a knitting machine of the character described, the cylinder C cut out or provided with a cavity in its upper portion for receiving a movable switch, in combination with a switch disposed or partially disposed in said cavity, a standard or support for said switch, and a spring for returning the switch to its normal position after it has engaged and pushed down the needle, substantially as described. 14th. In a knitting machine of the character described, the cylinder C, fixed cam-plates A, A^2, B, D, H, H^2, J, pivoted switch-cams E, E^2, pivoted tumblers K, K^2 provided with shoulders X, the screws N^1, stops a, d^2, springs g, standards Q, pivoted switch-plates L, L^2, and arms f, f^2 provided with the shoulders i, constructed, combined and arranged to operate substantially as described.

No. 28,000. Hame Coupling.

(*Attache de mancelle.*)

Francis M. Franklin and James G. Ryersee, Jefferson, Iowa, U. S., 12th November, 1887; 5 years.

Claim.—1st. In a hame coupling, the portion A having a semi-pherical or elliptical portion A^1 between the members or shanks B, and a socket adapted to fit over said portion, and provided with members c, c, for attaching the same to the tug, substantially as shown and for the purpose set forth. 2nd. The combination of the portion A, provided with curved shanks B, and a connecting portion upon which is formed a semispherical projecting portion A^1, which extends inwardly at an angle with said shanks, and a portion C having a socket D, and members c, c, to which the tug is attached, substantially as shown and for the purpose set forth.

No. 28,001. Ironing Board. (*Planche à repasser.*)

Toussaint Dsève, Montreal, Que., 12th November, 1887; 5 years.

Résumé.—Une planche à repasser composée de table A de forme ordinaire, munie des supports pliants B, C et G, à, charnières c e f g, et de la barre évidée F, le tout tel qui ci-dessus décrit et pour les fins sus-mentionnées.

No. 28,002. Gas Stove. (*Poêle à gaz.*)

James Smith and Harry J. Boyd, London, Ont., 12th November, 1887; 5 years.

Claim.—1st. In a gas stove, a bed of punice or lava placed immediately above the plane of the gas burner, so as to act as a spreader to the flame and receive and radiate the bed, substantially as specified. 2nd. The combination, with the above-described bed, of punice or lava I, a metallic basin G attached to the underside of top-plate B of a gas stove, and enclosing the open space C beneath the said bed of punice or lava, so as to partially exclude the outer air while admitting sufficient through openings i to supply the burner, substantially as shown and specified. 3rd. In combination with the burner of a gas stove, an attachment for purifying the flame by the more perfect combustion of the carbon, consisting of a metal tube F, trumpet-shaped as shown, provided with expanding flanges a, c at bottom and top enclosing the burner and attached thereto by ring d and supported outer ring f, substantially as shown and specified.

No. 28,003. Lubricator. (*Graisseur.*)

Wallace MacMullen and Dickson D. MacMullen, (Administrators of the estate of Michael MacMullen), Brooklyn, N. Y., U. S., 12th November, 1887; 5 years.

Claim.—1st. A lubricator consisting of two parts, the upper part holding a wick or other capillary conductor, and provided with an oil-inlet at one side, and the lower part constituting the oil-reservoir, the two parts being so arranged in relation to each other that they can be placed and removed from the journal-box at will, said lubricator being held in position in the journal-box by suitable means, substantially as set forth. 2nd. A lubricator consisting of a box or reservoir B, with a cover A having a concave upper bearing surface, a wick-holder or opening C, a wick or capillary substance D and levers F, and springs G, as described. 3rd. A lubricator consisting of the oil-reservoir B, the cover A having a concave upper surface, a wick-holder C, the wick or capillary substance D, the oil-inlet E with its cover e and spring e^1, as described. 4th. A lubricator consisting of the oil-reservoir B, the cover A having a concave upper surface, a wick-holder C, wick or capillary substance D, levers F and springs G, and the oil-inlet E provided with cover e and spring e^1, as described and shown.

No. 28,004. Car-Coupling. (*Attelage de char.*)

William C. Whittington, Caddo Mills, and John D. Stovall, Greenville, Tex., U.S., 12th November, 1887; 5 years.

Claim.—1st. In a car-coupling, the combination of the link A pivoted on the underside of the car, and having the hooked and beveiled front end, shoulder A thereon, lever B pivoted near the centre, the spring C between the outer end of the lever and the link, the side-bar D pivoted to the rear end of the lever, the spring actuated pin H secured thereto and adapted to enter a socket h in the car body, and the retractile spring K at the outer end of the lever, all constructed and arranged substantially as and for the purpose set forth. 2nd. In car-coupling, the combination of the link having a hooked front end, the lever B, spring C between the front end of the lever and the link slide bar D pivoted to the rear end of the lever, the spring-actuated latch I on the said bar having the pin H thereon to engage in a socket in the bottom of the car, and the retractile spring K at the outer end of the lever, substantially as and for the purpose set forth. 3rd. The combination, in a car-coupling, of the pivoted link A, lever B disposed approximately parallel thereto, the repressive spring C between the outer ends of said lever and link, the opposing retractile spring K and the means to normally hold the links in engagement, substantially as and for the purpose hereinbefore set forth.

No. 28,005. Process of Separating Metals from their Ores. (*Procédé de séparation des métaux de leurs minerais.*)

David W. Birmingham, Clifton, N.Y., U.S., 12th November, 1887; 5 years.

Claim.—1st. The process of separating metals from ores, which consists in amalgamating the ore, adding suitable chemicals in the amalgamating apparatus, intimately mingling or grinding the ore with mercury, and subjecting the ore pulp or shines to the action of a positive current of electricity, the positive electrode being in contact with the ore pulp or shines, the mercury and amalgam being finally deposited or collected at the negative electrode, substantially as described. 2nd. The process of separating metals from ores, and saving the floured mercury, the same consisting in intimately mingling or grinding the ore with mercury, and subjecting the ore pulp or shines containing the floured mercury to the action of a positive current of electricity, the positive electrode being in contact with the shines or pulp, the mercury amalgam being finally deposited or collected at the negative electrode, substantially as described.

No. 28,006. Car Brake. (*Frein de char.*)

John Hahu, St. Souis, Mo., U.S., 12th November, 1887; 5 years.

Claim.—1st. The combination, with a railway carriage, of a vertically movable bar bearing a brake shoe, of the rack E, the screw-threaded shaft, its pinion and the line rope connected to said rack, substantially as described, 2nd. The combination, with the shaft F for raising and lowering the bar bearing the brake of the spur-wheel keyed on this shaft, the endwise movable rack engaging said wheel and guided in a case secured to the top of the car, the case J attached to said rack and slotted as shown, a pointed bolt J annularly grooved and the pull rope H, all constructed and adapted to operate with a spring-actuated gripping device, substantially as specified. 3rd. The combination, with the line rope H on top of the car, and the brake-shaft F bearing a spurred pinion, of the rack engaging therewith, a coupling device, as described, and the spring-actuated tension device connected to the coupling pin or bolt J and also to the line rope H, substantially as described. 4th. A brake-shoe, chambered as described, in combination with a brake bar, fastening devices for the shoe, and an automatic oil supply valve, substantially as described. 5th. A brake-shoe, chambered and provided with an oil supply valve, as described, in combination with a bar which is allowed to vibrate vertically, and which is adjustable by means substantially as described. 6th. The combination of a vertically vibrating bar pivoted to the bed of a railway carriage, a brake-shoe chambered and provided with an automatic supply valve, and devices for raising said bar, as described. 7th. The chambered brake-shoe, scored as described, and provided with an oil supply channel, in combination with a spring actuated valve in this channel, adapted to be opened by contact with the axle or a collar thereon, substantially as described.

No. 28,007. Machine for Removing Stone.

(*Machine à enlever les pierres.*)

Robert Wallace, Markdale, Ont., 14th November, 1887: 5 years.

Claim.—1st. In a machine for removing stones, the combination, with a rectangular frame mounted on a waggon body, of a movable axle adapted to rotate and wind up a chain attached to the article to be raised, means provided for releasing said movable axle from its bearings at the rear end of the machine, and causing it to travel on a rack formed on said rectangular frame, and to carry the article raised to the required position over the body of the waggon, and means for lowering on to the waggon body the stone or other article raised substantially as specified. 2nd. The combination, with the rectangular frame A raised on struts B attached to a waggon body, of movable axle G held in position against stops M, M^1 on said frame, as specified, and grooved driving-wheel H designed to be actuated by draft rope m, substantially as specified. 3rd. The combination, with rectangular frame A raised on struts B attached to a waggon body, of movable axle G, stops M, M^1, pivoted arm N, lifting rod l, dog h pivoted on pawl-frame f and adapted to engage in hole i formed on top of rectangular frame, grooved pulleys J and J^1 designed to rotate by winding the rope o on axle R, spur pinions K, K^1, rack F, grooved driving wheel H actuated by draft rope m, ratchet wheel L and spring pawl a operated on a frame attached to the movable axle G, substantially as specified. 4th. The combination with the movable axle G designed to be held in position against the stops M, M^1 on the end of rectangular frame A, of gear wheel I, pinion wheel S, spur-pinions K, K^1 and rack F, chain P, rope o designed to wind and unwind on axle R, and grooved pulleys J, J^1 and spring pawl and ratchet to control the motion of said axle G, substantially as specified. 5th. The combination, with the movable axle G designed to move on rectangular frame A, of pawl frame f, guide frame C, spring E, slotted pawl a, pin b and ratchet wheel L, and rope n passing over pulley n^1 and attached to the guide frame c, so as to operate the spring pawl, substantially as specified. 6th. The dog h pivoted to the pawl frame f attached to movable axle G, and adapted to engage in slot i formed in the rectangular frame A, in combination with elbow j journalled in the pawl frame, and the lifting rod k, substantially as specified. 7th. The arm N pivoted to frame A, and designed to keep movable axle G against stop M^1, in combination with lifting rod l pivotally attached at one end to the free end of the pivoted arm N, the other end of rod l being adapted to engage in holes formed in strut B, substantially as described and for the purpose specified. 8th. The axle R journalled on the waggon frame and operated by handle p, in combination with rope o, passing over pulleys o^1 journalled on frame A, and designed to wind and unwind on grooved pulleys J, J^1 on movable axle G when the axle is moving over the rack F, substantially as specified. 9th. The guide pulley O, journalled on the frame beam E, in combination with pawl r and ratchet q, draft rope m and grooved driving wheel H fixed to the movable shaft G, the revolutions of which are designed to raise and lower stones, substantially as specified.