landfear, of Hartford, Conn., for an Improved Pegging-machine:

I claim, first, The employment, in combination with the bar, A, of the vertically and laterally-moving box, C, having a plate, D, awl, b, punch, i, and inclined face, j, arranged substantially as described and shown, so that on the descent of the plate, D, the awl will enter the sole, and the inclined face, j, will, while the awl remains in the leather, shove the bar, A, along laterally, thus ensuring certainty and regularity of feed; and on the elevation of the plate, D, the box, C, will be moved laterally by the spring, l, the awl will be carried over the point where a new hole is to be made, and the punch brought over the previously-made peg-hole in readiness to drive home the peg on the next descent of the plate, D.

Second, The combination with the vertically and horizontally moving box, C, of the spring, l, for giving a lateral movement to said box, and the adjusting screw, m, for regulating the spaces between the peg holes, as shown and described.

Third, The arrangement and combination with the bar, A, of the adjustable elastic plate, T, again at which the peg block is pressed, said plate being adjusted by means of the screw, p, to suit any size of pegs, as herein shown and described.

25,205.—D. L. Long, of Dayton, Ohio, for an Improvement in Sleeping Berths for Railroad Cars:

I claim the arrangement and combination of the jointed supporters, l, l', i', i'', m, n, r, and hinged seat and back, A, with the folding berth, g, g', screen, k, and rest, i, all arranged and operating, so as to form two sleeping berths, substantially as described.

25,206.—Eugene Martin, of Waterbury, Conn., for an Improvement in Alloys:

I claim the process or mode of procedure, substantially such as herein described, as applied to the ingredients, such as described, and for the purpose specified.

25,207.—John M. May, of Janesville, Wis., for an Improvement in Pumps:

I claim cylinder, B, in combination with part, A, when constructed, arranged, and operated with piston, C, and pipe, D, substantially as described, and for the purposes set forth.

I also claim the screw, E, when used for the purposes of fastening and unfastening the stationary part of the pump in the well, or reservoir, to any suitable substance, substantially as, and for the purposes described.

I also claim set-screw, N, in combination with the notch, O, or projection, P, or their equivalents, to form a catch or wrench, for turning the screw, E, and pump neatly in the path of a horizontal circle, in fastening and unfastening the stationary part of the pump in the well, or reservoir, substantially as described; the set-screw, N, also serving to gage the descent of the piston and to protect the valves from injury, as set forth.

I also claim the devices consisting of springs, G, G, segment, J, and lever, H, when connected together substantially as described, and for the purposes set forth.

25,208.—John M. May, of Janesville, Wis., for an Improvement in Pumps:

I claim the device for connecting together the cylinders and regulating the stroke of the pump, in combination with the point or spike, I, or its equivalent, when used in open wells, and claim said device in combination with rod, H, when used in drilled wells, substantially as, and for the purposes set forth.

I also claim the collar, E, and springs, g, g, g', g', g', g', when used in combination with the pump, or with the education-pipe, and arranged substantially as shown.

25,209.—Hippolyte Monier, of Paris, France, for an Improvement in Argand Gas-burners:

I claim the construction of the Argand burner, with its grate, a, and external tube, b, of clay, porcelain, or other incorrodible refractory non-conducting material, and with the inner tube and stem of metal—the several parts being combined substantially as described.

25,210.—Richard Montgomery, of New York, N. Y., for an Improvement in Corrugated Iron Bridges:

I claim, first, The combination of the corrugated arch, A, B, with the corrugated arch, M, N, constructed and arranged in relation to each other, substantially as described and shown.

Second, The combination of the peculiarly-formed blocks, C, and bed-plates, F, with the abutment ends of the arches, A, B, and M, N, substantially as, and for the purposes set forth.

Third, The combination of the blocks, D, and bottom-plates, G, with the cross-rails, K, L, and arches, A, B, and M, N, substantially as, and for the purposes described.

25,211.—Benjamin F. Moore, of New York, N. Y., for an Improvement in Ladies' Bustles:

I claim an inflated bustle for ladies' dresses, formed with the projecting points or scollops, d, d, in the manner and for the purposes specified.

25,212.—Daniel Murray, of Fairfield, Conn., for an Improvement in the Mode of Measuring Grain:

I claim the arrangement of the arms, a, and b, in combination with the sides, b, and f, constructed and operating as described, and for the purposes set forth.

25,213.—William Murray, of Baltimore, Md., for an Improvement in Stamping Machines for Crushing Ores, &c.:

I claim, first, The combination of two or more stampers arranged on the same radial line with two or more semi-circular lifting, revolving, lifting, and dropping cams, which move together, and with a central driving shaft, substantially as and for the purposes set forth.

Second, Providing the semi-circular lifting and dropping cams with a vertical joint about midway between their terminating ends, and with an oblong vertical slot at their rear or highest ends, and attaching said ends, by means of a set-screw, or its equivalent, to the frame of the cams, so that the inclination of said cams may be adjusted to lift the stampers to a greater or less height, according to the force required to perform the operation of stamping, substantially as and for the purposes set forth.

[This arrangement of two or more stampers on the same radial line with two or more semi-circular horizontally-revolving cams, renders the machine capable of doing double the amount of work in a given time that is performed by ordinary single-cam stamping machines, without the necessity of enlarging the size of the machine or employing more than one driving shaft. And the arrangement of the cams so as to be adjustable provides for the gradation of the force of the blow given by the stampers, and thus the machine can be adapted readily for stamping ore, or pounding hominy, rice and other substances of various nature. This is a good improvement.]

25,214.—Richard H. Osgood, of Columbus, Ohio, for an Improved Reciprocating Saw:

I claim providing the upperedges of saw teeth with notches, f, f, fig. 1, substantially as described and represented, for the purpose of assisting to clear the kerf of sawdust.

25,215.—John L. Pott, of Pottsville, Pa., for an Improvement in Hoisting Apparatus:

I claim the inclined drum, M, revolving in a plane parallel, or nearly parallel to the lines of hoisting rope, in combination with the guide pulleys, Q, Q, on the cross-head, R, the latter being operated by the shaft or the drum, through the medium of the screw, K, or its equivalent, substantially as, and for the purpose set forth.

25,216.—John B. Quigley, of Trenton, N. J., for an Improvement in Tapping Water Mains:

I claim the employment of the pivoted standards, B, jaws, C adjustable beam, D, adjustable swivel, E, chain, G, vertical sliding-piece, H, and ferrule, K, when the above parts are arranged and combined as shown and described.

25,217.—Thomas Robjohn, of New York, N. Y., for an Improved Inkstand:

I claim the arrangement and combination of the ring, D, cover, D', arm, e, slatted projection, E, and diaphragm, G, so that by pressing down ring D, the cover will open and the ink rise; and by releasing the ring, the ink will fall, and the cover, D' will close, as and for the purposes shown and described.

[The nature of this invention consists in applying the principle of action of the elastic diaphragm covered under a patent dated August 22, 1857, to serve the double purpose of forcing the ink into the fountain by downward pressure, and to act as a spring upon a lever, in order to keep the cover of the fountain always closed down tightly when the pressure is removed.]

25,218.—Charles W. Russell, of Philadelphia, Pa., for an Improved Method of Shaping Bonnets:

I claim the described method of shaping bonnets, &c., by means of a core, or its equivalent, which is wound over the several parts of the bonnet, and which is retained in position, by hooks, a, and d, or their equivalents, substantially as specified.

25,219.—Charles W. Russell, of Philadelphia, Pa., for an Improved Machine for Pressing Bonnets:

I claim the arrangement of the adjustable roller, I, or its equivalent in such relation to the chain or rope, which connects the treadle with the press-lever, B, that the direction in which the pressing-iron acts can be controlled, substantially in the manner, and for the purpose described.

25,220.—Augustin P. Samuel, of New York, N. Y., for an Improvement in Rotary Engines:

I claim the method of governing and working the pistons, C, D, by connecting their piston-rods, K, K, through the roller holders, L, L, and rollers, M, M, directly with the eccentricated curve, F, substantially as and for the purposes set forth.

I also claim the combination and arrangement, substantially as described, of the valves, a, and b, with and within the movable pistons, C, D, whereby such valves, a, b, are opened by the first motion of the piston-rods, K, K, and before any motion is given the pistons, C, D, so that a passage is given to the steam within such pistons, and the steam admitted on both sides thereof, for the purpose of producing an equilibrium of pressure on each side of such pistons before they are put in motion.

I claim also the construction and arrangement, as above-described, of the packing rings, r, s, acting against each other by inclined surfaces; the outer ring, s, being conical, or tapering, on both sides, and the inner ring, r, being tapering on one side only towards the ring, s, and the inner ring acting against the other by means of the springs, z, or its equivalent, expanding it outward against the cylinder, and inward against the piston, for the purposes specified.

25,221.—Hezekiah B. Smith, of Lowell, Mass., for an Improved Mortising Machine:

I claim the relative arrangement of the fulcrum, D, lever, F, connecting-rod, G, and table, R, with each other, in the manner described, when combined with power mortising machines, for the purposes set forth.

25,222.—George S. G. Spence, of Boston, Mass., for an Improvement in Stoves:

I claim the use of the conical inverted cup, B, combined with the chain, f, or its equivalent, in the manner, and for the purpose set forth.

I also claim the combination of the air deflector with the fire-place door register, and so as to operate therewith, and deflect the entering currents of air upon or toward the ignited surface of the fuel, as described.

25,223.—Orange N. Stoddard, of Oxford, Ohio, for an Improvement in Sewing Machines:

I claim the yielding metallic loop-check, B, b, operating in combination with a grooved hook, A, a, or its described equivalent, in the manner and for the purpose set forth.

25,224.—Zurriel Swope, of Lancaster, Pa., for an Animal Trap:

I claim, first, The sinking bottom, N, constructed as described, for closing the trap, when acting in combination with the spring, f, and bait lever, M, substantially as already specified.

Second, I claim the counterbalance chamber, H, constructed as described, and operating for the purpose of resetting the trap, as already set forth.

25,225.—H. K. Symmes, of Newton, Mass., for an Improvement in Gas Retorts:

I claim the arrangement of the removable flues, D, and valves, E, in combination with retorts of double length, substantially as, and for the purpose set forth.

[This invention consists in arranging the lid of a retort with a horizontal tube or flue in such a manner that the flue can easily be removed and cleaned independent from the retort, and it further consists in arranging it with a socket to fit to a flange which is cast or otherwise rigidly attached to the lower end of the stand pipe, so that the lid can be attached to the body of a retort, dispensing with the mouth-piece altogether; and that the gas emanating from the material in the front part of the retort has to pass back over the hotter portion of the coke in order to reach the opening in the flue through which it passes to the stand pipe, and the stand pipe is secured to the body of the retort so that its lower end is open when the door is taken off. If this arrangement be applied to retorts of double length the openings of the flues are closed by valves which are operated from the outside, and the two ends of the retorts are closed at different times, so that one end is hot while the other is charged, and by closing the flue on this end, the gas arising from the fresh charge can be forced to pass through the whole length of the retort to the flue on the opposite end.]

25,226.—Charles Taylor, of Little Falls, N. Y., for a Ticket-holder for Railroads, &c.:

I claim the eye, E, spring clasp, C, and spring hook, B, in combination with the link, D, or its equivalent, for the purpose described.

25,227.—Stephen R. Weeden, of Providence, R. I., for an Improvement in Preparation of Candle-wicks:

I claim a plaited or braided candle-wick, e, saturated with a solu-

tion of acetate of lead, or other substance, to aid combustion, and coated with a silicate, as, and for the purpose set forth.

[The object of this invention is to provide candles that are made of tallow and other stock that fuses or melts at a comparatively low temperature with a wick that will bend and have its end brought in contact with the air, and be consumed as the candle burns down, without guttering the candle, or causing it to burn badly. Candles made of stock that melts at a comparatively high temperature, such as wax, stearine, spe maceti, and the like, are provided with such wicks as do not melt or gutter the harder stock by their bending. This invention consists in the employment of a braided or plaited cotton-wick saturated with acetate of lead, and then coated with an alkaline silicate to make the wick stiff, so that it will not bend too readily, and at the same time bend at a sufficient height above the candle to consume but not to gutter the candle.]

25,228.—J. W. Wetmore, of Erie, Pa., for an Improvement in Railroad Chairs:

I claim the T lip, or jaw, (as at k, l, m, or k', l', m', n') notching the web of the rail, as at e, e, and through these notches, having the bottom of the jaw pass down, and riveted or keyed under the base, g, h.

25,229.—Ira Wisel, of Newbury, Minn., for an Improvement in Water Wheels:

I claim the peculiar form of the buckets, in combination with the rest of the wheel.

25,230.—F. L. Buel (assignor to C. G. Keeney), of Manchester, Conn., for an Improvement in Knitting Machines:

I claim attaching the mechanical device, above set forth, to a knitting machine, namely, by the thread guide, b, lever, c, e, and arm, i, substantially in the manner, and for the purpose described.

I also claim the arrangement of the lever, k, connections, m, n, frame, h, and arm, i, substantially as described, and for the purpose set forth.

25,231.—Jonas Hinkley (assignor to himself and Frederick A. Wildman), of Clarksfield, Ohio, for an Improvement in Sewing Machines:

I claim, first, The combination of the looper, H, and receiving spring hook, J, when arranged so as to operate in the manner and for the purpose set forth.

Second, The combination of the deflecting hook, G, the looper, H, and the receiving hook, J, essentially as specified.

Third, The lifting finger, K, or its equivalent, operating substantially as set forth.

Fourth, The combination of the lifting finger, K, with the looper, H, and receiving hook, J, substantially as described.

Fifth, The combination of the lifting finger, the deflecting hook, G, the looper, and the receiving hook, arranged and operating substantially as described.

Sixth, The combination of the arm, D5, link, D6, and lifting bar, D4, with the vibrating bar, D3, and feeding hand, D7, for the purpose described.

25,232.—Thomas R. Hopkins (assignor to himself and R. E. Robinson), of Petersburg, Va., for an Improvement in Cam Presses:

I claim operating a press follower or other part of a machine which is required to give a radial pressure, by means of the combined agency of two differentially toothed disks, D, D', which revolve at unequal speeds, two sets of reverse acting cams, h, g, and intermediate friction rollers, E, or their equivalents, substantially as described.

25,233.—William Linton (assignor to himself and John Jones), of Baltimore, Md., for an Improvement in Machinery for Making Clay Pipe:

I claim the two-sized permanent core or mandrel, in combination with the fixed die, A, and adjustable jaws, C, D, constructed, arranged, and operating in the manner described, for the purpose specified.

25,234.—E. T. Steen, of San Francisco, Cal., assignor to himself and B. S. Nichols, of Sacramento, Cal., for an Improvement in Quartz Mills:

I claim the employment of stampers, J, J', when the same are operated by means of steam cylinders, H, H', which communicate by the cross-passages, e, e', the change of steam being effected by valve pistons, J, J', operating on a working beam, L, and operated by the pistons, G, G', the whole being arranged and combined substantially in the manner described.

[This invention relates to that class of mills in which the stampers are operated by steam, and it consists in arranging two stampers in a double cylinder in such a manner that by the action of the upper ends of the stems of the stampers—which at the same time form steam pistons—as they strike against the valve pistons, the steam is changed and conducted to the cylinders by cross passages in such a manner that when the steam is admitted to one cylinder on the top and exhausts from the bottom, it enters the other at the bottom and exhausts at the top, and the change of steam is effected by means of two valve pistons which are connected by a rocking lever from which an arm extends down to the valve, so that when one of the main pistons rises and strikes against the valve piston so as to raise it, the valve is thrown the full distance, and the full power of the steam is admitted to the cylinders at once.]

25,235.—Bernard Louth (assignor to Jones & Louth), of Pittsburg, Pa., for an Improvement in the Manufacture of Iron:

I claim a new article of manufacture made by rolling iron or steel in a cold state for hardening and adding strength to it, without injury to its fiber, and at the same time reducing it in size, as set forth.

RE-ISSUES.

H. W. Collender, of New York City, for an Improvement in Billiard-table Cushions. Patented Dec. 8, 1857:

I claim composing cushions for billiard-tables, with a body or back of what is known as the soft compound of vulcanized india-rubber, or allied gum, in combination with a facing of india-rubber, or allied gum, rendered less compressible by fibrous matter or the equivalent thereof, substantially as described.

C. A. McEvoy, of Richmond, Va., for an Improvement in Railroad Station Indicators. Patented Nov. 20, 1855:

I claim presenting a movable signor symbol to passengers of a railroad car, so that both sides of said sign shall be visible, and utilized as annunciators by passing each sign in turn through an opening of the case, by the revolving of the drum to which the said signs are attached.

James Powell, of Cincinnati, Ohio, for an Improvement in Faucets. Patented March 22, 1859; re-issued July 5, 1859; again re-issued Aug. 23, 1859:

I claim, first, The valve-stem, H, formed with projecting flanges, J and S', when confined to a rectilinear path and operated by a cam or eccentric, which engages with it at two opposite points, in the manner and for the purpose set forth.

Second, The described arrangement and combination of the slotted head, I, pivot, e, socket, E, and cam, F, operating in the manner set forth to prevent lateral motion of the valve stem.

ADDITIONAL IMPROVEMENTS.

Moses Bales, of Big Plain, Ohio, for an Improvement in Mole Plows. Patented Feb. 15, 1859:

I claim the employment of the cap, d, in combination with the mole E, constructed and arranged substantially as and for the purposes set forth.

L. P. Harris, of Mansfield, Ohio, for an Improvement in Apparatus for Evaporating Saccharine Juices. Patented January 18, 1859:

I claim the application of partial transverse or oblique partitions to evaporating pans, for the purpose of preventing a continuous transverse channel, when the said partitions shall be arranged substantially in the manner as fully set forth and described.

DESIGNS.

James Bogle, of West Newton, Mass., assignor to himself and Daniel Bogle, of Dover, N. H., for Designs for Floor Oilcloth. (Two Cases.)

Henry Hebbard, of New York City, for Design for Spoon or Fork Handles:

Francis M. Strong and Thos. Ross, of Brandon, Vt., for Design for Scales.

NOTE.—In another column is an article complaining of the delay at the Patent Office in the examination of certain classes of inventions. Those remarks will not justly apply to the entire examining corps; and since the article was penned, our attention has been called to the preceding list of claims, in which we notice the issue of a number of patents in cases which have been before the Office for some time, so we are now in hopes that we shall not be under the necessity of again protesting in behalf of inventors at the delay under which too many of them have been obliged for months past to suffer. While a few of our clients are lamenting at the delay to which they are subjected, others write us by nearly every mail acknowledging the prompt and efficient manner in which their cases have been prosecuted; and among our own patrons, we recognize in the above short list of patents the names of TWENTY-SIX whose papers were prepared, and their applications conducted to a successful termination, through the Home Office of the SCIENTIFIC AMERICAN, exclusive of a number which were prepared at our Branch Office, corner F and Seventh streets, Washington.—Eps.

Hints to Inventors and Patentees.

INVENTORS who have made improvements upon which they desire to procure Letters Patent, will do well to bear in mind that the Proprietors of the SCIENTIFIC AMERICAN have had upwards of fourteen years' experience in the examination of inventions, and during this time have unquestionably had more cases brought under their immediate notice than any other Patent Agency in the United States. It would be absurd to suppose that this extended experience did not afford them unparalleled facilities for the rapid and successful prosecution of this department of professional business. Messrs. MUNN & Co. have made thousands of personal examinations at the United States Patent Office into the novelty of inventions, and are familiar with the law, the rules and the regulations that govern the examination of cases, and are having daily intercourse with the Honorable Commissioner of Patents and the Examiners. Messrs. MUNN & Co. have, during the last few years, successfully prosecuted hundreds of rejected cases, not for their own clients merely, but for agents of limited experience, whose offices are remote from that great storehouse of American genius, the United States Patent Office. They venture the assertion that, possessing such advantages and facilities as they do, no other Patent Agency in the United States can offer equal inducements to the worthy inventors of this country. In proof of the unparalleled amount of business transacted through the Scientific American Patent Agency, it is only necessary to refer to the letter of the Hon. Charles Mason, the late respected Commissioner of Patents, also to the letter of the Hon. Joseph Holt, now Postmaster-General, who also filled the office of Commissioner of Patents with great credit (both of these letters are published below), and to the still more significant fact that since the 1st of January last—a space of only eight months—we have secured SEVEN HUNDRED AND FORTY-SIX Letters Patent for inventors whose cases were prepared and prosecuted through the Scientific American Patent Office.

Notwithstanding the multiplicity of Patent Agents in the United States, the business of Messrs. MUNN & Co. is steadily on the increase. At no former period has their professional practice been so extensive as at present, which fact indicates that inventors throughout the country have the most perfect confidence in their integrity and mode of transacting this class of business. Their experience covers the most remarkable years of inventive progress; their knowledge could not be purchased by money, any more than an abstruse science could be acquired without laborious study and many experiments. They have facilities within their power by which the entire business of the United States Patent Office could be successfully carried on through their Agency alone. If cases are rejected, they are rigorously investigated. Appeals, interferences, and extensions are also conducted with the greatest care. In fact, every department of the business connected with the Patent Office receives their attention.

If an inventor wishes to procure patents in Great Britain, France, Belgium, Austria, Russia, Prussia, Spain, Holland, or any other foreign country where patent laws exist, Messrs. MUNN & Co., through their old established agencies in London, Paris, and Brussels, can attend to it with great dispatch, and will furnish all needful information upon application, either in person at their offices in New York and Washington, or by letter. Inventors should remember that MUNN & Co.'s office in Washington is not a mere "Agency," in which inventions are exposed to the view of outside parties, but it is a Branch Establishment managed by Messrs. MUNN & Co., and their confidential clerks.

Messrs. MUNN & Co. wish it to be distinctly understood that they neither buy nor sell patents. They regard it as inconsistent with a proper management of the interests and claims of inventors, to participate in the least apparent speculation in the rights of patentees. They would also advise patentees to be extremely cautious into whose hands they entrust the power to dispose of their inventions. Nearly fifteen years' observation has convinced us that the selling of patents cannot be conducted by the same parties who solicit them for others, without causing distrust.

Inventors who wish to personally consult with Messrs. MUNN & Co. can freely do so, and receive promptly all needful advice, free of charge, and their letters will be treated as confidential.

We commend to the perusal of all who are interested in the procurement of Letters Patent, the following testimonial letters from Hon. Judge Mason and Hon. Joseph Holt; the former is now a candidate

for the bench of the Supreme Court of the State of Iowa, and the latter is the Postmaster-General of the United States:

Messrs. MUNN & Co.—I take pleasure in stating that while I held the office of Commissioner of Patents, MORETHAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE came through your hands. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the Office, a marked degree of promptness, skill, and fidelity to the interests of your employers. Yours, very truly,

CHAS. MASON. Immediately after the appointment of Mr. Holt to the office of Postmaster-General of the United States, he addressed to us the following very gratifying testimonial:—

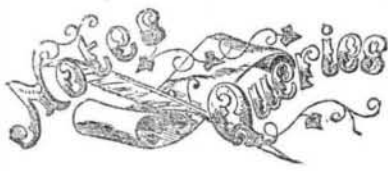
Messrs. MUNN & Co.—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and, I doubt not, justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements. Very respectfully, Your obedient servant, J. HOLT.

PRINCIPAL OFFICE—37 Park-row, New York. BRANCH OFFICE—Corner of F and Seventh-streets, Washington, D. C., opposite the United States Patent Office. FOREIGN OFFICES—London, 66 Chancery-lane; Paris, 29 Boulevard St. Martin; Brussels, 26 Rue des Eperonniers.

A PAMPHLET AND CIRCULAR OF ADVICE, "How to Procure American and Foreign Patents," sent free on application. All communications considered confidential, and should be addressed to

MUNN & CO., No. 37 Park-row, New York.

REVISED CASES, also applications for the Extension of Patents, receive special attention. In this class of cases, MUNN & CO. have had great success.



W. A. S., of Ark.—We regret we must decline publishing your second letter. It contains some thoughts of general interest to the public. There is, however, a mechanical obstacle to its publication. The handwriting is exceedingly minute (almost requiring a microscope for its perusal); it is also otherwise very illegible, and the matter is written on both sides of the paper. This last fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer and is almost always fatal to the author, unless the writing is exceedingly distinct, which is far from being the case in the present instance.

G. O. K., of Vt.—The best way for you to procure a second-hand steam-engine will be to advertise for it in the SCIENTIFIC AMERICAN. You will find our terms on another page.

W. P., of Ohio.—In the answer to you on page 126 of our present volume, the word "feet" should have read "inches." A tube 1.728 inches high and of one square inch area contains a cubic foot of water which weighs 62 1/2 pounds water, and exerts this amount of pressure on its base. A similar tube of 1.692 inches (14 feet) high contains about 61 pounds of water; a round tube one inch in diameter, and 178 feet high, contains nearly the same quantity of water, and exerts a like intense pressure on its base. As has been inferred with good judgment, "it is not easy to avoid errors sometimes taking place, in answering so many correspondents, and using so many mixed terms and quantities."

W. M. F., of Pa.—Wagon brakes have been patented to accomplish what you desire. If you have anything new in this department of invention you are entitled to a patent for it. Send us a description of it for examination.

C. R., of Tenn.—If some nitrate of silver is added to printers' ink, it will make indelible stencil ink.

J. L. M., of Ind.—On page 52 of the present volume of the SCIENTIFIC AMERICAN, you will find instructions for plating on iron. We know of no such book as you describe suitable to every mechanical pursuit.

E. H. B., of Mass.—You can make black impression paper with glycerine and lampblack, also with fresh butter and lampblack; dry as well as possible after application.

T. McC., of N. Y.—You can easily calculate the power of a hydraulic press by multiplying the pressure on the square inch into the water area of the ram in square inches, and by the speed, in feet, per minute of the piston. As your ram has an area of 14.75 square inches and a pressure of from 1 to 30 lbs. on the square inch, it moves at the rate of two feet per minute its power will be one-sixth of a horse—5126 lbs. lifted one foot in one minute. Consult a work on horology about pendulums.

E. B., of S. C.—Your idea of placing a perforated diaphragm at the bottom of the steam-chamber to prevent water being carried up into it is an old one, and so is the surface well for collecting and conveying away the foam. We do not very well understand your bulk-head, owing to the imperfection of your drawing, but have seen something very much like it. We have sent to your address one of our pamphlets of information.

R. D., of C. W.—We thank you for proposing to get us up a club of subscribers. We are now electrotyping our numbers each week, and can therefore supply back numbers at all times. Plaster-of-Paris can hold boiling water without being much affected by it. A cement of plaster-of-Paris and fine white sand, in equal parts, mixed up with white lead paint, will answer well, we believe, for stopping the leaks in your tank.

D. P. of Pa.—We do not know of any substance suitable for cleaning fly specks from the feathers of stuffed birds. You had better consult some taxidermist in Philadelphia.

H. M. S., of Mich.—The coal of a wood fire burned in the open air is different from charcoal burned in a pit. The former contains hydrogen, the latter none. Hydraulic cement sets in a very few minutes after it is laid. Platinum is the most expansive metal by heat, and wrought expands more than cast iron. Allow dull files to lay in diluted sulphuric acid until they are bit deep enough. We cannot specify the time that is required.

J. R. B., of Ind.—We cannot think that a few shot would prevent molasses running out of a barrel without the barrel itself was very tight. Lyell's "Manual and Elements of Geology," published by D. Appleton & Co., of this city, will suit you best.

C. L. H., of Vt.—If you take the trouble to figure out the cost of figuring-making, as stated in our article, you will see that our costing is not so tall as you suppose.

J. M. C., of Iowa.—Boiled linseed oil will keep polished tools from rusting if it is allowed to dry on them. Common sperm oil will prevent them from rusting for a short period. A coat of copal varnish is frequently applied to polished tools exposed to the weather.

H. W. W., of Ill.—A more regular motion is produced by cutting off the steam before the end of the stroke than in carrying full pressure the whole length.

W. S. G., of Ill.—We are not acquainted with the composition of the cement to which you refer. A mixture of India-rubber and shell-lac varnish makes a very adhesive leather cement. A strong solution of common isinglass, with a little diluted alcohol added to it, makes an excellent cement for leather.

M. B., of Mass.—You will find information on the art of lithography by reference to Ure's dictionary. There is no distinction on this subject.

B. C., of Pa.—Superheated steam is gradually coming into more extended use in England, but is making no progress in this country. It has been found most advantageous not to use it too highly heated, as it uses up too much lubricating material when very highly dried.

M. H., of Pa.—We refer you to articles on pages 169 and 204 of Vol. XIV. of the SCIENTIFIC AMERICAN; they contain full information on the subject of balancing saws.

J. O. M., of N. Y.—So far as we know, your improvement in casting cannon of the two metals specified in your letter is new and useful; and it appears to us that, by casting the most fractious on the top of the least fractious metal, as proposed, you will accomplish the desired result.

W. J. P., of Vt.—The hone side of a razor strap is made with fine emery laid on with glue; the polishing side is made of calcined tin or colcothar, but if you cannot get these use black-lead and a little grease. The finishing side is simply buff leather.

C. M. E., of Pa.—There is no patent in existence which covers the use of compressed air as a motor. Any person may use compressed air in the United States for moving cars, &c. it is public property.

C. A. F., of Mo.—The coating for iron to which you refer is silicate of soda, and will not answer for iron boilers to prevent corrosion. Nespratt's Chemistry is sold by Russell & Bros., 290 Broadway, New York. Your subscription expires Jan. 1.

E. B., of S. C.—You omitted to sign your name to your letter of inquiry about the double boat, but there being evidence of good faith on your part we reply that it is an old idea, and we cannot advise you to apply for a patent on it. Your money would be thrown away upon the government and the agent.

Turner, Maine.—A correspondent from this place seeks information from us, and is disappointed, doubtless, in not receiving an answer. The reason is he forgot to sign his name to his letter.

J. H. R., of Mass.—By all means have your well covered, as it will then be protected from dust and dirt.

W. B. G., of N. Y.—Under some conditions, we have no doubt but that electro-magnetic engines would be most suitable, especially for driving light machinery, such as sewing machines, &c.

J. H. L., of Ind.—The spirit obtained from grain is from that part which may be converted into starch, and for this reason starch manufacturers are exceedingly careful to prevent vinous fermentation in their vats. A considerable amount of spirit may be obtained from starch, but at present we cannot give you the exact quantity. The Postmaster ordered your paper to be stopped as uncalled for.

P. F. K., of Ga.—We do not know where you can get your old tea-trays japanned, but we will tell you how to do it yourself. First clean them thoroughly with soap and water and a little rotten stone; then dry them by wiping and exposure at the fire. Now, get some good copal varnish, mix with it some bronze powder, and apply with a brush to the denuded parts. After which set the tea-tray in an oven at a heat of 212° or 200° until the varnish is dry. Two coats will make it equal to new.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Aug. 26, 1859:—

- F. S. P., of N. Y., \$35; J. A. S., of Mo., \$30; L. M., of Wis., \$7; A. C. P., of N. Y., \$30; C. & L., of N. C., \$30; S. & La. R., of Ind., \$25; W. & W. Mfg Co., of N. Y., \$525; L. W., of Mich., \$1; I. N. P., of Ind., \$35; L. E., of Cal., \$100; C. E. R., of N. Y., \$25; J. W. & H. A. G., of Pa., \$30; J. S., of Maine, \$30; J. B., of N. Y., \$35; H. K. S., of Mass., \$25; W. C. P., of Ind., \$5; N. S., of Minn. Ter., \$30; G. G. N., of Mass., \$30; C. & C., of Pa., \$30; K. & M., of Vt., \$10; G. E. S., of Ill., \$25; T. & J., of Pa., \$25; A. P., of N. Y., \$55; P. C. F., of N. Y., \$25; H. P. L., of Conn., \$25; I. O., of Texas, \$10; I. P., of N. Y., \$30; L. R. F., of Ga., \$25; J. P. A., of Ga., \$25; J. W. D., of Mass., \$30; J. S. C., of Pa., \$30; L. G. K., of N. Y., \$30; C. W. W., of N. Y., \$30; S. R. McD., of Del., \$30; A. L. F., of N. Y., \$25; J. S. L., of Pa., \$25; T. P., of N. Y., \$40; J. A., of N. J., \$50; B. & C., of N. Y., \$25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Aug. 26, 1859:—

- H. K. S., of Mass.; E. D., of La.; C. F. R., of N. Y.; L. M., of Wis.; C. L. R., of Wis.; P. C. F., of N. Y.; A. P., of N. Y.; L. R. F., of Ga.; A. L. F., of N. Y.; G. W. R. B., of Lu.; W. P. C., of Ind.; J. W., of S. C.; J. P. A., of Ga.; S. & La. R., of Ind.; F. S. R., of N. Y.; H. P. J., of Conn.; L. E., of Cal.; I. N. P., of Ind.; G. E. S., of Ill.; T. P., of N. Y.; J. B. L., of Pa.; J. A., of N. J. (two cases); B. & C., of N. Y.

History of the Scientific American and Important Information to Patentees.

We have printed a supplementary edition of the SCIENTIFIC AMERICAN, in which there is a history of its rise and progress, with illustrations of the building, externally and internally, showing the spacious rooms in which our immense patent business is conducted, and with life-like representations of the artists, engineers and specification writers at their daily labors. The same paper contains information on the many intricate points arising in patent law and practice, and comprises the best popular treatise on the subject ever published; it should be in the hands of all who are interested either in procuring, managing or using patented inventions. The legal information contained in this paper is the result of FOURTEEN YEARS' experience as patent solicitors, and it cannot be found in any other treatise on patent law. It also contains information in regard to Foreign Patents and Extensions. It is published in octavo form, sixteen pages, and mailed upon receipt of two three-cent stamps. Address: MUNN & Co., publishers of the SCIENTIFIC AMERICAN, New York City.

PORTABLE RAILROAD TRACK AND METAL BAR CUTTER.

For cutting medium and large sized bars with or without previously heating. Patented Sept. 21, 1858. A very desirable article for Machine Shops, Railroad Companies, Iron Stores, &c. Its advantages are, first, A stout boy can cut off a cold bar of iron, of any size, to four inches, to any desired exact length, in less time than would be required for heating. Second, It is portable, weighing only about 112 pounds, and can be used in any part of a shop or railroad. Third, The end cut is left smooth for centering, &c. We also manufacture a similar machine, geared and adapted to the use of power, for machine, engine shops, &c. For particulars address: GRESSON & HUBBARD, 10 1 N. W. corner 12th and Noble-sts., Philadelphia, Pa.

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