

No. 12,497. Improvements in Window Blinds.*(Perfectionnements aux jalousies.)*

Elliott Metcalf, Port Huron, Mich., U.S., 12th March, 1881; for 5 years.

Claim.—1st. The hanger C constructed with lower straight slotted bar A, curved upper bar B, stop bar C and recess D. 2nd. The hanger C in combination with the hook D, screw-eye or ring F and adjusting cords G (i. 3rd. The cross-bar H woven through webbing cord lace, or other material woven, looped or knotted, or both woven and knotted for the purpose of strengthening and shifting the position of the blind.

No. 12,498. Improvements on Machines for Drying Printed, Varnished, or Gummed Sheets.*(Perfectionnements aux machines à sécher les feuilles imprimées, vernies ou gommées.)*

Lonis A. Fernow, Chicago, Ill., U.S., 12th March, 1881; for 5 years.

Claim.—1st. In a continuous drying machine, the combination of endless chains and transverse supporting wires driven by such chains, whereby a large number of sheets or other objects can be carried forward, simultaneously, and returned to or near the starting point. 2nd. The combination of the slow and fast moving chains, with the cross wires, whereby the movement of the drying sheets will be alternately retarded and accelerated. 3rd. The combination of the endless slow and fast moving chains, with the endless ways, the carriages travelling upon such ways and the cross wires connecting the carriages, such ways following the fast and slow chains alternately. 4th. In a continuous drying machine wherein the sheets are carried upwardly from near the floor towards the ceiling, and horizontally along near the ceiling and are returned to or near the starting point, the combination of slow moving chains for moving the sheets horizontally, and fast running chains at both the front and rear ends of the machine, for moving the sheets vertically. 5th. The combination with the driving chains, of the ways D supported by brackets and the connected carriages G. 6th. The combination, with the chains, the ways and the connected carriages, of the brakes or springs K for retarding the downward movement of the carriages. 7th. The points upon which the sheets are hung.

No. 12,499. Improvements in Cards and Needles for Mariners' Compasses.*(Perfectionnements aux boîtes et aux aiguilles des boussoles.)*

Frederick A. Brown, John Lewis, Boston, and Edward Cunningham, East Milton, Mass., U.S., 12th March, 1881; for 5 years.

Claim.—1st. A magnetic needle tapering at its poles and rectangular in shape between them, and slotted in its body. 2nd. A mariners' compass card having a magnetic needle and provided with "horse-shoe" or U-magnets arranged in the card circumferentially, and with all their poles in, or about in the circumference of a circle concentric with the card and having the north pole of each magnet toward the south pole of the magnetic needle of each card. 3rd. A mariners' compass card having a magnetic needle and provided with "horse-shoe" or U-magnets arranged on it, the said card circumferentially and with all their poles in or about in the circumference of a circle concentric with the card, and having the north pole of each magnet toward the south pole of the needle, and the magnets of the east and west points stronger in their magnetic power than either of the others in sets thereof.

No. 12,500. Improvements on Steam and Hot Water Furnaces.*(Perfectionnements aux fourneaux à vapeur et de chauffage.)*

Edward Gurney, jr., (Co-inventor with Charles Sellers), Toronto, Ont., 12th March, 1881; for 5 years.

Claim.—1st. In a base burning stove or heater, a series of water compartments arranged around the coal feeder and forming a smoke flue leading from the fire pot to the exit pipe, in combination with partitions placed in the flue at certain intervals, for the purpose of directing the course of the smoke around the water compartments. 2nd. In a base burning stove or heater, a circular water compartment surmounting the fire-pot and connected to sectional water compartments constituting the body of the stove and having internally projecting water spaces fitting around the coal feeder to form a smoke flue.

No. 12,501. Improvements in Baling Presses.*(Perfectionnements aux presses à empaqueter.)*

Peter K. Dederick, Albany, N.Y., U.S., 12th March, 1881; for 5 years.

Claim.—1st. The lever P in combination with the movable fulcrum Q, when said fulcrum is constructed and located, wholly or in part, underneath the lever, so as to operate in the plane of the lever. 2nd. The lever P in combination with the central movable fulcrum Q pivoted between its sides. 3rd. The central movable fulcrum Q having an opening through it for the convenient operation of the rope T. 4th. The central movable fulcrum Q in combination with the rope T. 5th. The central movable fulcrum Q in combination with the lever P and the follower R. 6th. The lever P, rope T and sheave d, in combination with the central movable fulcrum Q. 7th. The rollers, in combination with the rope T and central movable fulcrum Q. 8th. The roller j in combination with the rope T and power girts O. 9th. The guides I, or their equivalent, in combination with the levers P. 10th. The jointed looped door fastener m. 11th. The lever and slides N in combination with the jointed looped door fastener m. 12th. The lever and slide n, in combination with the door L and jointed looped door fastener m. 13th. The brackets h in combination with the door L and posts A. 14th. The jointed looped door fastener m in combination with the door L. 15th. The combination of the doors L and posts A with the jointed looped door fastener m. 16th. In combination with the frame of the press, the truss rods F when supported by the rods X Y. 17th. In combination with the fulcrums Q and pins, or supports at the base, the friction rollers W in combination with the rope.

No. 12,502. Improvements in Window Blinds.*(Perfectionnements aux jalousies.)*

Edward W. Bowslaugh, Grimsby, Ont., 12th March, 1881; for 10 years.

Claim.—1st. A window blind composed of slats hung from a top rail carried in supports by pins placed excentrically. 2nd. The combination, with the slats A and bands B, of the fasteners C. 3rd. The fasteners C with turned down ends to the prongs.

No. 12,503. Improvements in Boiler Furnaces and Boilers.*(Perfectionnements aux chaudières et aux fourneaux des chaudières.)*

William M. Fisher, Cincinnati, Ohio, U.S., 12th March, 1881; for 5 years.

Claim.—1st. In a boiler furnace, the hollow water partition provided with legs of different lengths projecting from its upper side and applied to the boiler. 2nd. The hollow water partition arranged below the body of the fluid with which it is directly connected, having at one end of its upper side, a short leg communicating with the lower portion of said body of fluid, and at the other end thereof a long leg extending into the upper portion of, or above said body of fluid. 3rd. The hollow water partition arranged below the body of the fluid with which it is directly connected, having at one end of its upper side a short leg communicating with the lower portion of said body of fluid, and at the other end thereof a long leg extending into the upper portion of, or above said body of fluid and having a curved extremity. 4th. In a steam boiler, the water partition provided with water legs, one terminating flush with the crown sheet of the fire-box, and the other, on the opposite side, extending into the steam space of the boiler, in combination with an auxiliary combustion chamber between the said water chamber and the tube sheet, the said chamber being provided with a hinged perforated bottom allowing air in jets, whereby a more perfect combustion is produced, and a better circulation of water is maintained. 5th. The combination of a steam boiler or other means for holding a fluid to be vaporized or evaporated, the fire chamber, the hollow partition at the rear end of the fire chamber and constructed with hollow legs, one of which opens into the lower part of the water space, while the other extends to the steam space, or thereabout, and one or more pendant hollow similarly legged partitions beyond the fire chamber. 6th. The combination of a steam boiler or other means for holding a fluid to be vaporized or evaporated, the fire chamber, the hollow partition at the rear end of the fire chamber and constructed with hollow legs, one of which opens into the lower part of the water space, while the other extends to the steam space or thereabout, the second combustion chamber, and a pendant similarly legged partition in said second combustion chamber. 7th. The combination of the fire chamber of a furnace, and the combined circulator and evaporator suspended above the grate surface thereof and having a short leg, at one end, connecting with the lower portion of the water above the fire chamber, and a long leg, at the other end, extending into the water, to near the water line or into the steam space. 8th. A combined circulator and evaporator for steam boilers and other contrivances, for vaporizing or evaporating liquids, having a short leg at one end connecting with the lower portion of the water in the boiler, a long leg at the other end extending to near the water line or into the steam space, and a current directing plate.

No. 12,504. Improvements on Pumps.*(Perfectionnements aux pompes.)*

Julius A. Pease, Boston, Mass., U.S., and Ernest D. Manchée, Toronto, Ont., 12th March, 1881; for 5 years.

Claim.—A pump with a corrugated or grooved cylinder and piston, in combination with a rubber ring.

No. 12,505. Apparatus for Decomposing Steam and Burning the Gases Thereof.*(Appareil pour décomposer la vapeur et en brûler les gaz.)*

Byron Sloper and Walter M. Jackson, New York, U.S., 12th March, 1881; for 15 years.

Claim.—1st. In the production of heat, the process of decomposing water by injecting the same in a vaporized condition, either with or without the admixture of either liquid or sub-divided fuel into or upon solid or porous carbonaceous material located in a combined decomposing retort and combustion chamber constructed for the purpose, whereby mutual decomposition of the water and fuel into hydrogen and carbonic oxide is effected by causing the vaporized water either alone, or in conjunction with the liquid or sub-divided fuel, to hug the surface of the solid, or porous carbonaceous material, and be brought into intimate contact with the same. 2nd. The process of burning liquid or sub-divided fuel in conjunction with the gases, resulting from the decomposition of water by atomizing and injecting such fuel in conjunction with a current of steam upon a bed of solid or porous carbonaceous material, heated to an intense white heat, in a suitable decomposing retort and combustion chamber combined, whereby the mutual decomposition of the steam and fuel into hydrogen and carbonic oxide, is effected by the successive and intimate contact of the steam and liquid or sub-divided fuel, upon the solid or porous carbonaceous material in the said decomposing retort and combustion chamber, and perfect combustion of the result and gases is effected, and the most intense heat produced. 3rd. The process of burning liquid or sub-divided fuel by atomizing and injecting the same, by means of a current of steam upon a bed of carbonaceous material heated to an intense white heat in a decomposing retort and combustion chamber, and causing it together with the gases generated to reverberate over or through the solid or porous carbonaceous material, so as to bring it together with the gases generated into intimate contact with fresh portions of solid or porous carbonaceous material. 4th. The process of burning liquid or sub-divided fuel by atomizing and injecting the same upon a bed of solid or porous carbonaceous material heated to an intense white heat, in a decomposing retort and combustion chamber combined, in conjunction with a current of air, and causing the whole to reverberate over and hug the solid or porous carbonaceous material, so as to bring the gases developed into intimate contact with the solid or porous carbonaceous material, whereby a thorough combustion of the liquid or sub-divided fuel is effected and an intense heat produced. 5th. In combination with a furnace for burning liquid or sub-divided fuel, a combined decomposing retort and combustion chamber having its interior provided with a series of salient and re-entering and deflecting surfaces to de-