

T, pinion *v*, shaft Z, pinion *g*, hand *f* and dial W, in combination with means for supporting the bracket and with operative mechanism. 2nd. The counter-balance *l* in combination with the hand shaft Z, to prevent back leash and steady the hand. 3rd. The dial W adapted to be adjusted to face in any desired direction to accommodate the workman having it in charge. 4th. A vertically arranged shaft, a pulley or means for rotating the shaft, a dial, a hand arranged to traverse the dial, and suitable intermediate operative mechanism connecting the shaft and hand, the dial being adapted to move around the shaft at its centre of motion, or to be faced outwardly in either direction from the shaft. 5th. The improved speed indicator herein described, the same consisting of the body A, shaft B, whorl C, sleeve H, collet Q, bars I, arms E, balls G, lever R, collet P, shaft N, segment O, pinion *v*, shaft S, wheel T, pinion *g*, shaft Z, weight *l*, cord *h*, dial W, hand *f* and brackets *u* *m*.

**No. 16,803. Improvements on Car-Couplings.** (*Perfectionnements aux accouplages des chars.*)

Arthur H. Armstrong, Plainville, Conn., U.S., 4th May, for 5 years.

*Claim.*—1st. The combination of the ordinary coupling pin *a*, the mainhead chambered and the supplementary head hung therein having the hopper mouthed outer end *e*, which projects beyond the end of the main head, and provided with the vertical pin holding orifice, the whole so combined that the supplementary head, with the coupling pin therein, may rock on its trunnions to adjust itself to a like coupling mounted at a different height. 2nd. The combination of the main head, the supplementary head hung thereon upon trunnions and having the hopper mouthed outer end, and the gravity pin holding lever hung within the supplementary and rocking head. 3rd. The combination of the main head having slotted side walls, and the supplementary head hung upon trunnions within said walls for tipping its outer end downwards, while the slotted walls permit the trunnions and outer end of the head to be raised.

**No. 16,804. Improvements in Shingle Machines.** (*Perfectionnements aux machines à bardeau.*)

Calvin J. Weld, George W. Hooker, Brattleboro, and Guy C. Noble, St. Albans, Vt., U.S., 4th May, 1883; for 5 years.

*Claim.*—1st. The combination, with a circular saw, of adjustable gang frames adapted to receive and incline the bolts, the said frames being provided with operating mechanism, two or more reciprocating sliding carriages, the said carriages being connected together and provided with spring grips having tappet arms projecting therefrom, suitable stationary guides for governing the action of the spring grips and mechanism for imparting motion to the sliding carriages. 2nd. The combination of a reciprocating carriage having spring actuated grips carried by a sliding bar to clamp the bolt, and the inclined projections operating to withdraw the grips, with the oscillating frame operated by the shaft provided with cam faces. 3rd. The combination of the oscillating frame, the shaft with cam faces, and the ratchet and pawl mechanism adapted to be operated by the carriage. 4th. The combination, with a shingle sawing machine having a horizontal saw, of a horizontal saw-dust pipe R arranged at the side of the machine, to inclose the edge of the saw and convey the saw-dust therefrom.

**No. 16,805. Improvements in Ash-Sifters.**

(*Perfectionnements aux cribles à cendres.*)

Christian Cook, Baltimore, Md., U.S., 5th May, 1883; for 5 years.

*Claim.*—In combination with the box B and the removable sieve and spindle respectively represented by A and *c*, the sections *a* and *b* of the lid, the latter being notched to fit over the spindle *c*.

**No. 16,806. Improvements on Horse Power Machines.** (*Perfectionnements aux machines.*)

William O. Frost, LeRoy, N. Y., U. S., 5th May 1883; for 15 years.

*Claim.*—1st. The combination of the top plate, the planet wheel having the central recess or socket, and the hub on the top plate which the oil duct through it and on which the planet wheel turns. 2nd. The combination of the top plate, the sweep resting upon the top plate beneath an upper sweep, laying at right angles with the lower one and both secured in position by the clamping device. 3rd. The combination of the top plate, the sockets on the plate for the sweep, the bolts recessed in the inner face of the socket, and the clamping bar for securing the sweep upon its rest. 4th. The combination of the top plate, the sweep, the open rests or sockets on the plate of the sweep, and the clamping device for securing the sweep so as to permit its endwise adjustment.

**No. 16,807. Improvements on Car-Shunters.**

(*Perfectionnements aux machines de garage.*)

La Fayette Collins, Bay, Mich., U.S., 5th May, 1883; for 5 years.

*Claim.*—A car shunting device composed of the bars A B E and straps D pivotally secured to the lever C.

**No. 16,808. Improvements on Tow Boats.**

(*Perfectionnements aux remorqueurs.*)

Alexander McDougall, Duluth, Minn., U.S., 5th May 1883; for 5 years.

*Claim.*—1st. A tow-boat having a flat bottom and vertical sides, except at the ends, a semi-cylindrical upper portion throughout its entire length and having the bottom and sides toward the ends taper-

ing in outwardly curved lines to the extremities, so as to form a precisely similar conical bow and stern. 2nd. A water tight fore castle having a windlass supported by hangers and operated from a turrece deck above the fore-castle. 3rd. In combination with the turrets and communicating with them, a water tight cabin and fore-castle arranged on the upper part of the hull and communicating with each other by means of a water tight passage way in the upper central portion of the hull, all adapted to preserve the equilibrium of the hull under all conditions. 4th. The skeleton of the tow-boat composed of numerous rib frames precisely alike in size and form, each with flat lower parts and vertical sides and rounded tops throughout the body of the hull, bow and stern frames nearly annular and precisely alike in size and form, at equal distances from the extreme ends and cross beams, and stanchions secured together at their points of contact, whereby a keel and stern and stern post are dispensed with.

**No. 16,809. Improvements on Ore Separators.** (*Perfectionnements aux séparateurs des minerais.*)

George A. Metcalfe, Malden, Mass., U.S., 5th May, 1883; for 5 years.

*Claim.*—1st. The tank A having the perforated diaphragm B and water space beneath it, and provided with a gate for the discharge of the heavier metal above the diaphragm, and a gate or overflow in a higher plane for the escape of the lighter material, in combination with a rotary agitator adapted to act simultaneously on all portions of the mass.

**No. 16,810. Improvements on Canvas Boats.**

(*Perfectionnements aux canots en toile.*)

Campbell M. Douglas, Quebec, Que., 5th May, 1883; for 5 years.

*Claim.*—1st. In a boat constructed with the gunwales hinged to the stem and stern posts of the keelson, and with a canvas other suitable covering of suitable material secured to the gunwales and to the keelson, whereby the gunwales can be folded down against the keelson. 2nd. The combination, with the keelson having stem and stern posts, of the gunwales hinged to the same canvas attached to the gunwales and keelson, and longitudinal strips attached to the inner and outer surfaces of the canvas. 3rd. The combination, with the keelson having stem and stern posts, of gunwales hinged to the said stem and stern posts, canvas attached to the gunwales and keelson, and transverse stretchers or ribs adapted to support the gunwales and held in notches in the upper edge of the keelson. 4th. The combination, with a keelson having stem and stern posts, of gunwales hinged to the said stem and stern posts and composed of an outer strip C<sub>1</sub> and an inner strip C<sub>2</sub> projecting below the edge of the outer strip C<sub>1</sub> and stretchers or ribs E, the ends of which are passed between the strips E<sub>2</sub> and the canvas D which is attached to the gunwales and the keelson. 5th. The combination, with a keelson having stem and stern posts, canvas attached to the gunwales and to the keelson, of the removable stretchers or ribs *b*, the pins G, and the cross pieces H held on the ribs by the pins G. 6th. The combination, with a keelson having stem and stern posts, canvas attached to the gunwales and to the keelson, of the removable stretchers or ribs *b*, the pins G, the cross pieces H and the seat I provided with a pivoted leg K. 7th. The combination, with a keelson having stem and stern posts, canvas attached to the gunwales and to the keelson, of the removable stretchers or ribs E and the cross-bar M. 8th. The combination, with a keelson having stem and stern posts, canvas attached to the gunwales and to the keelson, of the removable stretchers or ribs E, the false bottom planks L, the buttons *l* on the keelson, and the buttons *m* on the ribs E.

**No. 16,811. Improvements on Brushes.**

(*Perfectionnements aux pinceaux.*)

Daniel A. McDonel, Mich., U.S., 5th May, 1883; for 5 years.

*Claim.*—A brush wherein the head is provided with a saw kerf at the base of the channel, which contains the bristles.

**No. 16,812. Improvements in Spectacles.**

(*Perfectionnements aux lunettes.*)

Samuel Ollendorff, Detroit, Mich., U. S., 5th May, 1883; for 5 years.

*Claim.*—The eye wires and nose piece formed of the softer and non-corrosive metals, and the rule joints and temples formed of steel, such joints being soldered at a low temperature to the eye wires.

**No. 16,813. Improvement in Fences.**

(*Perfectionnement des clôtures.*)

Alonzo Russell and Andrew J. Russell, Burr Oak, Mich., U. S., 5th May, 1883; for 5 years.

*Claim.*—The posts A, the side stakes B, the longitudinal rails D and the braces C, the parts being wired together.

**No. 16,814. Machine for Sharpening the Knives of Mowers.** (*Machine à ré-mouler les lames des faucheuses.*)

Peter Straith, Toronto, Ont., 5th May, 1883; for 5 years.

*Claim.*—1st. The combination, with the frame B provided with the boxes *d* and sliding bar D, of the slotted adjustable standards E formed in pairs secured together by the clamping screws *f*, the pivoted notched holders F and the stone A. 2nd. The combination, with the stone A, pinions *a* *b* and slotted frame B, of the transverse adjustable bar D, adjustable standards E, notched pivoted holders F, lever H and holder F pivoted thereto, and pitman *h* connecting the forward end of the lever H with the crank pin *a*.