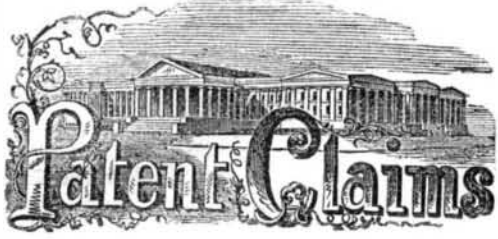


that such prints are, in a certain sense, double pictures.

The porcelain glass used in photography is, we believe, composed of ordinary window glass rendered opaque and milk-white by the mixture with the molten metal of oxide of tin and arsenic. We do not know the exact formula, and we wish that some of our readers would send it to us for publication.



ISSUED FROM THE U. S. PATENT OFFICE FOR THE WEEK ENDING OCT. 16, 1866.

Reported Officially for the Scientific American.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying 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.

58,746.—TANK FOR CONTAINING AND TRANSPORTING PETROLEUM.—W. C. Allison, Philadelphia, Pa.

First, I claim a vat or reservoir, having an outer casing of wood and a thin petroleum-proof lining of metal, so suspended within the casing and detached from the sides and bottom of the same that it can readily, and without danger of rupture, yield and accommodate itself to any twisting or other distortion of the vessel, as set forth. Second, The combination, as described, of a tank or reservoir, consisting of an outer casing of wood and a petroleum-proof lining with the frame of a car. Third, The air space between the tank and sides and roof of the car, for the purpose described. Fourth, The perforated pipes, M', or their equivalents, forming a communication between the interior of the tank and the ventilated space, M', beneath the roof. Fifth, Cams, N', to mix the air and gas to pass through the perforations of the ventilator, before it reaches the external air, for the purpose described. Sixth, The roof, G, of the tank, with its transverse beams, q, both being covered with a petroleum-proof lining, substantially as described, and the transverse beams serving to prevent undue agitation of the contents of the tank, as set forth.

58,747.—MACHINE FOR PEELING WILLOW.—George S. Anderson, Jeffersonville, Ind.

I claim the wheel, E, rollers, H, brakes, S and V, when constructed, combined and arranged to operate together, substantially in the manner and for the purpose specified.

58,748.—GEOGRAPHICAL MAP.—E. A. and A. C. Apgar, Philadelphia, Pa.

First, We claim the use for map drawing of such geometrical figures as are constructed by taking in each case some one line as a measuring unit, by means of which the lengths of other lines about the figure are determined. Second, We claim the trisecting and bisecting of certain lines about our geometrical figures for the purpose of determining the positions of certain prominent points along the coast lines of the continents. Third, We claim, as original with us, and desire to secure by letters patent, that symbolic language for maps in which dots and lines, arranged substantially as described, are used to represent certain numbers, whether of population of cities, or the height of isolated hills, mountain peaks, or plateaus, in feet or miles, or other units of measurement.

58,749.—SCREEN FOR GAS PURIFIER.—T. G. Arnold, New York City.

I claim the new manufacture of galvanized metal gas sieves, in contradistinction to ungalvanized iron gas sieves, for the purposes hereinbefore set forth.

58,750.—EGG BEATER.—Varnum G. Arnold, Providence, R. I.

I claim the combination of the cylindrical can, provided with a funnel-shaped mouth and a broad base with a series of cutters spirally arranged and fixed to the inside of the can, or to arm fitting inside the can.

58,751.—CARPET STRETCHER AND TACK HOLDER.—Frederick Ashley, New York City.

I claim the device, for the purpose specified, consisting of the toothed bar, B, and the spring arm, F, with its notched end, G, bearing against the inner side of the notched jaw, H, of the bar, B, and operating in the manner and for the purpose described.

58,752.—MACHINE FOR PLANTING COTTON SEED.—Nathan E. Badgley, New York City.

First, I claim the construction of the base, V, and its connection with the handles. Second, The manner of constructing the draft piece, D, with its fastenings. Third, The construction of the hopper with its several hoops and its attachment to the cross-piece, T, as herein described. Fourth, The attachment of the cover, M, to the base and the rod, R, with its coiled spring, N. Fifth, I also claim the combination of the several parts as herein described and substantially set forth.

58,753.—WASHING MACHINE.—Alexander Badlam, Sr., San Francisco, Cal.

I claim the combination and arrangement of the water box with curved slats, a, metal dogs, EE (serving as weights), handle, E', and dash boards, c, c, the whole being constructed and arranged for joint operation, substantially as described.

58,754.—BARREL MACHINERY.—Horace Baker, Cortland, N. Y.

First, I claim the annular wheel, O, and knives, O', in combination with the swinging frame, P, when respectively constructed and arranged for use, substantially as set forth. Second, The combination and arrangement of the annular F, and pulley, G, for suspending and revolving the bar churn, with the guide bar, H, carrying the plane, I, and operated by an automatic feed, substantially as set forth.

58,755.—USE OF HYDRO-CARBON LIQUIDS FOR TRANSMITTING HEAT.—William C. Baker, New York City.

I claim the employment of hydro-carbon liquids to circulate in heating surfaces, as and for the purposes set forth.

58,756.—WASHING MACHINE.—Hiram Barker, Aurora, Ind.

I claim the construction of the watering tub, A, the movable shaft, D, with its pins, the flange, E, and ribs, F, all the whole being arranged and operating in the manner herein set forth.

58,757.—GLOBE.—Elias Bascom, New York City.

I claim the construction of a transparent or globe, with adjustable wires and end plates, in combination with an illuminated axis, as herein described and for the purposes set forth.

58,758.—WOOD-TURNING LATHE.—August Basse, Quincy, Ill.

I claim the arrangement of the carriage end, J2, stand, J3, and stand, K, for the purpose of supporting the cutter shaft, K', and permit it to be set and fastened at such a position or angle as may be desired, when constructed and operating substantially as described.

58,759.—WHIFFLETREE.—Alonzo Bell, Washington, D. C.

I claim, as the distinctive feature of this improvement, the application of a combination swingtree and clevis to the center of double whiffletrees whereby a direct and equalized strain is brought to bear on the center of the carriage, so that by this application or combination of movement the traces shall have free play, and equal and steady draft imparted to the centre of the carriage and the present continual leverage other obviated.

58,760.—HOOP LOCK.—G. N. Beard, St. Louis, Mo.

I claim a hoop lock formed with a rectangular slot, a1, connecting with and forming a part of curved slots, a2 and a3, substantially in the manner and for the

58,761.—CREASING OR ORNAMENING LEATHER.—James M. Bent, Wayland, Mass.

I claim the revolving creaser, I, in combination with the self adjusting pressure roll, K, operating substantially as described for the purpose set forth.

I also claim, in combination with the above, the lever, Q, or its equivalent, substantially as and for the purpose described. I also claim the gage, L, in combination with the creaser, I, and pressure roll, K, substantially as set forth.

58,762.—PUNCHING LEATHER.—James M. Bent, Wayland, Mass.

I claim the revolving punch, I, with its die, E, substantially as and for the purpose set forth.

I also claim, in combination with the above, the pin, G, for clearing the punch, I, substantially as described. I also claim the spring, G, or its equivalent, for the causing the die, E, to adapt itself substantially as set forth.

58,763.—SOUND BOARD FOR PIANOS.—Jacob Benz, Philadelphia, Pa.

I claim the construction and combination of two different sound boards with transverse-running wood fibers, and prov supporting ribs and air passages, substantially and for the purpose as described and set forth.

58,764.—GAS BURNER.—Hermann Berg and Andrew Blessing, Springfield, Mass.

We claim, the Argand burner, constructed

58,765.—FRICTION CLUTCH PULLEY.—George W. Bishop, Stamford, Conn.

I claim the arm, C, and cog, D, pivoted thereto parallel with the pulley, A, operating in combination with the sliding sleeve, E, substantially as described and for the purpose specified.

58,766.—PISTON PACKING.—James Broughton, Lambertville, N. J.

First, I claim the arrangement of the body, A, hub, B, division plate, D, follower, E, rings, b, b', grooved T-shaped keys, c, springs, F, in the recesses, G, combined and operating in the manner and for the purpose herein specified. Second, The grooves, a, in the keys, c, which close the joints of the packing rings, for the purpose set forth.

58,767.—LUBRICATOR FOR STEAM ENGINE.—John Broughton, New York City.

I claim the combination and arrangement of the reservoir, O, and valve stem, E, having vertical openings, P, P, and made to screw into the shaft, B, with the nipple, F, tubular cap, G, and air chamber, K, the whole being constructed and operated substantially in the manner and for the purpose set forth.

58,768.—GRINDSTONE-JOURNAL BOX.—Thomas W. Brown, New York City.

I claim the improved grindstone-journal box as made with the wheel-journal caps, c, c, c, arranged and combined with the wheel cover, C, so as to extend over and about the wheel journals, substantially as and for the purpose specified.

I also claim the arrangement and application of the duplex spring catch, E, with the projections, d, d, from the cover, c, and with the sides of the box, A, as specified.

58,769.—METHOD OF SINKING AND TUBING WELLS.—John H. Bruin, Elmira, N. Y.

I claim a tube and boring bit for sinking and tubing wells, consisting of a tube, A, and a perforated tube, B, to the base of which is attached a spiral bit, C, and having a socket in the bottom of the tube, B, for receiving the point of the rod, D, said several parts being respectively constructed and combined for use, substantially as set forth.

58,770.—EGG BEATER.—Charles H. Butterfield, Sturbridge, Mass.

I claim, as an improved manufacture, the glass egg beater jar as made, with the contraction as arranged at or near its middle, the same being as and for the purpose or objects as hereinbefore set forth.

I also claim an egg beater as composed of the case contracted at its middle, as represented, and a liquid rotator arranged within the contraction and connected to the stopple of the case, by means substantially as set forth.

58,771.—CAR-SEAT INDICATOR.—Francis H. Carney, Boston, Mass.

I claim the car-seat indicator, constructed substantially in manner and for the purposes hereinbefore described.

58,772.—COFFEE MILL.—Nathan Chapman, Hope-dale, Mass.

First, I claim locking or faste together, by making the bottom of the case, described. Second, I claim making the bottom of the hopper eccentric, or the top of the case eccentric, or both, for the purpose of adjusting the top of the case to make the mill grind fine or coarse, substantially as described.

58,773.—SULKY PLOW AND HARROW.—James E. Cheesebro, Buffalo, N. Y.

First, I claim the combination and attachment of a plow to a sulky in such manner that the plow beam shall pass under the axle of the sulky and project forward, and the plow handles project rear of the axle and in convenient grasp of the plowman as he upon his seat, substantially as set forth and described.

Second, The combination of the guide stirrup, B, with the slide, G, for the purpose of forming a connection of the forward end of the plow beam with the sulky, substantially as set forth. Third, Connecting the rear end of the plow to a brace or foot board, D, projected from and in rear of the axle, for the purpose as described.

Fourth, The driver's seat, A, and foot board, D, projected and supported in rear of the axle, for the purpose and substantially as set forth. Fifth, The combination of a harrow, M, with the sulky, for the purpose and substantially as described.

58,774.—GLOBE VALVE.—William Chesley, Cincinnati, Ohio.

I claim the construction and arrangement of the boss, d, cap, b, and plug, a, with reference to the valve stem, c, for the purpose and as herein set forth.

58,775.—GOVERNOR VALVE FOR STEAM ENGINES.—William Churchill, St. Louis, Mo.

I claim, First, The arrangement of the throttle and governor valves, in the manner substantially as set forth. Second, The combination of the nut, G, stem, F, and spring, H, whereby to secure the action and regulation of the governor in accordance with the demands of power and speed.

58,776.—SETTING FENCE POSTS.—Henry W. Clarke, Newport, R. I.

I claim the arrangement and application of the hollow frustum, B, its cement or head, D, and the mass of gravel, E, or its equivalent, with a post, A, the whole being substantially as and for the purpose set forth.

58,777.—MILL FOR CRUSHING QUARTZ.—Cummings P. Colby, Lancha Plana, Cal.

I claim the combination of the eccentrics, B, with collars and spindles and springs, a, arranged to operate the stampers, substantially as described.

58,778.—STRAW CUTTER.—Robert Conarroe, Camden, Ohio.

I claim, First, The combination of the eccentric, e, pin, d, and roller, d'.

Second, The combination of the grooved eccentric cams, F, on the shaft, G, with the guides and frame C, D, and knife, E, of a straw cutter, substantially in the manner and for the purpose set forth.

58,779.—WOOL PRESS.—Solon Cooley, Oakwood, Mich.

I claim the arrangement of the bottom board, A, the sides, B, and ends, C, C', as constructed with the follower, H, spring arms, G, G, rack bars, F, and hooks, I, I, substantially as and for the purpose herein specified.

58,780.—SHAFT FOR RUBBER ROLLERS FOR WRINGING AND WASHING MACHINES.—John Cram, Chicago, Ill.

I claim constructing a shaft, A, with a series of recesses and corresponding pins or projections arranged and operating substantially in the manner and for the purposes herein specified and described.

58,781.—LADDER.—Charles Croley, Dayton, Ohio.

First, I claim the sliding pieces, h, h, connected to the ladder, A and B, substantially as and for the purposes specified. Second, The combination of the projections, g, g, the books, i, i, and step, S, substantially as and for the purpose described.

Third, The base pieces, C, the braces, D, and jointed bar, E, when constructed and arranged with reference to the ladder, B, in the manner substantially as described and for the purpose specified.

58,782.—HEATING STOVE.—E. N. Cummings, Colebrook, N. H. Antedated Oct. 4, 1866.

I claim a stove for heating purposes made substantially as above described, its upper and lower parts, A, E, being connected by serpentine fines whose openings in the upper part, E, are controlled by two independent dampers, substantially as shown.

58,783.—PROJECTILES FOR ORDNANCE.—J. M. Currie, Washington, Iowa.

I claim the projectile, A, with the conical point and tapering rear, having the packing ring, B, applied as shown and described.

58,784.—DEVICE FOR HANGING WALL PAPER.—James Warren Davis, Washington, D. C.

I claim the roller, D, having a yielding surface, the clamping bar, E, the frame, A, B, C, the pivoted arms, F, the bell crank, G, and the spring rods, J, M, the whole arranged and operated substantially in the manner and for the purpose herein described and represented.

58,785.—MACHINE FOR HARVESTING, HUSKING AND SHELLING CORN.—D. A. Dickenson, Baltimore, Md.

First, I claim a machine for cutting the stalks from the hill or row, separating the stalk from the ears, husking the ear and shelling it, when the different pieces or parts thereof are constructed, arranged, and operated substantially as herein recited.

Second, I claim combining with cutting and husking or shelling machines the arrangement of the means or parts constituting the apparatus for cutting the stalk from the hill or rows, when constructed and operated substantially as set forth.

58,786.—CAR WHEEL.—Wallace Dickinson, Brooklyn, N. Y.

I claim the elongated hub, H, having flanges, s, s', provided with a bush, d, having cavity, c, and openings, m, n, and washer, w, all constructed and arranged substantially as described and for the purpose set forth and shown in the accompanying drawings.

58,787.—SKID FOR SUPPORTING BARRELS.—W. W. Doane and W. P. Burr, Brewer, Me.

We claim the and arrangement substantially as specified.

58,788.—GANG AND SUB-SOIL PLOW.—R. L. Dodge and E. M. Walker, Gallatin, Mo.

First, We claim the construction and arrangement of the pole, H, in connection with the standard, I, and axle, B, so that it may be elevated and lowered, substantially as described.

Second, We claim the pole, H, when hinged to the cross-bar of the frame so as to form a lever to raise the plows, in combination with the plow beams, E, E, and plow, C, C', when constructed for the purposes and substantially as described.

58,789.—COMPOSITION FOR WALKS, PAVEMENTS, ETC.—W.

I claim the composition and process herein described when applied as and for the purposes set forth.

58,790.—MAGAZINE FIRE-ARM.—Wm. C. Dodge, Washington, D. C.

First, I claim the sliding tube, B, with the spring, g, attached and sliding in the groove, h, in combination with the barrel, A, and breech frame, C, when said parts are arranged to operate as and for the purposes herein set forth.

Second, In combination with the sliding tube, B, I claim the spring catch, c, located inside of the breech frame, C, and arranged to be operated from the outside, as shown and described.

Third, I claim forming the chamber for the reception of the cartridges at the rear end of the tube, B, by means of the pieces, m, or their equivalents, substantially as described.

58,791.—STEERING APPARATUS.—F. P. Duprazy, S. M. Dumont, and John Dickason, Veray, Ind.

First, We claim the intermediate sleeve or double spiral and drum, D, E, constructed substantially as set forth for the purpose specified.

Second, We claim the arrangement of the wheel, A, drum, B, rope or chain, C, drums, E, E', pulleys, D, D', F, and tiller, G, forming a progressive-power steering apparatus, as described.

58,792.—HAT BOX AND VALISE.—Zoheth S. Durfee, Philadelphia, Pa.

I claim combining a hat box with a modification of the common traveling bag or valise, substantially as and in the manner described and shown in the accompanying drawings.

58,793.—WATER COOLER.—John Eckert, Madison, Ind.

I claim the sheet-metal chamber, A, cast bottom, B, b, and thimble, C, c, the whole being combined and adapted to operate as set forth.

58,104.—INSTRUMENT FOR TRANSPLANTING PLANTS.—W. C. S. Ellerbe, Camden, S. C.

I claim an improved plant transplanter formed of a cup, A, handle, C, and of a pusher, D, and rod, G, constructed and com-

rollers, when they are all arranged together so as to operate and be operated substantially in the manner described.

I also claim the stationary knife blade, P, in combination with the splitter blade, I, substantially as and for the purpose specified.

I also claim the adjustable piece C, T, seen red to the under side of the splitter blade, substantially as described for the purpose specified.

58,939.—FRUIT BOX.—W. H. Earle, Vineland, N. J., assignor to himself and G. M. Buttrick, Barre, Mass.
I claim the combination with the upper corners of a box, the sides and bottom of which are made as described, of the metal corner fastening pieces, F, substantially as shown and described.

58,940.—SCHOOLBOY'S BOOKBINDER.—Thos. Goodrum (assignor to Albert T. Manchester), Providence, R. I.
I claim a portable book package binder, constructed and operating as described, the article being substantially as herein specified.

58,941.—BRICK KILN.—E. Harrison, A. Wagner and A. Nulsen (assignor to Nulsen & Co.), Cincinnati, Ohio.
We claim, first, The method substantially as described of burning bricks, etc., by the contact of falling coal dust or other comminuted fuel, with a draft of air which has become heated by traversing the already burnt brick.

Second, The arrangement of the continuous gallery, A, B, A', B', shifting partitions or partitions, D, D', and dampers, G1, G2, and so forth, or devices substantially equivalent, whereby the operations of producing, burning and cooling are simultaneously and continuously performed, in the manner substantially as explained.

58,942.—LANTERN.—John O. Harris (assignor to himself and Israel S. Ritter), Reading, Pa.
I claim the conical base, B, attached to the lower part of the glass globe, A, of the lantern, and having a flange, C, at its lower end perforated with holes, u, b, in combination with the cap, E, and jacket, F, at the top of the glass globe, A, all arranged substantially as and for the purpose set forth.

58,943.—ELECTRIC GAS STOP COCK.—John A. Hoyl, Boston, Mass., assignor to himself and George Bailey, Hudson, Mass.
I claim the above explained improved cut-off, consisting of the stationary cylinder, G, and the rotary tube, E, provided with passages, a, b, arranged in them as described, in combination with the ratchet, F, and the gas burner conduit, the whole being substantially as and for the purpose and to operate as hereinbefore explained.

58,944.—MANUFACTURE OF PAPER.—George W. Hurlbut (assignor to himself and Abram C. Wicker), Fair Haven, Vt.
I claim the use of pulverized clay, slate and other suitable stone as a material in the manufacture of paper, to give it body, evenness and finish.

58,945.—BRAKES FOR COTTON LAPPERS.—Daniel Hussey, Nashua, N. H., assignor to Richard Kitson, Lowell, Mass.
First, I claim the employment of the arm, E, and pinion gear, F, in combination with the bevel gears, C and C2, and ratchet wheel, A, all arranged to operate substantially in the manner and for the purpose set forth.

Second, I claim the gear, D, on the shaft, B, in combination with the bevel gears, C and C2, pinion, I, and arm, E, when the said gear engages with the pinion, J, to operate said pinion and its connections, substantially in the manner and for the purpose set forth.

Third, I claim the ratchet wheel, H, or its equivalent, in combination with the friction pulley, I, and friction weight, L, arranged and made to operate substantially in the manner, by the means and for the purpose set forth.

Fourth, I claim the lever, G, on the shaft, B, when the said lever is formed, arranged and combined with the pulley, I, ratchet wheel, H, and friction weight, L, substantially as and for the purpose specified.

Fifth, I claim the connecting rod, m, or the equivalent thereof, in combination with the arm, l, cross lever, M, and a weight or spring, P, all arranged to operate substantially as and for the purpose specified.

Sixth, I claim the spring, R, in combination with the ratchet wheel, H, pulley, I, and friction weight, L, and arranged to operate substantially in the manner and for the purpose explained.

Seventh, I claim the combination of the ratchet wheel, A, bevel gear, C, arm, E, pinion, F, bevel gear, C2, spur gear, D, lever, G, with arms, K and I, ratchet wheel, H, or equivalent, the pinion, J, friction pulley, I, friction weight, L, connecting rod, m, lever, M, weight or spring, P, with the shaft, B, the whole arranged to operate substantially as and for the purpose set forth.

58,946.—COFFEE MILL.—J. G. Lane (assignor to himself and W. J. Lane), Washington, N. Y.
I claim having the outermost ridge, h', of the grinding surface of case, A, solid or without being notched and extending around the outermost ridge, f, of the corresponding grinding surface on plate, B, so as to serve as a barrier to the too free discharge from the mill of the substance being ground, substantially as herein set forth.

58,947.—WOOD-TURNING LATHE.—James E. F. Leland (assignor to H. A. Leland), New York City.
I claim the slide, B, carrying the material to be turned, cam or eccentric wheel, H, sliding tube, I, concentric tube, J, having cutters, N, when all arranged together, substantially in the manner and for the purpose described.

58,948.—HINGE FOR MOLDERS' FLASKS.—E. C. Little (assignor to Eveline Little), St. Louis, Mo.
I claim the projecting wing, b, and pintle, c, in combination with the male half of the hinge plates, and the female plate with notched corner, and its edge, d, operating together the plates adapted to lie on the corner edges of the cope and drag, substantially as described for the purpose specified.

58,949.—ADJUSTABLE FRAME FOR FORMING HOOP SKIRTS.—Henry S. Loper (assignor to Collins, Peck & Co.), New Haven, Conn.
I claim the combination of the band block, B, adjustable upon its support, C, with the bars, D, adjustable in the band block and upon the base, substantially in the manner and for the purpose herein set forth.

58,950.—PIANO-FORTE.—Wm. H. Mason, Boston, Mass., assignor to himself and H. K. W. Palmer, Chelsea, Mass.
I claim the combination of the lever, H, and its flexile connections, a, a, with the two octave keys of a piano-forte.

I also claim the combination and arrangement of the tongue, I, with the lever, H, its flexile connections, a, a, and the two octave keys of a piano-forte.

58,951.—SOD CUTTER.—Silas A. Moody (assignor to Philip E. Divine), San Francisco, Cal.
I claim a series of circular blades or knives upon a shaft or axle arranged to rotate, as described, in combination with the cover, C, and seat upon the cover, substantially as described.

58,952.—INK-WELL COVER.—George Munger (assignor to himself and J. W. Shermerhorn), New York City.
I claim the semicircular sockets, b or b', in the bracket or disk in combination with the galleons, a, cast solid with the cover, A, substantially as and for the purpose described.

58,953.—MODE OF SINKING WELL TUBING.—R. F. Osgood, Rochester, N. Y., assignor to C. W. Kinne, Cortland, N. Y.
I claim the combination of the spiral wing or wings, h, with the

shank, B, and tubing, A, operating substantially as and for the purpose herein set forth.

58,954.—EYELETED BRACE.—Samuel J. Shaw (assignor to himself, Thomas Corey, and Wm. E. C. Worcester), Marlboro', Mass. Said Worcester assigns to said Shaw his right.
I claim as a new article of manufacture for purposes as set forth the eyelets and brace struck or stamped together or in connection from one piece of metal.

58,955.—BRACE AND LACING DEVICE.—Samuel J. Shaw and W. E. C. Worcester (assignors to themselves and Thos. Corey), Marlboro', Mass. Said Worcester assigns to said Shaw his right.
We claim the combination of the metallic stays made with the lacing holes and the arrangement of the lacing so as to go through such holes or eyelets serving to fasten the stay to the upper, the whole being substantially as described, whereby such lacing is made to protect the stay from being torn or separated from the shoe while in use.

58,956.—CAR BRAKE.—C. W. Singer, Anderson Store, Va., assignor to himself and Abel Land, Rochester, Ohio.
I claim, first, The rollers, D, D', in combination with the adjustable rubbers, A, and springs, K, arranged in the manner and for the purpose set forth.

Second, I claim bringing the rubbers to the truck plates or frames so as to form inclined planes, thereby allowing the rollers to act as a wedge between the rubbers and plate, A, to compress the said rubbers upon the wheels and so that said rollers will move back independently on releasing the brake from the wheels, as and for the purpose set forth.

58,957.—WASHING MACHINE.—Josiah Stubbs, Decatur, Ill., assignor to himself and H. E. Foster, Macon county, Ill.
I claim the combination of the corrugated floor, K, gravitating beater, P, and closed rocking box, A, B, E, all constructed and arranged to operate in the manner and for the purposes set forth.

58,958.—MACHINE FOR DRESSING WILLOW FOR BASKETS.—Matilda C. Root, Harris Colt, and Elisha Colt (executors of E. K. Root, deceased), Hartford, Conn.
We claim the employment, in combination with the shaving mechanism, of a rotary carriage or bed to which the foremost end of the switch is fastened and by which the switch is pulled or drawn by the cutters during the shaving operation, as hereinbefore described.

58,959.—KEYED MUSICAL INSTRUMENT.—Hubert C. Baudet, Paris, France.
I claim, first, The locks, a', attached to and in combination with the strings of a musical instrument, substantially as and for the purpose herein specified.

Second, I claim the rollers, d, in combination with the locks, a', substantially as and for the purpose herein specified.

Third, I claim the combination with the rollers, d, or their equivalents, strings, a, and locks, a', of one or more driving cylinders, b, c, and a system of keys, f, the whole operating substantially as herein specified.

58,960.—ELECTRO-MAGNETIC ENGINE.—Auguste P. Berlioz, Paris, France.
I claim, first, The shaft, d, divided into two insulated parts, turning in insulated boxes, D, D', and connected to the bobbin wire or wires, t, all substantially as and for the purpose described.

Second, I claim the combination of the above and the disks, G, their bobbins, I, and the rings, u, u', when the wires on said bobbins are connected to the shaft, to each other, and to the said rings, substantially as shown in Figs. 2 and 3, for the purpose specified.

Third, I claim the spring, o, its projection, n, and the roller, m, in combination with a ring, H.

Fourth, I claim the spring, o', its projection, m', in combination with a ring, H'.

Fifth, I claim the combination with two or more machines constructed in safety with the said machines are so arranged that when their axles are coupled by the within described devices or their equivalents, alike currents will be simultaneously generated in all the machines.

58,961.—PURIFYING AND SOFTENING WATER.—Servaas De Jong, Paris, France.
I claim purifying and softening water by silicate of soda and carbonate of soda, or its equivalent, as set forth.

58,962.—STEAM SAFETY VALVE.—William Naylor, Lorn Terrace, Midway Park, Eng.
I claim the arrangement, substantially as hereinbefore shown and described, of the safety valves of the first order acting in combination with a spring or springs, the whole operating in the manner and for the purpose set forth.

58,963.—MACHINERY FOR FORGING PIPE JOINTS AND OTHER ARTICLES.—James Alfred Shipton and Robert Mitchell, Wolverhampton, Eng.
We claim the construction and arrangement of machinery or apparatus for shaping and forging metallic articles, substantially as hereinbefore described and illustrated by figs. 1, 2 and 3, of our drawings.

REISSUES.

2,375.—APPARATUS FOR CARBURETING GAS.—J. F. Boynton, Syracuse, N. Y. Patented Sept. 5, 1865.

I claim, first, In an apparatus for carbureting gas, by charging it with the vapors of hydro-carbon liquids, the use of wood, as a capillary agent, to draw up the liquid and expose it to evaporation.

Second, In a carbureting apparatus as above described, I claim the use of wood in combination with cotton wicking or other fibrous material, to produce the capillary action necessary to promote rapid evaporation, substantially as described.

Third, I also claim so arranging and constructing the cotton wicking or other fibrous material, and its wooden supports, that as the surface of the liquid in the carbureting vessel ascends, the number of capillary pores brought into action will be all the while increasing, substantially as described.

Fourth, I also claim a combination of wood and wicking, or other fibrous material, so arranged as to form a movable frame or cage, setting into a box, and producing a compound of capillary action of porous and fibrous material, substantially as described.

2,376.—APPARATUS FOR CARBURETING GAS.—John F. Boynton, Syracuse, N. Y. Patented Sept. 25, 1866.

I claim, first, The automatic filling reservoir, D, in combination with the tube, C, substantially as described.

Second, The base board, H, in combination with a series of wooden pegs inserted therein, and supporting fibrous material to produce a compound capillary action, as and for the purposes described.

Third, I claim the wooden pegs, I, wound with cotton wicking, J, or other equivalent fibrous material to produce a compound capillary action as described.

Fourth, I claim the base board, H, wooden pegs, I, and cotton wicking or other fibrous material, J, so combined, constructed and put together, as to form a movable frame or cage which may be inserted into the carbureting box and removed therefrom, together, as one entire structure.

Fifth, I claim securing the fibrous material at the lower end of the peg, by driving it with the peg into a perforation of the base board, substantially as described.

Sixth, I claim the internal box, K, with its partitions, K', constructed and arranged substantially as described.

Seventh, I also claim so constructing and arranging said internal box, K, that when set in the main carbureting box it will

divide the carbureting chamber into an outer and inner apartment, substantially as described.

Eighth, I also claim constructing said box, K, with its partition walls of wood or any other porous substance which will produce capillary action.

2,377.—GAS BURNER FOR COOKING, ETC.—Adolph Geiss, Buffalo, N. Y. Patented Nov. 28, 1865.

I claim, first, The draft and mixing chamber, A, in combination and arrangement with the perforated dome, D, perforated shell, e', and metallic base, A2, including gas pipe, F, for the purposes and substantially as described.

Second, In a gas burner for cooking and heating purposes, I claim the thimble, C, in combination with the wire gauze dome, D, substantially as described.

Third, The combination of the thimble, C, wire gauze dome, D, cap, B, substantially as set forth.

Fourth, The combination of the outer thimble, e, the inner and upper thimble, c, and dome, D, for the purposes and substantially as set forth.

2,378.—LOOM.—Benjamin Oldfield, Newark, N. J. Patented Jan. 23, 1866. Antedated Jan. 17, 1866. (Div. A.)
I claim the application to a batten of two or more shuttles for plain weaving, and one or more figuring shuttles, to operate in conjunction, substantially in the manner and for the purpose herein set forth.

2,379.—LOOM.—Benjamin Oldfield, Newark, N. J. Patented Jan. 23, 1866. Antedated Jan. 17, 1866. (Div. B.)
I claim an upright shuttle driven by rack and pinion or in any other suitable manner and which is grooved on each of its sides, and the body part of which is cut away for the quill and provided with a guard, g, substantially in the manner and for the purpose herein set forth.

2,380.—Suspended.
2,381.—METHOD OF OPERATING CUT-OFF VALVES.—G. H. Reynolds and M. A. Hinckley, Mystic Conn., Admstr. to D. B. Hinckley, assignee of G. H. Reynolds. Patented Feb. 3, 1857.

First, I claim automatically shutting a cut-off valve carried on the steam valve, so that so soon as the valve commences to close it will continue its closing motion independent of the motion of the engine, substantially as and for the purposes herein specified.

Second, I claim the inclined dogs, H, H, arranged to operate in connection with a cut-off valve, F, carried on the steam valve, B, substantially in the manner and for the purpose herein set forth.

DESIGNS.

2,494.—PAPER HANGINGS, ETC.—Charles Husband, Taunton, Mass.

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2,224.—REPEATING FIRE-ARM.—Oliver F. Winchester, New Haven, Conn. Dated Aug. 29, 1866.

2,236.—SOFTENING, DISINTEGRATING, AND BLEACHING VEGETABLE FIBERS.—James M. Mellor, New York City. Dated Aug. 30, 1866.

2,242.—MACHINERY FOR HULLING AND CLEANING COFFEE AND OTHER BEERIES OR SEEDS.—William V. Lidgerwood, a citizen of the United States, now Charge des Affaires at Rio de Janeiro, Empire of Brazil. Dated Aug. 30, 1866.

2,247.—APPARATUS FOR BORING BOILER TUBE HEADS, DRILLING ANGLE HOLES, OR CUTTING CIRCULAR GROOVES IN METALLIC SUBSTANCES.—James Miller, New York City. Dated Aug. 31, 1866.

2,264.—HOOPSKIRT.—Augustus J. Colby, New York City. Dated Sept. 3, 1866.

2,338.—STEAM JET.—David M. Nichols, New York City. Dated Sept. 17, 1866.

2,389.—FELTING OR SIZING HAT BODIES, AND MACHINERY THEREFOR.—Philip W. Somers, Danbury, Conn. Dated Sept. 17, 1866.

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Office of William Sellers & Co., Philadelphia, Aug. 15, 1866. Joseph Harrison, Jr., Esq. Dear Sir:—We have your favor of the 9th inst., and may say in reply, that we have now had the Harrison Boiler in constant use in our Works for nearly two years, and have given us great satisfaction.

Dear Sir:—I will say in reply to yours of the 9th inst., that I have had one of your Boilers almost in constant use over one of my Founding Furnaces for over eighteen months, and in all that time I require no repairs, with the exception of changing a few light bolts for heavier ones, and it is now running without any signs of leaking or want of repair, apparently as good as when first put up.

Mr. Joseph Harrison, Jr.: Dear Sir:—I take great pleasure in testifying to the merits of your Boiler, as a generator of steam, the confidence we have in its safety, its economy of fuel, and also of space for its erection.

Dear Sir:—We take great pleasure in testifying to the merits of your Boiler, as a generator of steam, the confidence we have in its safety, its economy of fuel, and also of space for its erection.

Dear Sir:—After having your cast-iron boiler in use at the Colliery of this Company for more than a year, it gives me pleasure to state that its operation has been very satisfactory.

Dear Sir:—About four months ago, we put in one of your "Harrison Boilers," and it gives us much pleasure to be able to state that, as a safe steam generator, in its general economy in fuel, time, etc., we consider it the best boiler now in use.

Dear Sir:—We take pleasure in informing you that the Boiler purchased from you, which we have had in use about five months, has given the best satisfaction, and has borne out ever thing you claimed for it.

Dear Sir:—In my annual Report of this Institution, for 1865, I stated my high estimate of your Boiler, for safety, economy, and general efficiency.

Dear Sir:—The "Harrison Boiler" we bought of you, some four months ago, has given us perfect satisfaction.

Dear Sir:—We have had one of your Six-slab Boilers in use in our Paper Mill for five months. We consider it unequalled by any other make of boiler now in use, and less than one-half the fuel it produces more and drier steam than any boiler we ever used.

It is simple, easily managed, and perfectly safe. Our Boiler bleaches the stock for, and dries one tun of paper daily, with one cord of pine wood per day.

Very truly, McNEIL, IRVING & RICH. Mercantile Printing Rooms, Franklin Building, Philadelphia, 14th Aug., 1866.

Dear Sir:—I am very much pleased with the Boiler you put in for me some nine or ten months ago. It has been in constant use—no trouble—no repairs—no stopping to clean out, and steam can be "got up" in about twenty minutes.

Dear Sir:—We have one of your 31 Horse-power Globular, Five-Slabbed Boilers, known as the "Harrison Boiler," in use now nearly five months, and as a safe, reliable steam boiler, and for economy of fuel, we think it cannot be equalled.

Dear Sir:—Before purchasing your boiler, we examined with much care the various kinds now in use, determined to get "The Best." After eight months' trial, our experience conclusively confirms the correctness of our judgment in making choice of yours.

Dear Sir:—It gives me great pleasure to be able to inform you that your Boiler comes up to the most sanguine expectations; in fact, all that you can possibly claim for it: being economical, safe, and a speedy generator of steam.

Dear Sir:—In reply to your letter of the 9th ult., I would say that I have been using the "Harrison Boiler" for more than two years, and it gives me great pleasure to state that I find it entirely satisfactory.

Dear Sir:—You ask our opinion of the safety, economy in fuel, and general merit of the Harrison Boiler we have in use. I deem it a safe Boiler; from its construction I do not think it possible that a disastrous explosion can occur.

Dear Sir:—Having charge (as administrators) of the Worsteds Mills of the late Mr. Samuel Yewdall, at which the recent terrible explosion of a wrought-iron boiler occurred, we have decided to avoid a recurrence of such a calamity in the future, and believing your Boiler to be the only one absolutely free from danger from explosion, and at the same time equal, if not superior, as a generator of steam, and in economy of fuel to any boiler now in use.

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THE MECHANICS AND AGRICULTURAL FAIR ASSOCIATION OF LOUISIANA. At a special meeting of the Board of Directors, held at Mechanics' Institute on the 13th inst., it was unanimously resolved that the FIRST GRAND FAIR of this Association shall take place on the FAIR GROUNDS, City of New Orleans, commencing on the 20th of November ensuing. Inventors, Manufacturers, Agriculturists, Stock Raisers, and others, from any portion of the United States, desirous of being represented in this Industrial Exhibition, can obtain full information by addressing the officers of the Association. L. N. MARKS, President. C. H. HOBBS, Sec. and Treas. C. H. SLOCUM, Chairman of Committee on Fair Grounds.

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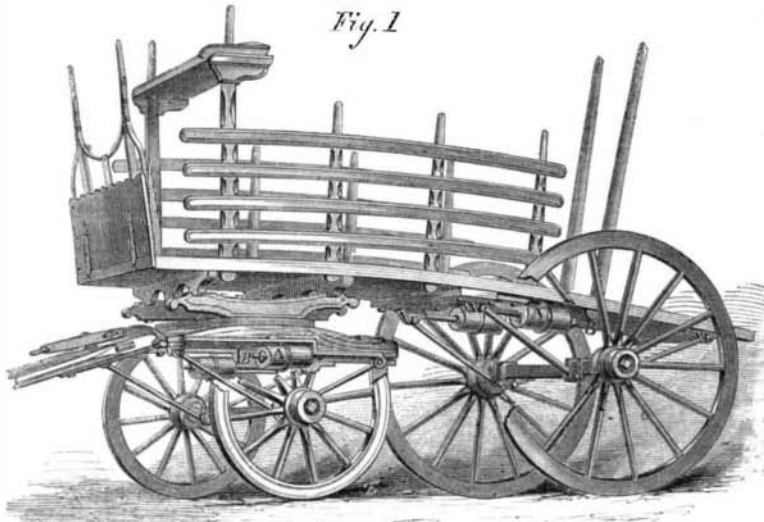
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The cost of the steel-plate springs for teams and carriages, the danger of breaking in rusty weather, and their disposition to throw the weight of the wagon, and its contents, out of equilibrium, on roads which are not smooth, are objections which all who drive vehicles have noticed. The inventors of the spring herewith represented have spent years in trying to overcome these faults, and believe that they have succeeded. The spring proper is a cylinder of india-rubber attached to the body and axles by toggle joints, arms, and slides.

Fig. 1 represents a common teaming wagon, with



The Franklin Institute.

From advance sheets of the proceedings of this society, kindly furnished by Mr. Henry Morton, the Secretary, we copy the following items:—

The Sand Patch Tunnel on the Pittsburgh and Connellsville Railroad is cut through, its total length being 4,750 feet, by 22 wide, and 19 high. It is intended for two tracks.

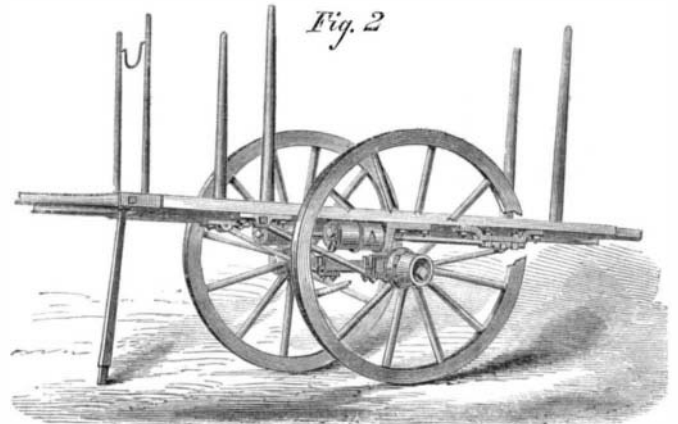
In the new system of drainage applied to London, a large amount of the sewage matter collects at a level, requiring the use of pumps to remove it. To meet this demand a system of engines, etc., have been established at Crossness, by which this matter

copper in solution, which makes a brown stain on other articles but does not affect those which are gilt.

Bronzing Gun Barrels.

The *Mechanics' Magazine* expresses surprise to learn that the gun barrels used by our army in our late war were bright polished, instead of being bronzed. It says that the movements of the Union armies were on several occasions detected by the Confederates by the sheen of the sun or moon on the barrels, when secrecy was important to success.

It has been a matter of no less surprise to us. A bright barrel has other disadvantages beside that of being a tell-tale and perhaps thereby ruining an important movement. In sighting over a polished tube the glare of the sunlight fatigues the eye and diverts the aim. This is so well known that no



LA BAW AND CAMPBELL'S WAGON AND CARRIAGE SPRING.

the springs attached, the wheels broken away to show their working parts, and Fig. 2 a cart with the patent springs. A A are the springs, which are secured to the body or the frame by proper clamps and staples. A rod passes through the center of the spring, furnished with an embracing cast-iron head and nut, B. The other end of the rod is of flat iron and slides on the plate, C, provided with guides, D (see Fig. 3). E is the axle to which the brace, F, is bolted, the other end of the brace being jointed to the sliding rod at C. The axle clip is pivoted to the brace, G, the other end of which is secured to the wagon frame.

Now the action of the springs can be readily comprehended. As the weight of the vehicle with its load brings the axle and springs nearer together, the spring is compressed longitudinally. A considerable motion of the axle effects but a slight movement of the springs, the tension of

which may be increased or diminished at will by tightening or slackening the nut, B. A compression of the springs to the extent of one inch will give three inches perpendicular motion to the axle, and the weight of the load coming endwise on the springs, they can bear a larger proportionate strain than the ordinary steel springs, and when the wheels go suddenly down into a hole their elasticity in a longitudinal direction tends to assist in raising the load.

The inventors claim that this spring is not required to be more than one-fourth the weight of the steel spring to sustain the same load, and can be manufactured at half the cost. It is so simple in construction that it can be made by any ordinary blacksmith, and can be adjusted to any load. It is very durable, and unaffected by the frost. For light vehicles the springs can be made tapering so that they are more sensitive and easy. The improvement appears to possess desirable features which in some important particulars make it superior to the ordinary springs.

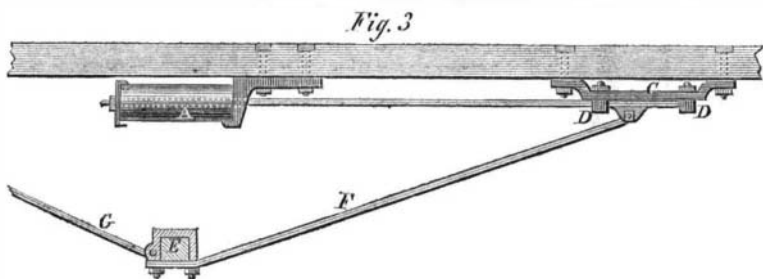
Patented by George W. La Baw and Peter F. Campbell, of Jersey City, N. J., who can be addressed as Campbell & Le Baw, box 24, as above, for State, county, and manufacturers' rights.

is raised 19 feet 6 inches, and thrown into a reservoir constructed for its reception. This reservoir covers an area of 6½ acres, is 14 feet deep, and has a capacity of 24,000,000 gallons. It is arched over with brick-work, supported on 644 piers, and is covered with earth and sod.

It is usual to discharge this reservoir into the river about half an hour before high tide, but during heavy rains it is filled and emptied four times in the 24 hours.

The engines are four in number, each working eight pumps, which are of the usual plunger construction; their aggregate capacity amounts to

true sportsman would think of polishing the barrel of his rifle or fowling piece. It is a remnant of the old nonsense about "the pomp and circumstance of glorious war," retained by Government officials, after it has been rejected by sensible people. In using a fire-arm in the sunlight, a bright barrel will heat much quicker than a bronzed one. Beside this, the work of the soldier would be materially reduced and the durability of the weapon increased, by the adoption of bronzed iron work, about the musket and rifle. The subject is one of considerable importance.



29,523 gallons per minute. The minimum amount raised in 24 hours is 38,000,000 gallons, the maximum 100,000,000 gallons.

Robert Grant, of New York City, has improved the reservoirs for the gases of lime lights by the use of iron cylinders instead of india-rubber bags. The gas is condensed in these cylinders, so that the apparatus of weights, press-boards, etc., is unnecessary. The cylinders are nine inches in diameter by thirty inches long, and weigh, when charged with gas up to thirty atmospheres, only twenty-six pounds. Each cylinder contains thirty cubic feet of gas. Nitrous oxide and carbonic acid can be held in these reservoirs in liquid form. Another improvement in the use of gases for experiments, etc., is that of making the orifice for their escape through the closed end of a tube, by means of a perforation much smaller than the diameter of the tube itself, the end of the tube being flat, or square across. This prevents the flame from running back and sometimes extinguishing the light.

A test for gilt articles to distinguish them from those which are simply made of a gold-colored bronze, is announced by Weber. It consists in the application of bichloride (the common chloride) of



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