

**No. 18,681. Steam Actuated Valve.***(Soupape Mue par la Vapeur.)*

Henry Kessler, San Francisco, Cal., U. S., 16th February, 1884; 5 years.

*Claim.*—In a steam-actuated valve, the combination of the cylinder A having a piston B provided with piston rod Br, the steam chest C having ports C<sub>1</sub>, C<sub>2</sub>, D, D<sub>1</sub> and exhaust spout J J<sub>1</sub>, the plunger E having heads E<sub>1</sub>, E<sub>2</sub> and rod E<sub>3</sub>, said rods B<sub>1</sub>, E<sub>3</sub> being connected by means of adjustable collars and links, as shown, the rabbeted valve G having ports G<sub>1</sub>, G<sub>2</sub>, G<sub>3</sub>, and the reversing valve H having ports H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, all substantially as described.

**No. 18,682. Vehicle Spring.** *(Ressort de Voiture.)*

Harry B. Cornish and Samuel E. Hall, Hampton, Iowa, U. S., 16th February, 1884; 5 years.

*Claim.*—The combination, with the framing B and vehicle-bed, of the shafts C journalled on the underside of the said bed bars c<sub>2</sub> extended outward from said shafts and connected with the framing B. Bars c extended inward from said shafts and having a series of notches c<sub>1</sub> formed on their outer edges, and the springs having one end made fast to the vehicle-bed, and their outer ends provided with a loop slipped over the bars c and engaging the notches c<sub>1</sub>, whereby the said springs are capable of adjustment to support the bed A in a level position, with the load unequally disposed thereon, substantially as and for the purposes set forth.

**No. 18,683. Bicycle.** *(Bicycle.)*

De Lancy Kennedy, New York, N. Y., U. S., 16th February, 1884; 5 years.

*Claim.*—1st. The combination, in a bicycle, of a fixed or non-pivoted main fork, a main wheel mounted therein, a pair of cranks and a system of frictional gear for communicating power from the cranks to the main wheel, substantially as set forth. 2nd. The combination, in a bicycle, of a fixed or non-pivoted main fork, a main wheel mounted therein and having friction gear wheels revolving therewith, with an upper system of friction gears mounted in sliding bearings in the main fork, and with cranks for revolving said gears and main wheel, substantially as set forth. 3rd. The combination, in a bicycle, of a fixed or non-pivoted main fork, a main wheel mounted therein, and having friction wheels revolving therewith, with an upper system of frictional gear, a perch or back bone attached to, and having vertical movement with the shaft of the upper wheels of the system or crank shaft, substantially as set forth. 4th. The combination, in a bicycle, of a fixed or non-pivoted main fork, a main wheel mounted therein, a rear steering wheel mounted in a vertically pivoted fork, treadles mounted on the main wheel shaft, and connections between said treadles and the steering wheel, substantially as set forth. 5th. The combination, in a bicycle, of a fixed or non-pivoted main fork, a system of frictional gear in sliding bearings, a perch connected with the shaft of the upper wheels of the system, treadles mounted upon the main wheel shaft, a rear steering wheel mounted in a vertically pivoted fork, and rods connecting the treadles with the shaft of the steering wheel, substantially as set forth. 6th. The combination, in a bicycle, of a main wheel and a system of grooved and elastic tired friction gears, substantially as set forth. 7th. The combination, in a bicycle, of the treadles having arms, the main fork and springs connected thereto bearing on the arm of the treadles, substantially as set forth. 8th. Combined with a bicycle of the character described, cranks capable of adjustment, substantially as set forth. 9th. Combined with a bicycle of the character described, cranks having a ratchet and pawl attachment, substantially as set forth. 10th. The combination, in a bicycle, of a main fork perch and a rigid rod connection between the fork and perch, substantially as set forth. 11th. In a bicycle, a main fork having slots combined with gearing whose shafts have vertical movement in said slots, substantially as set forth. 12th. In a bicycle, a main fork having a slot combined with a perch connecting with said slot and having vertical movement therein, substantially as set forth. 13th. The combination, in a bicycle, of a fixed or non-pivoted main fork, a main wheel mounted therein, a rear steering wheel mounted in a vertically pivoted fork and treadles, and connections for operating the steering wheel, substantially as set forth.

**No. 18,684. Process for Making Felt Boots, Shoes and Stockings.** *(Procédé pour Confectionner les Chaussures et les Bas de Feutre.)*

James Brandy, Lawrence, Mass., U. S., 16th February, 1884; 5 years.

*Claim.*—1st. The improved process for making a felt boot, shoe or stocking, herein described, the same consisting essentially in winding the sliver of felt or felting material, as it comes from the card, directly onto a revolving cone or former, having a foot-piece or foot-pieces which conform somewhat to the shape of the foot of a finished boot, shoe or stocking, said sliver being delivered to, and wound upon the cone or former in such a manner as to cover the bottom and all other parts of said foot-piece as well as the leg portion of the cone, then removing the bat thus formed and hardening, fulling and treeing the same, substantially as set forth. 2nd. The improved process of making a felt boot, shoe or stocking, herein described, the same consisting essentially in winding the sliver of felt or felting material as it comes from the card directly onto the cone or former, having a foot-piece or foot-pieces, the cone or former being revolved and also moved backward and forward in the arc of a circle, while receiving the sliver, and the leg and foot portion including the sole produced at one operation, the boot, shoe or stocking being subsequently hardened, fulled and treed, substantially as specified. 3rd. Forming the foot-portion including the sole and the leg of a felt boot, shoe or stocking at one operation, from a sliver of felt or felting material delivered directly from the card onto a revolving cone or former having a foot-piece, substantially as and for the purpose set forth. 4th. As an improved article of manufacture, a seamless felt boot, shoe or stocking, the leg and foot portions of which, including the

sole, are formed from a sliver of felt or felting material wound upon the cone, substantially as described and subsequently hardened, fulled and treed, substantially as specified.

**No. 18,685. Stump Machine.** *(Arrache-Souche.)*

Aza A. Howe, Ulysses, Penn., U. S., 16th February, 1884; 5 years.

*Claim.*—1st. In a stump-puller, the hook i having the pulley l in its loop, and the depressions s and u near its point, for the reception of the adjacent links of the chain, substantially as set forth. 2nd. In a stump-puller, the combination, with the long hook i having pulley l and link depressions s, u, of the short link K having link depressions s, u, and supported upon the same lever as the hook i and working above, substantially as specified. 3rd. In a stump-puller, the combination, with the wooden lever a having the cap plate b secured thereto by the clips c, c and provided with the journals d, d, bail f, notches h, h and ring g, of the long grappling hook i having pulley l, the short grappling hook K, the springs n, n connecting said hook and the chain m, substantially as specified.

**No. 18,686. Mechanical Movement.***(Mouvement Mécanique.)*

Emanuel M. George, Three Rivers, Mich., U. S., 16th January, 1884; 5 years.

*Claim.*—1st. The combination, with a crank or its equivalent and its operating device, of mechanism, substantially as described, connected to, and carried by the operating means and travelling in an orbit, the centre of which is the centre of the cranks, motion and construction to overcome the dead centre of said crank, as set forth. 2nd. In a device for the purposes described, and in combination with a case A and crank pin B moving in a circular orbit, the slide C and springs D constructed to hold the slide centrally, the parts being arranged and operating, substantially as and for the purposes set forth. 3rd. In a device for the purposes described, and in combination with the case A, crank pin B and slide C and springs D, the ratchet E, pins b, b<sub>1</sub> and pawls c, d, the parts being constructed and arranged to operate, substantially as and for the purposes set forth.

**No. 18,687. Apparatus for Cultivating Soil.** *(Appareil pour Cultiver la Terre.)*

John Cooke, Richmond, Eng., 16th February, 1884; 5 years.

*Claim.*—Apparatus for cultivating soil consisting of cutting discs, fixed in combination with forwardly curved cutting blades on a shaft caused to revolve rapidly while it advances, substantially as and for the purposes herein set forth.

**No. 18,688. Draw-Bar for Connecting Locomotive and Tender.** *(Barre d'Attelage de Locomotive.)*

Thomas B. Purves and Thomas C. Craven, Greenbush, N. Y., U. S., 16th February, 1884; 5 years.

*Claim.*—1st. A draw-bar for locomotives composed of two parts, one part for connections with the locomotive sustained by a support between its extremities, and the other for connection with the tender or other vehicle, the parts being united with each other by a movable joint, substantially as and for the purposes set forth. 2nd. In combination with a draw-bar for locomotives, the strut jointed thereon, and a supporting piece or block, substantially as and for the purposes set forth. 3rd. In combination with a draw-bar for locomotives, the draw-link jointed thereon, and a supporting piece or block, substantially as and for the purposes set forth. 4th. In combination with a draw-bar for locomotives, the strut and the draw-link jointed thereon, movable independently of each other and arranged to operate as explained, and a supporting piece or block combined, substantially as and for the purposes set forth. 5th. The saddle provided with rollers and arranged to support and carry the rear end of the herein described jointed draw-bar, substantially as shown and described. 6th. The pendants suspended from the locomotive and provided with means, substantially as described, for adjusting the support for the rear end of the bar, substantially as and for the purposes explained. 7th. In combination with the travelling saddle, the supporting-yoke and the pendants secured to the locomotive, said yoke being made adjustable upon the pendants, substantially as and for the purposes set forth. 8th. In combination with the draw-bar, the strut and the draw-link jointed thereon, and arranged, substantially as explained, so that the rear end of said link is free to vibrate horizontally with the tender, for the purposes and objects set forth. 9th. In combination with the draw-bar having the strut and draw-link jointed thereon, the applied upon the tender and arranged, substantially as shown to receive and transmit the thrust upon the strut on the draft upon the link for the purpose and objects set forth. 10th. In an attachment for locomotives, a draw-bar supported at its rear end in an adjustable travelling saddle and carrying a strut and draw-link, each jointed independently to said bar, and the whole combined and arranged to operate upon the tender, in the manner and for the purposes set forth.

**No. 18,689. Brick Machine.** *(Machine à Briques.)*

John H. Konefes, Quincy, Ill., U. S., 16th February, 1883; 5 years.

*Claim.*—1st. In a brick-machine, the stationary table C, said mold-table and plungers being connected to mechanism, substantially as and set forth, whereby the two are operated jointly, the stationary table C for the purpose set forth. 2nd. In a brick-machine, the plungers E, G and revolving mold-table B, in combination with the purpose specified. 3rd. In a brick-machine, the stationary table C having circular or curved arms a connected to the centre post b, in combination with the mold-table B, jointed plungers Y<sub>3</sub>, lever Y<sub>4</sub>, the cam W and lever T, substantially as and for the purpose set forth. 4th. In a brick-machine, the stationary table C and the revolving plunger O, plungers E, in combination with the plungers G, H, forked plunger O, rods F, eccentrics I, slotted cams K, N and lever O, substantially as