



[Reported Officially for the Scientific American.]
LIST OF PATENT CLAIMS
 Issued from the United States Patent Office
 FOR THE WEEK ENDING MAY 12, 1856.

RIFLE FOR GOLD WASHING—O. G. Auld and J. S. Whiting, of Sackville, Cal. : We claim, in rifle boxes, the use of circular cavities or receptacles, constructed in the manner shown, having the neck of one diameter and the lower portion of an enlarged diameter, so as to operate in the manner specified.

LOCKS—W. H. Atkins, of Berkshire, N. Y. : I claim so arranging a series of revolving slotted disks, c, upon a fixed neck or stud, D, that each in turn shall be made the means of adjusting the slot of the other when operated upon by another disk, f, or its equivalent, secured to a revolving shaft, F, and index, G, for the purposes described.

Second, I claim altering the respective numbers of two or all the disks, c, by the simple change of an adjustable clutch from one disk to another, substantially as and for the purposes described.

Third, I claim the method described of discovering the proper numbers to open the lock, substantially as specified.

CARTRIDGE OPENER—Jesse S. Butterfield and Simon Marshall, of Philadelphia, Pa. : We claim the combination of a steady pin, thumb piece, toothed saw and spring, or their equivalents attached to the upper band of the gun, arranged and operated in the manner and for the purpose substantially as set forth.

FARM GATE—C. N. Cole, of Pleasant Valley, N. Y. : I claim the arrangement and combination of the parts forming a self-acting or balance gate, as fully set forth.

WARDROBE TRUNKS—Wm. J. McCracken, of Rochester, N. Y. : I claim the construction and arrangement of the supporting strips, l, l, in the portion of the trunk, a, for uniting the sliding portion of the wardrobe, E, to the part, a, of the trunk, as and for the purposes mentioned.

PLANING MACHINE—C. B. Morse, of Rhinebeck, N. Y. : I do not limit myself to the precise mechanical devices set forth, nor to the exact combination and arrangement of the same, so long as the object is obtained without changing the principle of operation.

I claim, first, the combination of the following mechanical elements: planing cylinder, C, line plate, F, beds or rests, D E, and weighted levers, G, or their equivalents, when arranged and operated by means of a board to an equal thickness without bending the same.

Second, making the edge, l, of the bed, D, a cutting instrument, and giving said bed, or rest, a longitudinal movement, simultaneous with the swinging back or forward of the cylinder, so that the edges of the cutters on the cylinder will preserve the same relative position with respect to the cutting edge of the bed, in all positions which the said cylinder may occupy.

Third, giving the line plate, D, a tilting motion about its own axis, to present its flat surface to the board under all circumstances, substantially as and for the purposes set forth.

Fourth, maintaining the pressure on the middle of the board, irrespective of the portion of the cutters to which the board is subjected, by means of the weighted levers, G, operating substantially as set forth.

FILE CUTTING MACHINE—James L. Norton, of Alum Bank, Pa. : I claim, first, hanging the worm wheel shaft in movable bearings, so that the worm may be disengaged from the feeding rack, without stopping its motion, to do so, for the purpose of allowing the carriage to run back, and be set for the next series of nicks, substantially as set forth.

I also claim, in combination with the movable shaft, the adjustable protection, m, and levers, S T, for first holding and then disengaging the shaft to admit of its swinging, substantially as set forth.

I also claim, in combination with the sliding carriage, the projection, t, and adjustable former, Y, for keeping the blank at a uniform distance from the nicking tool, for the purpose of equalizing the force of the blow, notwithstanding the taper of the blank, as set forth.

I also claim the use of the spaces, 1, 2, 3, for regulating the force of the spring upon the nicking tool, as set forth.

WATER WHEELS—G. W. Pitcock, J. B. Scott, and Galen Richmond, of Troy, N. Y. : We claim the combination bucket formed by the union of two separate buckets whose lines are arranged substantially as described, so as to form a hollow trough through which the water passes in operating the wheel.

We claim the mechanical arrangement and application of the gearing to the wheels and shaft within the upper section of the upper wheel, in combination with the cap which it covers, substantially as set forth.

BROOMS—T. H. Powers, of Wyoconia, Wis. : The mode of securing the broom by means of the flattened cone and T follower, I do not claim.

But I claim the frame composed of links and rods which surround the broom and hold it in connection with the cone, as described.

CATTLE PUMP—T. H. Powers, of Wyoconia, Wis. : I do not claim operating the platform and raising water by the weight of the cattle.

I claim the specific manner described, whereby the platform may be placed at a distance from the well, substantially as shown and set forth.

HEATING BUILDINGS BY STEAM—A. S. Pelton, of Clinton, Conn. : I claim the construction of the apparatus with an annular chamber D around the fire pot, and constituting a portion of the channel from the boiler to the radiator for warming the air in the radiators previous to the generation of steam, as and for the purposes set forth.

The employment of this chamber as a mere super-heater of the steam not being claimed as my invention.

R. R. SNOW PLOW—Saml. Richards, of Philadelphia, Pa. : I claim the construction of a snow clearer, of a simple rising inclined plane, A B, in combination with the curved pieces at F, so arranged that the snow shall be gradually raised at or near to the surface of the surrounding snow, and then discharged over, on the top of it, substantially as described.

Second, I claim the employment of a series of pipes or other heating apparatus in the interior of a snow clearer, for the purpose of diminishing the adhesion of the snow to the upper surface of the clearer.

MAKING BRASS KETTLES—F. J. Seymour, of Waterbury, Conn. : I claim forming brass kettles or similar articles from discs of metal by the successive operations as set forth, commencing at the bottom and smaller part of said kettle, and shaping the same at once, and then gradually forming a drawing in the sides by means of dies substantially in the manner and for the purposes specified.

CHAIRS FOR SHIPS' CABINS—Wm. Thomas, of Hingham, Mass. : I do not claim suspending or attaching the chair to a base or frame, so that it will remain stationary, while the base or frame is moved or rocked, irrespective of the peculiar manner of attaching or suspending the same.

But I claim suspending or attaching the chair, D, to the curved bar, C, which is connected to the base, A, by means of the arms, F F G, and curved bar, E, arranged substantially as shown and described, for the purpose specified.

FIRE AND ESCAPE LADDER—John Van Amringe, of Cincinnati, Ohio. : I claim the combination of the ladder, 2, frame, 7, and guy chains, 23, as attached to the frame work, 17, 17, and these, in combination with the pulley, 3, and rope, 24, or their equivalents, for elevating the ladder and frame, substantially as and for the purposes set forth.

I also claim the arrangement of the guiding shafts, 21, arranged with the two sections of the framing, 17, and the windlass, 1, and the cord connected therewith, and to one of said sections, 17, for drawing the two sections apart and together, for purposes mentioned.

OVENS—John Starrett and N. J. Wier, of Lowell, Mass. We claim, first, the distributor plate, D, constructed and arranged substantially as described.

Second, the combination of the distributor plate, D, the chamber, C, with its net work covering, and the exterior cases, A and B, substantially as set forth.

Third, the combination of the plates or registers, H H, with the net work covering of the chamber, C, for the purpose of varying the surface of combustion to suit the various utensils to be heated, d, substantially as set forth.

PREPARING DOUGH FOR MOLDING CRACKERS—F. C. Treadwell, Jr., of New York City : I claim the use of the cutters in combination with the throat, for the purpose of making a star cut, when used in combination with the grooved rollers, substantially as described.

FURNACE FOR HEATING SOLDERING IRONS—James Wilson, of Brandywine, Del. : I claim constructing a furnace and providing it with any desirable number of cells, E, in the manner described, for the purpose of heating solder irons with anthracite or other coal, as set forth.

HORSE SHOE—N. B. Carpenter, of New York City : I do not claim any particular construction or form of a horse shoe, with a rim or flange, although the latter is in fact, inseparably connected with my invention, yet I am aware that flanges or rims detachable have been used heretofore in this and other countries.

Neither do I claim a heel car or round shoe, separately considered, as that too has been used heretofore.

But I claim a horse shoe having a branch bar attached to each heel bar, o, the shoe, extending in two directions, in the same time lapping and fitting one to the other, with corresponding apertures through each, for the insertion of a pin or screw, for the purpose and in the manner set forth.

SURGICAL SPLINT—John Clough and D. M. Cummings of Enfield, N. H. : We claim, first, the bed composed of strips of cotton cloth, h h h, &c., or other suitable material passing through the slots, i, i, &c., in the leg side pieces, A, arranged and confined as described, for the uses and purposes set forth.

Second, the foot frame and bed, composed of the oblique standards, J, the bow, P, and the strip of cloth, h h, other suitable material, passing through the slots, i, i, attached to and adjustable upon the side leg pieces, A, and for the purposes and uses described.

Third, the device for extending the leg by the employment of the lower extension screws, e, e, the traversing nuts, j, and their guides, k, with their connecting straps, x, in combination with the cross bars, J, the leg side pieces, A, and the femur side pieces, F, F, the femur splint, E, the cushions, G and H, the bolster, L, the bandages, U and O, with their connecting straps and the brass straps, V, constructed and operating in the form and manner described.

Fourth, the device for extending the thigh by the employment of the upper extension screws, r, in combination with the femur side pieces, F, by the leg side pieces, A, the femur splint, E, the cushions, G and H, the bolster, L, the bandages, U and O, with their connecting straps, and the brass straps, V, constructed and operating in the form and manner described.

Fifth, the device for flexing and extending the limb by the employment of the elevating screw and its supports, y, y, in combination with the lever, z, the leg side pieces, F, the femur side pieces, F, the supports, m, m, and o, o, the braces, t, t, the elongating arbor, T, the concave flooring, N, and the bed pieces, B C and D, constructed and operating in form and manner described.

Sixth, the elongating arbor, T, constructed and operating in form and manner as described.

Seventh, the device for spreading and contracting the splint, by the means of the elongated tenon, A, passing through corresponding mortises in the lower ends of the bed pieces, B C and D, in the double elongated tenons, j, firmly fixed in the upper ends of the bed pieces, B C and D, and passing through a corresponding mortise in the upper end of the bed piece, C, and the confining pin, k, k, in combination with the bed pieces, B C and D, the supports, m, m, and o, o, the femur side pieces, F, F, the femur splint, E, the cross bars, J, and K, constructed and operating in form and manner, as described.

CONTINUOUS SHEET METAL LAPPING SURFACE—J. B. Cornell, of New York City : I claim a continuous sheet metal lap surface formed of united strips or sections of the shape, substantially as set forth.

CUTTING GREEN CORN FROM THE COBS—Wm. B. Coates, of Philadelphia, Pa. : I claim the splines, G, with any convenient number of prongs, e, in combination with the yielding cutters, F G, the whole being arranged and constructed substantially in the manner and for the purpose set forth.

BRIDLE BITS—B. J. Day, of Gibson Co., Ind. : I do not claim the attaching of a gum elastic strap, or other elastic material, to the upper ring of the common curb and lever bit by one end, the other extending a few inches out and attached to the rein, which itself is attached to the lower ring; nor do I claim straight, curved and spiral springs.

I claim the screw, h, the spring and folding limb, e, applied and operating substantially in the manner described, by which the common curb, and lever bit, and the non-curb and lever bit can be changed at pleasure, from one to the other.

SELF-COUNTING MEASURE—Elisha Dexter, of Holmes' Hole, Mass. : I claim applying the point which marks the extremity of the yard or standard of measure with the pressure knob, A, and connecting it with the pointer, E, by means of the escapement lever, F, and the rack, C, as a means of pointing out the number of yards measured upon the index, as specified.

TREBLING SINGLE THREAD—Lucius Dimock, of Hebron, Conn., and Ira Dimock, of Mansfield, Conn. : We claim, first, the rock shaft, G, with a hollow conducting arm, g, operating substantially as described to conduct each strand thread from its bobbin to the hitching pin or its equivalent and to effect the enchainment of the loops.

Second, the attachment of the hitching pin, h, to the arm or arms, h, of a rock shaft which is operated substantially as described, for the purpose of forming and disengaging the loops.

Third, the arrangement and combination of the rock shaft, G, having a hollow conducting arm or arms, g, its traveling carriage, F, carrying the rock shaft, G, and its vibrating hitching arms, h, the strand bobbins, B B, and the trebled thread spools, C C, the whole operating substantially as set forth.

DRESSING MILL STONES—S. W. Draper, of South Dedham, Mass., and Reuben M. Draper, of Roxborough, Mass. : I claim the employment of a secondary lever, m, attached to the sliding piece, A, or arranged in any equivalent manner to cross the face of the cam on one side of the center, and transmit motion therefrom to an arm, c', on the pick shaft, whereby in all changes of the relative positions of the pick shaft and the cam, the pick is operated by the cam in such a manner as to give an uniform force to the blow, as set forth.

BOW FOR VIOLINS—S. F. French, of Franklin, Vt. : I claim the attachment of a portion, d, d, of the hair of the bow to a movable pin, f, or its equivalent, operating as described, to separate the said portion, d, d, of the hair from the main body of hair in the bow, or to unite it therewith, at the pleasure of the player.

SELF-RAKING ATTACHMENTS TO HARVESTERS—Hugh Foisman, of Enon, O. : I claim the combination of the wheel, D, adjustable crank, E, slotted rake, F, and guides or ways, g, m, for giving the rake its traversing and rising and falling motion, substantially as described.

HAT-FELTING MACHINES—A. C. Fuller, of Danbury, Conn. : I do not claim a vibrating rubber bed in combination with rollers having positive and reverse action.

But I claim the polygonal drum, B, constructed, arranged, and operated substantially in the manner and for the purposes described.

HAND SAW—Jackson Gorham, of Bairdstown, Ga. : I claim the construction of a saw so as to answer the purposes of both saw and square in one and the same instrument, substantially as described.

LOCK JOINT FOR R. R. BARS—James R. Hilliard, of Paterson, N. J. : I claim, in joining the sections of rail for railroad heads the combination of the several laps, substantially such as described, and consisting of, first, the lapping each against the other, along a central longitudinal vertical plane, or nearly so; second, lapping each on to and under the other on planes parallel, or nearly so, with the longitudinal axis of the rail; and third, making the surfaces where each laps on another, and the other, inclining downwards from each side of the rail towards the central longitudinal vertical plane of division of the joints, substantially as and for the purpose specified.

HUSKING THIMBLE—J. H. Gould, of Smith, O. : I claim the device shown, resembling the end of a human finger, and formed by providing a thimble, A, very similar in construction to a sewing thimble, and welding or otherwise forming an artificial finger nail, B, on the upper side of its forward extremity, substantially as and for the purpose set forth.

WINNOWER MILLS—Horace N. Goodrich, of Aurora, Ill. : I claim the arrangement of the screens, A B C D, above the ordinary screens and shoes of a common fanning mill, and furnishing a regulated blast to said series of screens, either from the main fan wheel, or any auxiliary wheel near thereto, for the purpose of comprising within one machine or frame, the facilities for cleaning all kinds of grain or seeds, and separating them from each other and from the impurities mixed with them, as set forth.

PUNCHING MACHINE—Edward Heath, of Fowlerstown, N. Y. : I claim placing a series of punches, L, of varying sizes and forms in a flanged rotating cylinder, J, arranged relatively with the plunger rod, l, as shown, so that by rotating the cylinder either of the punches may be brought in line and connected with the plunger rod, substantially as described.

PORT MONNAIES AND POCKET BOOKS—James Hewson, of Newark, N. J. : I claim the combination of the catch, b, or swivel, e, and spring, A, with the ring, d, attached to the port monnaie or pocket book frame, in the manner and for the purpose described.

MANUFACTURING WASHBOARD—J. B. Holmes, of Cincinnati, O. : I claim the arrangement of the cams, 3 3 and 6, spring, 4, and ring, 5, for operating the incising knife or cutter, 7, as mentioned.

I also claim the arrangement of the guide piece, 12, and gauge pieces, 22 22, for purposes mentioned.

COMPOUND RAIL FOR RAILROADS—Wm. J. Holman, of Indianapolis, Ind. : I claim the extension at sundry points throughout its length or lengths by waved or irregular formations of the stem or flange, a, of the cap bar of the tripartite rail below, and through or beyond the bottom surface of the two side or chair rails, and in combination and connection therewith by key or wedge passing through the one rail only from below, as and for the purposes set forth.

SECURING KNIVES TO CUTTER HEADS—Wm. D. Hooker, of Dedham, Mass. : I do not claim operating a wedge by a screw, to have the purpose of comprising within one cutter head, A, the shanks, a, of the cutters, the wedge, D, the screw rod, E, the whole in combination, arranged substantially as described and for the purpose specified.

INVALID CHAIRS—Daniel S. James, of New Market, Va. : I claim the construction of invalid chairs of a loosely jointed frame, in combination with a brace, f, operating substantially as and for the purposes specified.

MOWING MACHINES—C. M. Lufkin, of Ackworth, N. H. : I claim the employment or use of the endless apron, J, in connection with the rotating cutters, D D', arranged as shown for the purpose specified.

FASTENING BITS—Horace Lettington, of Norwich, N. Y. : I claim the rod or arbor, D, passing transversely through the stock or bit, A, and a portion of the socket, J, in the rod or arbor having a notch, d, in one side, and the shank, b, of the notch, C, also having a notch, e, in one side, and the rod having a bolt, E, pressing against it, the parts being arranged as shown for the purpose specified.

PORTABLE CHAIRS—Zebulon Lyford, of Lowell, Mass. : I claim my self-operating, folding, portable chair, or its mechanical equivalent, constructed, arranged and operated substantially in the manner and for the purposes set forth.

WORKING SHEET METAL—Sylvester B. Miller and Ezra W. Whitehead, of Newark, N. J. : We do not claim a rotating die or countersink for making depressions by cutting and removing the material, as the means for doing so are well known, and are for another purpose.

We claim the employment of the die, E, when constructed as described, and used in connection with the lower die, N, for extending or stretching thin metal plate by pressure and rotary motion combined.

BRICK MACHINES—Edmund Kingsland, of New York City : I claim, first, the oscillating finisher, F, provided with a pair of fixed and a pair of movable bearings, operating as described, in combination with a mold cylinder, containing flat faced molds, for the purpose of finishing the bricks with flat outer surfaces, as set forth.

Second, the employment, for varying the depth, of all the molds simultaneously to vary the thickness of the bricks of the two cones, H H, the right and left-handed screw shaft, C, and the nuts, g, all applied to the mold cylinder shaft, and operating substantially as described, in combination with the inclined edges, e, e, on the piston bars, G G.

BLOW PIPES—Oliver S. Lawson, of Crestline, O. : I claim in combination with the adjustable valve, l, in the cylinder, the adjustable, E, in the tube, D, so that a regulated blast may be had whether sharp or mild, substantially in the manner and for the purpose set forth.

GAS REGULATORS—Henry Waterman, of Hudson, N. Y. : I claim the construction of the valve of the gas regulator in the annular or ring formed with two faces or leads of different diameter, one at the outer and one at the inner periphery or edge, so as to produce greater circumferential capacity or opening for discharge of gas, with a limited area of valve relatively working in a manner and for the purpose set forth.

SEEDING MACHINES—Hosea Willard, of Vergennes, Vt. : I claim the rotating cylindrical frames or screens, J, in combination with the inclined board or plate, K, with pivoted cleets, K', attached for the purpose of distributing the seed, and the cylinders or rollers, G G, having teeth, c, or shares, d, attached to their peripheries, substantially as described for the purpose specified.

OVENS FOR COOKING RANGES—Jacob S. Williams, of St. Louis, Mo. : I claim the employment of removable ovens provided with unconnected compartments of various sizes and forms, and arranged so that said ovens may be substituted one for another, or be inserted in different positions, for the purpose of subjecting their compartments to different intensities of heat, according to the nature of the hands to be cooked therein, substantially as described.

LOCKS—Joseph M. Lippincott, of Pittsburg, Pa. : I claim the combination of the spring bolt, l, tumblers, t, t, and fence, h, constructed and arranged in the manner and for the purposes described, together with the combination therewith of the locking bolt, i, and latch bolt, p, so that the lock may be readily opened from inside without a key, and yet requiring a key to open it from the outside, substantially as set forth.

ROLLING FILE BLANKS—James N. Aspinwall, (assignor to himself and Henry B. Staff), of Newark, N. J. : I claim the use of the rollers, A B, as described, for forming file blanks, when said rollers are operated and adjusted by the slide, K, cam, I, and springs, d, as set forth.

MOWING MACHINES—Jonathan F. Barrett, (assignor to Abram B. and Jonathan R. Barrett), of North Granville, N. Y. : I make no claim to the rotary cutters nor to the gearing driving them.

But I claim the combination of guard plate, P, covering plate, m, and saw connection to pinion, whereby the driving mechanism is effectually excluded from foreign matter substantially as set forth.

CUTTER HEAD FOR LATHES—Milton Roberts, (assignor to himself and Isaac N. Felch), of Belfast, Me. : I claim the eccentric insertion of the tenon, E, of the cutter head, B, in the mandrel, A, as represented, to produce an eccentric motion in throwing out the edge of the cutter, and performing as set forth.

FRAMES FOR TRAVELING BAGS AND MAIL POWCHES—Samuel D. Quimby, of Winchester, Mass., (assignor to Edward A. Locke, of Boston, Mass.) : I claim the improved mouth frame or combination of two folding side flaps, A and B, and two hinge extenders and gore closers, C, D, arranged, connected, and made to operate together, substantially in the manner and for the purpose as stated.

RE-ISSUE.

OIL GROUND TO RECEIVE PHOTOGRAPHIC COMPRESSIONS—Joel H. Tatum, of Baltimore, Md. Patent dated Aug. 15, 1855. : I claim the mode of preparing and rendering oil (or oleaginous) bodies, grounds or surfaces impressible or sensitive to the photographic art, by the temporary destruction or chemical change of the oil or oleaginous matter on the immediate surface only, by the use of

spirits of wine and alkaline solution, or their equivalents, and after fixing the impressions by the use of hydro sulphate of soda and the use of dilute acid, by which last application the alkalis are neutralized, and the oil restored with the impression permanent upon the surface.

Disclaiming everything heretofore known in the production of photographic pictures upon paper or any un-oiled body or surface.

DESIGNS.

PIANOFORTE LEGS—Isaac Engel, of Boston, Mass.

COOKING STOVES—Anthony J. Gallaher, of Philadelphia, Pa.

PARLOR STOVES—N. S. Vedder and Wm. L. Sanderson, of Troy, N. Y., assignors to N. S. Vedder, aforesaid.

PLATES OF COOKING STOVES—W. L. Sanderson and N. S. Vedder, (assignors to Sanders, Wolfe & Warren), of Troy, N. Y.

OVEN AND STOVE DOORS—Joseph A. Read, (assignor to John H. Cahill), of Philadelphia, Pa.

Recent Foreign Inventions.

Oil for Painting—P. Gontier, of Paris, has taken out a patent for treating poppy, linseed, and other oil for mixing with paint, by adding to these oils, when slightly heated in a caldron over a fire, sulphuric acid, resin, manganese, and litharge. One pound of oil of vitriol and one pound of manganese are sufficient for ten gallons of oil, and ten pounds of resin. They must be added cautiously, and stirred well for three or four hours.

Iron Tubular Ships—James Hodgson, of Liverpool, Eng., is now building iron screw steamships on a principle for which he has taken out a patent. These vessels are constructed without frames, side-frames, floorings, &c., in dispensing with which it was found necessary to increase the strength of the plating for the sides; but to double the strength it is not necessary to double the thickness of the plate, as the strength of the materials increases as the square of the thickness. The strength is further increased by a bulkhead being placed in the widest part of the ship, amidships, and by other bulkheads placed midway between the midship bulkhead and the bow and stern, and again by the interposition of stiffening plates, so as to spread the strain along the vessel's side from one to four feet from the bulkhead. As the sides of the ship, under ordinary circumstances, are much weakened by the holes cut for the bulkheads to be secured to the patentee extends the butting piece, usually placed over the joint, along the line or strake of plates, and spreads the rivets over a wider area. By the construction of a ship in this manner—in fact, on the principle of a huge steam-boiler or tube, with rounded top and sides, capable of sustaining great pressure—the usual appendages, knees, angle-iron plates, and rivets, for gunwale fastenings, are entirely dispensed with.

Manufacture of Steel—The correspondent of the London *Mining Journal* in Rhenish Prussia, expresses surprise that some of the capitalists in England do not turn their attention to puddling pig-steel, which in Prussia is making rapid strides. Puddling both iron and steel with gas is very general in Prussia. In some instances the gas is obtained from the blast furnace, but in most cases it is generated in small ovens, attached to each furnace. Dry wood, charcoal, lignite, and turf are employed as fuel. At one of the iron works where wood is used for gas the charges are 8 cwts. of white mottled iron each furnace, bringing out 20 to 21 tons of puddled bars per week, at a loss of only 4 or 5 per cent., and with a consumption of 4 cubic feet of timber per cwt. of puddled bars. At another works they charge with 10 cwts. of gray pig, and bring out the charge in 2 1-2 hours, with 8-70 cubic feet of wood per cwt. of puddled bars. A large rolling-mill is arranged to puddle steel with gas from lignite, to be converted into railway wheels and tires, for which there is an increasing demand. These are forged under the hammer to nearly the required form, and then passed through a pair of rolls, to finish them.

The Niagara Frigate.

The coppering of this noble vessel was finished on the 12th inst., and she was taken out of the dry dock the succeeding day. During the time she was getting on her sheathing, at the Navy Yard, the *Adriatic*, belonging to the Collins line, was partly planked, launched, sheathed, had her boilers, bed plate, and other machinery put in, and will no doubt be ready for sea half a year before the *Niagara*, although the latter vessel was launched some weeks earlier. Government jobs are slowly executed.