

No. 16,149. Improvements in Combined Sole Buffing and Cleaning and Edge Setting Machines. (*Perfectionnements aux machines combinées pour polir et nettoyer les semelles, et finir les tranchées des semelles des chaussures.*)

Enos Patten, (Co-inventor with Thomas Davey.) Lynn, Mass., U. S., 19th January, 1883; for 5 years.

Claim.—In combination, the suspended shaft A provided with pulleys *a* at pivoted frames B and C, shaft D carrying pulleys *e* and *f*, frame E, arm E1, arm F axially pivoted thereto, and head G carrying shaft pulley and tools.

No. 16,150. Improvements in Wind Instruments. (*Perfectionnements dans les instruments à vent.*)

Moses Harris, (assignee of Elias P. Needham and Charles A. Needham.) New York, N. Y., U. S., 20th January, 1883; (Extension of Patent No. 8308.)

No. 16,151. Improvements in Fanning Mills. (*Perfectionnements dans les farines-criblures.*)

Anthony Kline, Bond Head, Ont., 20th January, 1883; (Extension of Patent No. 8383.)

No. 16,152. Improvements on Wheels. (*Perfectionnements aux roues.*)

Charles Dranly, Carrizo Springs, Texas, U. S., 20th January, 1883; for 5 years.

Claim.—1st. The combination, with the screw threaded tube A provided with an annular shoulder C, of the screw threaded sleeve D having its inner end flared coincidently with the shoulder C and closed at its outer end, said inclosure being cast or formed integral with the sleeve. 2nd. The combination, with the tube A provided with an annular shoulder C, of the spokes I, the cushion layer E, the metal layer F on the same, and the nut D. 3rd. The combination, with the tube A provided with an annular shoulder C, of the spokes I, the cushion layer E, the metal layer F, the flat cushion rings G, the flat metal rings H and the nut D. 4th. The combination, with the tube A provided with an annular shoulder C, of the spokes I, the cushion layer E, the metal layer F, the flat cushion rings G and the flat metal rings H provided with an external annular ridge J. 5th. The combination, with the tube A provided with an annular shoulder C and having its outer end closed, of the spokes I and the nut D. 6th. A rim made of sheet metal folded to form a head of double thickness, and a web of double thickness. 7th. The combination, with the hub and spokes, of a rim made of sheet metal folded to form a head of double thickness, and a web of double thickness, and sockets in this web for the outer ends of the spokes.

No. 16,153. Improvements on Water Jacket Smoke Boxes. (*Perfectionnements aux boîtes à fumée avec chemise à eau.*)

Edward Huber, Marion, Ohio, U. S., 20th January, 1883; for 10 years.

Claim.—The combination of the boiler shells A, B, the flue sheet *c* and the cylindrical wall K, with the bulging jacket L rivetted to the outer shell B and to the said wall K, the latter being rivetted to the flue sheet, the whole forming a space *i* communicating directly with, and being a part of the space G.

No. 16,154. Improvements on Knit Caps. (*Perfectionnements aux bonnets en tricot.*)

Curtis F. Hoag, Kinderhook, N. Y., U. S., 20th January, 1883; for 5 years.

Claim.—1st. A knitted cap section having selvages along its sides and tapering top. 2nd. A knitted cap having its top formed of selvaged tapering pieces. 3rd. A cap body formed of sections, each section having substantially parallel sides and a tapering end, with selvages formed on said sides and end.

No. 16,155. Improvements on Car Couplings. (*Perfectionnement des accouplements des chars.*)

Nicholas L. Davis and John H. McIntyre, Rutland, Vt., U. S., 20th January, 1883; for 5 years.

Claim.—1st. The combination of the two bifurcated draw-heads A A having respectively the solid projections *a a* and the chambered projections *a2 a3*, with their corresponding bumper surfaces, the long pivoted and laterally vibrating spring coupling hooks B B located and acting within the recesses of the chambered projections *a2 a3* and the vertical rods D D having tumblers J J. 2nd. The combination of the vertically sliding and horizontally vibrating tumbler-rod D with the vibrating hook B, and the draw head A provided with the oblong slot *n*, space *o*, stop *m* and shoulders K K1. 3rd. The tumbler rods D D provided with tumblers J J and under and upper extensions *e e*, in combination with the vertically sliding and laterally vibrating spring hooks B B and with the draw-heads A A. 4th. In an automatic car-coupling device, the combination of the swinging-bar or lever E pivoted near its centre, with the lever bar H, rods I and tumbler-rod D. 5th. In an automatic car-coupling, the wheel rod F, wheel G, rods I, lever-bar H and tumbler-rod D.

No. 16,156. Improvements on Waggon. (*Perfectionnements aux wagons.*)

Silas Van Patten, Danesburg, N. Y., U. S., 20th January, 1883; for 5 years.

Claim.—1st. The combination, with the link S hinged to axle of the extension tongue block R recessed on the upper side in the form of a double hook and having the upper side of its ends bevelled, whereby, the link will pass into said recess automatically from either direction. 2nd. The combination, with the link S hinged to axle and the bolt K connecting the tongue and hounds of a lever T having a front end slot for the reception of the link, and fulcrumed at its middle offset to said bolt. 3rd. The combination, with the hinged link S, of the slotted lever T, the connecting bars U W and the connecting lever V, whereby the said hinged link can be readily raised to unlock the extension tongue. 4th. The combination, with the tongue J and the extension tongue M of the plate L, the keeper P and the dovetailed plate Q, whereby the said extension tongue is kept in place while moving forward and backward. 5th. The combination, with the suspended brake bar Y, the extension tongue M and the wagon gearing, of the rod *a* and lever *b*, whereby the brake will be applied by the rearward movement of the said extension tongue. 6th. The combination, with the brake bar Y, the extension tongue M and the wagon gearing, of the derrick *e f g* and the hoisting rope *h*, whereby the forward and backward movements of the extension tongue will raise and lower the derrick load and apply the brake.

No. 16,157. Improvements in Hay Rakes. (*Perfectionnements aux râteliers à foin.*)

The Massey Manufacturing Company, (assignee of Charles A. Massey, Matthew Garvin and William Johnston.) Newcastle, Ont., 20th January, 1883; (extension of Patent No. 8320.)

No. 16,158. Improvements on Rock Drills. (*Perfectionnements aux forêts de mine.*)

Henry C. Sergeant, New York N. Y., U. S., 20th January, 1883; (Extension of Patent No. 8357.)

No. 16,159. Improvements on Rock Drills. (*Perfectionnements aux forêts de mine.*)

Henry C. Sergeant, New York, N. Y., U. S., 22nd January, 1883; (Extension of Patent No. 8357.)

No. 16,160. Improvements in Safety Reliefs. (*Perfectionnement aux bombelles fusibles.*)

George A. Prowse, Montreal, Que., 22nd January, 1883; for 5 years.

Claim.—1st. The combination of the thimble A, plug D having openings E, and plate G. 2nd. The combination, with a vessel subjected to pressure, of a plate or surface of less strength than what is required to burst the said vessel, said plate being supported so that, when it has given way, it may be removed and replaced by a new one.

No. 16,161. Improvements in Draft Equalizers. (*Perfectionnements aux régulateurs du tirage des fardeaux.*)

Jacob Sebastian, New York, N. Y., U. S., 23rd January, 1882; for 5 years.

Claim.—1st. In a draft equalizer for vehicles, the combination, with the front axle having a spring support at its rear side, of a horizontally sliding draft bar connected at its forward portion with the front axle, and having its rear end extended directly through the said front axle and acting on the rear end portion of the spring, whereby the forward thrusts of the draft bar are relieved by the spring and sustained by the front axle. 2nd. The horizontally sliding draft bar having its rear end extended directly through the front axle of the vehicle, and provided at its forward end with lateral arms connected with the axle, in combination with a spring arranged directly in rear of front axle, and supported thereby and acting on the rearward extension of the draft bar. 3rd. The combination of the axle, the sliding draft bar having its forward end connected to the axle by means of chains, and having its rear end bifurcated and arranged to extend through the axle, the tubular India rubber spring fitted on a core projecting from the axle and the cross head, whereby the draft bar acts on the spring.

No. 16,162. Improvements on Heel Nailing Machines. (*Perfectionnements aux machines à cheviller les talons.*)

Henry A. Henderson, Lynn, Mass., U. S., 23rd January, 1883; for 5 years.

Claim.—1st. The reciprocating head having the awls, drivers and top lift spanker arranged in relation to each other to be brought successively into operative position. 2nd. The combination of the revolving head A, the notched disk *a1* and the horizontal spring bolt *a2*. 3rd. The combination of the spanker block G and top lift holding devices, for holding the top lift thereon or thereto. 4th. The combination of the block G, the top lift grasping arms and means for holding the arms to the block and for moving them to and from each other. 5th. A top lift spanker, or heel compressor, having its operative surface made slightly concave, or shaped to depress the surface of the heel from or near the centre to the edge. 6th. The combination of the post or bracket *c* and the table *e*. 7th. The combination of the post *c* having the spring holding recess *e1*, with the table *e2* and spring *a1*. 8th. The combination of the table *e2* having the recess *e1*, with the templet plate *e3* having the lug or stop *e4*, which enters said recess. 9th. A solid templet plate having a templet at one end the lugs or stops *e8 e12*. 10th. The solid nail-holder plate having nail-holder C2 at one end. 11th. A solid nail-holder plate having a nail-holder C2 at one end and the slot C16. 12th. The nail-holder C2 or perforated block having the perforated plate *e4* adapted to be partially revolved in opening and closing the holes in the nail-holder. 13th. The combination of the templet plate C2, the nail-holder C2 adapted to slide upon the templet plate, and the interposed plate *e4* adapted to be moved automatically upon the outward movement of the nail-holder over