

**No. 19,645. Feed Hopper for Roller Reduction Mills and Middlings Purifiers.** (*Trémie pour moulins à Blé à Cylindres et pour Épurateurs des Gruaux.*)

William J. Mitchell, Hespeler, Ont., 25th June, 1884: 5 years.

**Claim.**—1st. The combination of a feed hopper B, a feed board G extending its entire length, and a roller C fitting its outlet, having an axial movement in a direction reverse to the feed of the material, as set forth. 2nd. The combination of a feed hopper B, a feed board G extending its entire length, a roller C fitting its outlet, having an axial movement in a direction reverse to the feed of the material, and a brush D in contact with the feed roller, as set forth.

**No. 19,646. Speed Gauge for Locomotives.**

(*Jauge de Vitesse pour Locomotives.*)

Edward R. E. Cowell, Detroit, Mich., U. S., 25th June, 1884: 5 years.

**Claim.**—1st. A speed gauge consisting of a vessel G provided with an index tube T, the ends of which are provided with tubes O, P, communicating respectively with the bottom and top of the vessel G, within which an archimedean screw or other suitable wheel is arranged to operate substantially in the manner and for the purposes described. 2nd. In a speed gauge, the combination of the vessel G provided with a proper screw or wheel M, and a tube O carrying an index tube T, with the return bend tube P affording communication between the upper end of the tube T and the top of the vessel G, substantially as and for the purposes specified.

**No. 19,647. Manufacture of Drawers, Pantalons and Overalls.** (*Fabrication des Caleçons, Pantalons et Pardessus.*)

James C. Tracy, Baltimore, Md., U. S., 25th June, 1884: 5 years.

**Claim.**—1st. The herein-described method of cutting drawers, pantalons and overalls consisting in cutting the part comprising the one-half of the body and one leg so as to have from the waist to the ankle a continuous straight front edge *b*, and taking said edge from one selvage of the goods, taking the same edge of the other half-body and other leg from the same selvage, the waist edge of the two halves abutting, taking the straight front edges of the next pair of drawers from the other selvage of the goods and extending the tapering back edge *f* of the leg, whose front is cut from one selvage along the tapering back edge of the leg, which has its front cut from the other selvage, and finally cutting all the other parts necessary to complete one pair of drawers, pantalons, or overalls from that portion of the goods between the back body-seams *e* of the two halves and the selvage, as shown and described. 2nd. In a pair of drawers, a continuous seamless crotch-piece *l*, having a straight front edge *n* widest at the crotch or centre, and one of the tapering points extending down each drawer-leg, in combination with front facings *l* on each side of the fly-opening having their lower points *k* attached directly to the said seamless crotch-piece, as set forth.

**No. 19,648. Car Axle Truss.**

(*Armature d'Essieu de Wagon.*)

Charles E. Eaton, Chelsea, Mass., U. S., 25th June, 1884: 5 years.

**Claim.**—1st. A car axle truss formed in two sections C, C, each being a unitary casting and having an abutting flange *b* adapted to be bolted together, and a smaller flange or hub *e* with rods or stays *f* uniting the two, and arranged obliquely to the axis, substantially as specified. 2nd. The sections B of the axle formed with groove *i*, the sectional flanged ring *a*, and the enclosing ring *g*, and a recess in flange *b* to receive said ring *a*, substantially as specified. 3rd. In an axle truss formed with flange *b*, rods *f* and hub *k*, the radial stays *l* uniting said hub and rods *f*, substantially as specified. 4th. In an axle truss and in combination with hubs *e*, *k*, chambered as shown, the flange collars *n*, and ring packing *p*, substantially as specified. 5th. In a car axle truss, the outer hub *k* formed with a chambered enlargement *g* to receive the hub of wheel B, and a ring packing *k* arranged in said chamber, substantially as specified. 6th. In an axle truss, the hubs *e*, *k* formed to receive the axle B, and with an annular recess to receive the oil-packing *j*, with a radial opening to afford access thereto, substantially as specified. 7th. The hubs *e*, *k* formed with annular recesses, to be shown, and adapted to receive the anti-friction metal *i* therein, to serve as the journal bearings of axle B, substantially as specified. 8th. The sections C, C of an axle truss, formed with abutting flanges *b* respectively, formed with concentric recess *c* and projection *d* fitting therein, substantially as specified.

**No. 19,649. Soldering Tool.** (*Outil de Soudure.*)

Raoul Girouard, Quebec, Que., 24th June, 1884: 5 years.

**Claim.**—A soldering-tool constructed of a handle A, hollow stem E provided with conical tube F, hollow soldering tip H having radial bores J, gas pipe B provided with a gas burner G, and having a screw adjustment in the handle longitudinally, to approach and recede the gas burner from the conical tube at will, and thereby regulate the intensity of flame and concentrate it to enter the hollow tip, as set forth for the purpose described.

**No. 19,650. Machine for Sharpening Saw Blades.** (*Machine pour Rémouler les Lames des Scies.*)

Emil Mossberg, Elfkarloo, Sweden, 25th June, 1884: 5 years.

**Claim.**—1st. A grinding tool composed of a stock and handle, a grinding or abrading body and a driving pulley for rotating said body, supported from stock and handle, said parts constituting a grinding tool, as described. 2nd. A grinding tool composed of a stock and handle, a grinding or abrading body, a driving pulley and a friction gear connecting said pulley with the grinding body to rotate the same, said parts constituting a portable grinding tool, as described. 3rd. A

grinding tool composed of a stock and handle, a grinding or abrading body and a pulley, for rotating said abrading body, in combination with a driving pulley and a flexible connection between said pulley and the driven pulley of the tool, whereby said tool may be guided relatively to the body operated upon, as described. 4th. A grinding tool composed of a stock and handle, a grinding body and a driven pulley supported from said stock, and in combination therewith, of a driving pulley and a flexible connection between said pulley and the driven pulley, of the tool for rotating the grinding body, substantially as described and for the purpose specified. 5th. A grinding tool composed of a stock and handle, a grinding or abrading body, a driving pulley, a friction gear for transmitting the rotation of the pulley to the grinding body, and means for regulating the frictional contact of said friction gear, and said parts being supported from said stock and handle, substantially as described and for the purpose specified. 6th. A grinding tool composed of a stock and handle, a grinding or abrading body, a driving pulley, a friction gear for transmitting the rotation of the pulley to the grinding body, and means for regulating the frictional contact of said friction gear, and said parts being supported from said stock and handle, and in combination therewith, of a driving pulley and a flexible connection between said pulley and the driving pulley of the tool, substantially as described and for the purpose specified. 7th. The herein described grinding mechanism, consisting of a stock and handle, a grinding or abrading body and a driving pulley by rotating said grinding body, in combination with a driving pulley supported from an oscillating, counterbalanced frame, and a flexible connection between said driving pulley and the driving pulleys, substantially as described and for the purpose specified. 8th. The combination, in a grinding, abrading or polishing tool, of a stock or support, and grinding, abrading or polishing bodies of various forms or dimensions or both adapted to be interchangeably connected with and rotated on said stock, as described for the purpose specified. 9th. The combination, in a grinding, abrading or polishing tool, of a stock or support, an arbor rotatably mounted therein and grinding, abrading or polishing bodies of various forms or dimensions or both adapted to be interchangeably connected with said arbor, substantially as described and for the purpose specified. 10th. The herein described grinding tool, composed of a stock and handle *a*, said arbor *a*, the pulleys B, C and the grinding or abrading body E, said parts being arranged for operation, substantially as described. 11th. The herein described grinding tool, composed of the stock and handle *a*, a grinding or abrading body *e*, a driving pulley for rotating said body, and a guide adapted to guide the grinding body and maintain the same in proper position on the body acted upon said parts, being supported from the stock and handle and arranged for cooperation, substantially as described and for the purpose specified. 12th. The combination, with the stock and handle *a* at *a*2, the grinding body E and a pulley for rotating said grinding body, said parts being supported from the stock and handle, of the frame G, the slotted hanger F, pulley *g*, and appliances, substantially such as described, to transmit power to pulley *g* and through the latter to the grinding body E, substantially as described. 13th. The combination, with the stock and handle *a* at *a*2, the grinding body E and appliances, substantially such as described, for rotating said body, said parts being supported from the stock and handle, of the frame G, slotted hanger F, pulleys *g*, *g*1, *h*, friction gear *h*2, *i* and a clutch coupling for throwing said gearing in and out of gear, substantially as described. 14th. The mode of producing abrading bodies which consists in moulding a mixture of finely divided grinding or abrading substance, gum, lac and a resinous or bituminous binding substance, in or about the proportions set forth, around a socketed core and subjecting the mixture to heat and pressure, as described for the purpose specified.

**No. 19,651. Miner's Squib.** (*Pétrole de Mineur.*)

George Hayes, Girardville, Penn., U. S., 26th June, 1884: 5 years.

**Claim.**—An improved miner's squib, consisting of the tube A having an inner integral match *a*, coated or saturated with some rapidly-burning substance, and an outer match B secured to the tube over the match, substantially as herein shown and described.

**No. 19,652. Bundle Carrier for Grain Binding Harvester.** (*Porte-Gerbe pour Moissonneuses-Lieuses.*)

William Collius, Perham, Minn., U. S., 26th June, 1884: 5 years.

**Claim.**—1st. The combination, with a grain binder, of a swinging sheaf carrier secured to the same in such a position to receive the bundles as they fall from the binder table, and devices for discharging the bundles from the carrier. 2nd. The combination, with a grain binder, of a bundle carrier composed of a suitable number of curved fingers secured to the rock shaft, an abutment for holding the grain within the carrier and devices for dumping the carrier. 3rd. The combination, with a grain binder, of a rock shaft, curved fingers secured to the rock shaft and so situated as to receive the bundles of grain as they fall from the binder table, a suitable trip mechanism and an abutment for holding the grain within the carrier. 4th. The combination, with a grain binder, of a rock shaft, curved fingers secured to the rock shaft and adapted to receive the bundles of grain, a strengthening brace secured to the curved fingers, rods connecting said brace to the rock shaft and an abutment against which the table of rests. 5th. The combination, with a grain binder, the grain table of which is provided with a gate and guards secured to the lower face of said gate, of a rock shaft, curved fingers secured to the rock shaft, and an abutment secured to the binder table below the gate, substantially as set forth. 6th. The combination, with a binder table and upright standards, of the rock shaft having the curved fingers secured thereto, and the depending bearings, one of which is elongated substantially as set forth. 7th. The combination, with a grain binder, of a rock shaft, an arm secured to the rock shaft, a suitable rope or equivalent secured to the arm, curved fingers depending from said rock shaft and an abutment against which the grain rests, substantially as set forth. 8th. The combination, with a grain binder, provided with a gate and guards secured to the gate, of the rock shaft, curved fingers brace rods connecting the brace and crank shaft and an abutment, all of the above parts combined, constructed and