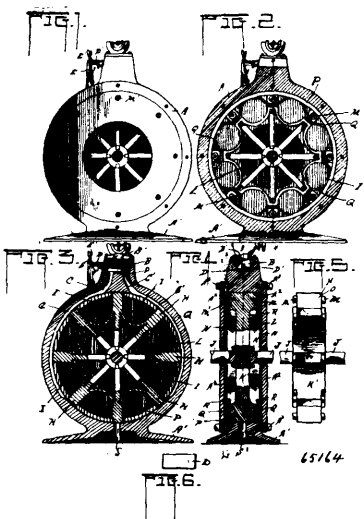


the spring, comprising a shaft mounted in supports on the upper end of the cylinder and provided with a crank, and a chain secured to the shaft and to the piston rod, substantially as herein shown and described.

No. 65,164. Rotary Engine. (Machine rotatoire.)

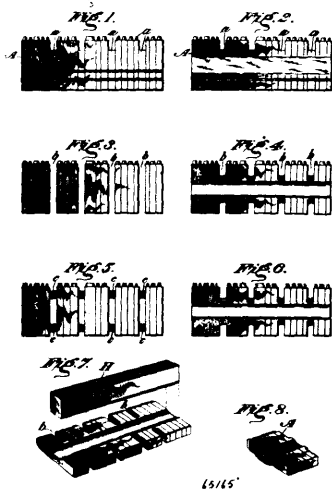


Charles T. Fonda, Wheatland, Missouri, U.S.A., 1st December, 1899; 6 years. (Filed 13th September, 1899.)

Claim.—The combination with the cylinder and the hub with its spokes, of the piston heads on the outer ends of the spokes, lugs projecting laterally from the said heads, follower plates on the sides of said spokes, means engaging the said lugs for securing said plates, a ring upon one side of said lugs and bearing against the inner periphery of the cylinder, and springs in the spaces formed between the inner sides of the piston heads and the said lugs and bearing against said ring, and means as set screws bearing on the springs to keep the same extended outward, substantially as shown and described.

No. 65,165. Type Line Bars.

(Ligne pour barres de caractères.)

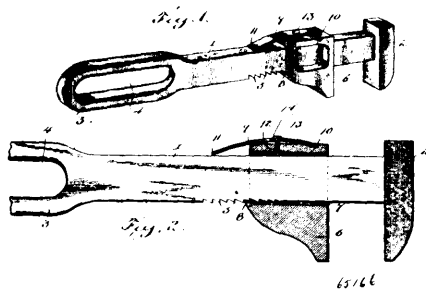


John Hewitt, Chicago, Illinois, U.S.A., assignee of Arthur E. Dowell, Washington, Columbia, U.S.A., 1st December, 1899; 6 years. (Filed 16th March, 1899.)

Claim.—1st. A type line bar consisting of a series of individual types having their bodies partially unified out of the metal thereof whereby the types are firmly united, substantially as and for the purpose described. 2nd. As an article of manufacture, a line of type, or type bar, formed of a series of individual types rigidly united by partially melting their bodies, for the purpose and substantially as described. 3rd. The herein described method of form-

ing type line bars from individual type, consisting in first assembling the type and then uniting the same by partially unifying their own bodies out of the metal thereof, substantially as described. 4th. The herein described method of forming type line bars from single type, consisting in first composing the type in line, and then partially melting the bodies thereof, for the purpose and substantially as described. 5th. The herein described method of forming justified type bars, consisting in assembling the type in line, separating the words or characters, and then partially melting the type bodies so as to bond the type together and cause the molten metal to partially fill the spaces between the words, substantially as described. 6th. In an apparatus for forming type bars, the combination of means for holding a line of type, with means for partially melting the type bodies so as to bond the types together, substantially as described. 7th. In a type bar making machine, the combination of a channel or holder to contain a line of type, with means for moving a line of type therein, means for partially melting the bodies of the type while held in said channel, and means for removing the unified line therefrom, substantially as described. 8th. In an apparatus for forming type bars, the combination of means for holding a line of type, with means for partially melting the type bodies at a plurality of points, so as to bond the types together lineally at a plurality of points, substantially as described.

No. 65,166. Wrench. (Clé à écrou.)



William H. Preston, Valley Junction, Wisconsin, U.S.A., 1st December, 1899; 6 years. (Filed 19th September, 1899.)

Claim.—1st. In a sliding jaw wrench, the combination with the shank thereof, of a movable jaw having a frictional locking engagement with the shank, a bowed leaf spring carried by the movable jaw, located exteriorly thereof, and slidably engaging the shank, and a tension screw carried by the movable jaw, engaging the bowed leaf spring intermediate of the ends thereof, and accessible from the outer side of the sliding jaw and the spring whereby the said spring may be regulated, substantially as shown and described. 2nd. In a sliding jaw wrench, the combination with the shaft thereof, of a movable jaw having a frictional locking engagement therewith, a bowed leaf spring having one end fitted in a socket or recess provided in the exterior of the back of the movable jaw and the opposite end of the spring engaging and projecting beyond one side of the jaw, the free end of the spring having a slidable engagement with the adjacent edge of the shank, and a tension screw carried by the movable jaw and passing loosely through an opening formed in the bowed spring intermediate of its points of contact or engagement with the jaw and accessible from the outer side of the sliding jaw and the spring, substantially as shown and described.

No. 65,167. Cut-off Steam Engine.

(Détente de machine à vapeur.)

Martin Olson Arnegard, Hillsboro, North Dakota, U.S.A., 1st December, 1899; 6 years. (Filed 1st April, 1899.)

N.B.—Patent No. 65,167 is a re-issue of Patent No. 58,595, dated the 7th day of January, 1898.

Claim.—1st. In an automatic variable governor cut-off for steam engines, the combination of the standard 1, the sleeve 6, vertically journaled therein, the governor levers 8, 8, fulcrumed in the upper end thereof, the vertical shaft 14, journaled in said sleeve and in operative connection with said levers, the connecting bar 17 pivoted to the lower end of said shaft 14 in combination with the rock shaft 23, the crank 21 fixed thereon, the bar 24 carried by the crank, and having guide rollers, and means substantially as described for operatively connecting the aforesaid rock shaft with the valve gear and governing the latter, as set forth. 2nd. In an automatic variable governor cut-off for steam engines, the combination of the standard 1, the sleeve 6 journaled therein and means substantially as described for imparting motion to said sleeve, the governor levers 8, 8, carried by said sleeve, the shaft 14 journaled in said sleeve, and in operative connection with said levers, in combination with the shaft 23, its crank 21, the arm 24, fixed thereon, the rollers 25, 25, mounted thereon, the connecting bar 17, pivoted to the lower end of the shaft 14, the arm 34 fixed on said shaft 23 and in operative connection with the valve gear, substantially as and for the purpose