

or vibration of the share point when at work. 4th. In combination with a plough having a movable adjustable share point A in a groove *h h*, cast in the interior surface of the landside D, and also a lateral slot formed in a shoulder piece G, the wedge B with set screw in rear end clamp H, and pin F.

No. 13,987. Improvement in Open Back Saws. (*Perfectionnement des scies sans dossières.*)

Lewis Lawson, New York, U. S., 16th January, 1882; for 10 years.

Claim.—1st. The slitted limb C with rigid jaws *n* in combination with the adjustable horizontal screw bolt E with jaws *n*, set nut and threaded end R operating in the square eye X to adjust and secure the saw S in a right line, by means of the stop pins P P passing through the ends of the blade and held in the jaws *n*. 2nd. The combination of the saw blade having a stationary pin P P at each end thereof, with the jaws *n* and adjustable screw bolts E to either tighten or loosen the blade.

No. 13,988. Improvements on Vegetable Soup Compounds. (*Perfectionnements à la soupe aux légumes en conserve.*)

John D. Warren, Lyndonville, N. Y., U. S., 16th January, 1882; for 5 years.

Claim.—A dry compound for use as vegetable soup composed of vegetables commonly used in such soup, such as potatoes, corn, cabbage, celery, carrots, etc., cut into small squares and thoroughly evaporated, combined with salicylic acid and sulphite of soda to preserve the same, and ground celery seed, ground parsley and vegetable flour for flavoring the compound.

No. 13,989. Improvement on Ore Separators. (*Perfectionnement des séparateurs de minerais.*)

Charles G. Buchanan, Brooklyn, N. Y., U. S., 16th January, 1882; for 5 years.

Claim.—1st. A magnetic ore separator having two inductively magnetized rolls forming a magnetic field between them. 2nd. As a means for separating the magnetic from the non-magnetic portions of the ore, the magnetized parallel rolls of opposite polarities revolving near each other in opposite directions. 3rd. A magnetized roll adapted and arranged to revolve in front of another magnet of opposite polarity, and thereby create a magnetic field between their opposed faces, whereby the magnetic ore particles attached to the roll in the magnetic field are as the roll revolves separated from the non-magnetic ore particles and carried to a point opposite the magnetic field where they are discharged by their own gravity. 4th. As a means for equalizing the magnetic force and for increasing the conductive capacity of the rolls throughout the length of the magnetic field, a magnet or magnetized roll having an elliptical or oval core or hollow centre. 5th. A roll capable of inductive action revolved in the field of a magnet of opposite polarity. 6th. The combination of two parallel and contiguous rolls supported on standards of opposite polarities and adapted to be magnetized by induction from said standards. 7th. A magnetic ore separator constructed with a pair of parallel rolls capable of inductive action, adapted to revolve and supported on suitable standards, and devices adapted to convey by induction electricity of opposite polarities to said rolls. 8th. Electro magnetic standards A A, insulated wires C C, P U, hollow rolls B B, collars K, frame A2, upper E and chutes.

No. 13,990. Improvements in Machines for Cutting Ice. (*Perfectionnements aux machines à couper la glace.*)

Félix L. D. Pearson, Montreal, Que., 16th January, 1882; for 5 years.

Claim.—1st. The combination of the saws N with an operating mechanism, and traction wheels D simultaneously operated to move the machine forward, and runners B. 2nd. The combination of the saws N, wheels D, runners B and operating mechanism by which the saws and wheels D are simultaneously operated, and guides B2. 3rd. The combination of the saws N, wheels D, runners C and operating mechanism by which the saws and wheels D are simultaneously worked. 4th. The combination of the platform A provided with runners B C, wheels D, track H and guides B2, also jacking device for raising the wheels D with the saws N, and operating mechanism for simultaneously working the said saws and wheels.

No. 13,991. Improvements in the Manufacture of Hubs. (*Perfectionnements dans la fabrication des moyeux.*)

George W. Bentley, Atha, Ont., (Assignee of Chauncey H. Guard, Dayton, Ohio, U. S.) 16th January, 1882; for 5 years.

Claim.—A hub constructed with wood pins laminated with linen or hemp fibre, and glue inserted diagonally through the said hub, in perforations prepared therefor, and subsequently placed in a tapered tube and subjected to pressure, under hydraulic or under mechanical power, whereby the pores of the wood are closed and the fibres thereof so compressed that the wood becomes a solid hard substance equal to that of our best native woods, and suitable for the manufacture of such hubs.

No. 13,992. Improvements on Car-Couplers. (*Perfectionnements aux accouplages des wagons.*)

Andrew Zettel, Formosa, Ont., 16th January, 1882; for 5 years.

Claim.—1st. The new buffer A or outside frame which is large enough to hold the slide or pin holder and is also deep enough to hold the pin upright, when not entered into the link. 2nd. The sliding pinholder B, which supports the pin when not holding the link and

which, when struck by the link in the approaching buffer, slides back and allows the pin to fall into the opening of the link to receive it. 3rd. The handle C attached, either at the sides or at the bottom of the arm, to the pinholder B to move it forward, under the pin E, so as to hold the pin up until the cars come together. 4th. In a new kind of link D on one end of which is a heel to hold it high enough to enter itself without being held by a brakeman, when the cars are shunted against each other and which enters the hole in the opposite buffer shoves back the sliding pin holder, when the pin falls into the space in the link and the cars are coupled without requiring a brakeman to go between the cars and thus endangering his life.

No. 13,993. Device for Drawing Screw Pattern from the Mould. (*Appareil pour tirer du moule les gabarits des vis.*)

William A. Ingalls, Providence, R. I., U. S., 16th January, 1882; for 5 years.

Claim.—1st. The combination of a mould board or table with screw pattern provided, exteriorly of the mould, with a screw thread which is held in a guiding nut, the screw thread of which is separated from the sand in the mould by an intervening guide chamber inclosing the screw pattern. 2nd. The combination of a mould board or table with a screw-pattern provided, exteriorly of the mould, with a screw thread held in a guiding nut, the screw thread of which is intersected with an opening *k* for the escape of loose sand. 3rd. The combination of a mould board or table with a screw pattern provided, exteriorly of the mould, with a screw thread held in guiding nut made in two parts, whereby the screw pattern can be properly withdrawn from the mould and then again inserted in proper position for forming a new mould by opening the guiding nut.

No. 13,994. Improvements on Lasting Machines. (*Perfectionnements aux machines à enformer.*)

Solomon B. Ellithorp, Rochester, N. Y., U. S., 16th January, 1882; for 5 years.

Claim.—1st. A lasting machine composed of a suitable frame A, last seat B, curved levers E E, templet G provided with hooks and clamps H I respectively, eccentric levers L L, connecting rods A K, holding bolts *n* and gathering cord O. 2nd. The combination, with the clamps I, of screws p, hooks H and the adjustable templet G to regulate the action of said clamps. 3rd. In a means for stitching and holding the leather F on the last C, the combination with the clamps I and holding screws N, of the gathering cord O. 4th. In a means for stretching, forming and holding the leather F on the last C, the combination, with the clamps I and holding screws N, of the curved levers E E.

No. 13,995. Improvements in the Process of Making Soap. (*Perfectionnements dans le procédé de fabrication du savon.*)

Charles S. Higgins, Brooklyn, N. Y., U. S., 16th January, 1882; for 15 years.

Claim.—1st. The process of making soap, viz: the saponification of fats and resins and subsequent solidifying, the same by stearic acid or stearine. 2nd. As a new article of manufacture a resin soap composed of tallow or its equivalent, resin, a caustic alkali and stearic acid or stearine. 3rd. As a composition of matter a soap composed of saponified tallow, saponified resin and unsaponified stearic acid or stearine. 4th. The use, in the manufacture of resin soap, of stearic acid or stearine at a period subsequent to the saponification of its acid ingredients, for the purpose of hardening the saponified resin.

No. 13,996. Improvements in Locomotive Smoke Stacks. (*Perfectionnements aux cheminées des locomotives.*)

George S. Strong, Philadelphia, Pa., U. S., 16th January, 1882; for 5 years.

Claim.—1st. The mode of equalizing the draft in the stack, said mode consisting in dividing the blast at the exhaust nozzle and admitting a portion of the exhaust steam near the lower end of the smoke box, and conveying another portion upward into the chimney near the upper end of the stack. 2nd. The combination of the smoke box, the stack and the exhaust nozzle opening into the smoke box, with an annular chamber opening into the interior of the stack at the upper end and with pipes whereby a portion of the exhaust steam is conveyed to the said annular chamber. 3rd. The combination of the stack having a deflector F, with the funnel G having pipe *d* and the steam nozzle *f*, whereby the sparks and cinders, thrown into the funnel by the deflector, are caused to pass through the pipe. 4th. The combination of the deflector, F the funnel G and its discharge pipe and jet nozzle, with the stack having an annular steam chamber *a* at the upper end.

No. 13,997. Improvements on Trunks. (*Perfectionnements aux malles.*)

Frank H. Ransom, Buffalo, N. Y., U. S., 16th January 1882; for 5 years.

Claim.—A trunk provided with the flanges G, in combination with a tray C provided with projections F.

No. 13,998. Improvements in Pipe Wrenches. (*Perfectionnements aux clés à tuyaux.*)

Timothy D. Mernan and Allan H. G. Hardwicke, Buffalo, N. Y., U. S., 16th January, 1882; for 5 years.

Claim.—1st. The combination, with the lever B having a perforation *d*, of a chain adapted to be drawn through said perforation, and means whereby one end of the chain can be fastened to the body thereof. 2nd. A chain pipe wrench, the combination, with a lever B provided with a perforation *d*, of a chain E adapted to be drawn through the perforation of the lever and provided at one end with a hook *f*.