

F. INTIHAR.
WRENCH.

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1,049,720.

Patented Jan. 7, 1913.

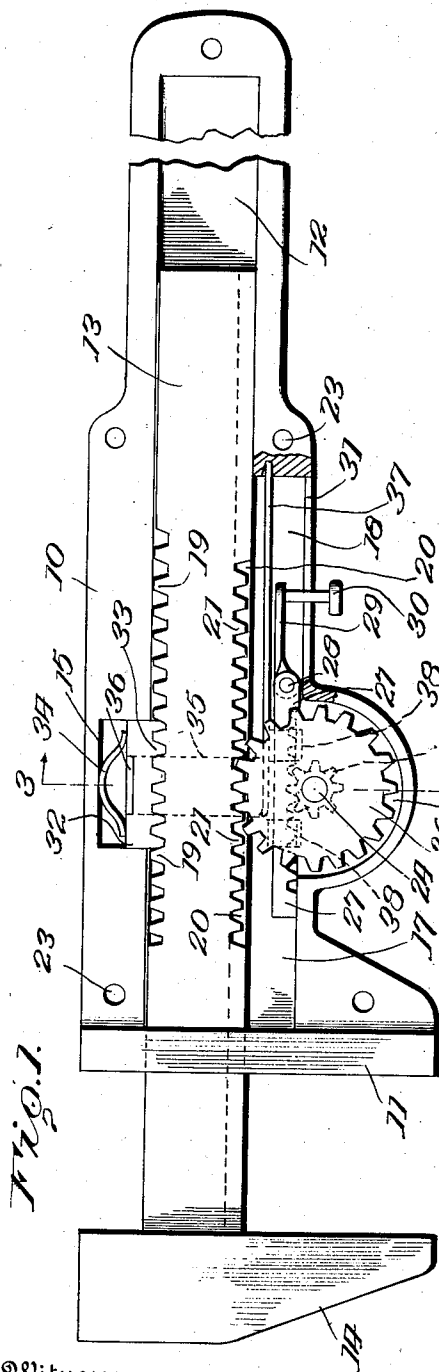


Fig. 1.

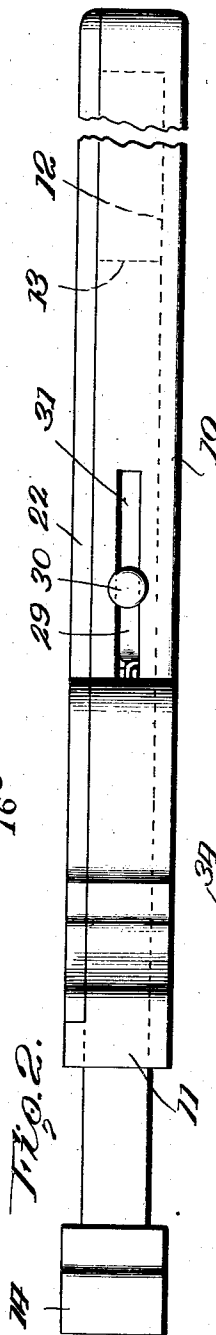


Fig. 2.

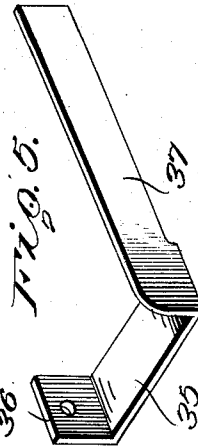


Fig. 5.

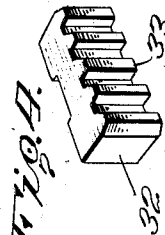


Fig. 4.

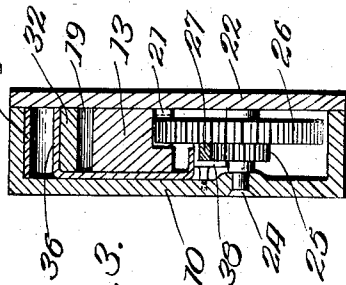


Fig. 3.

Witnesses

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WRENCH.

1,049,720.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK INTIHAR, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wrenches; of which the following is a specification.

This invention relates to improvements in wrenches of the class known as "quick action" wrenches, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a device of this character whereby a sliding stock may be released and adjusted by the same mechanism.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention: Figure 1 is a plan view of the improved wrench with the cover plate removed and partly in section; Fig. 2 is a side elevation with the cover plate attached; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; Fig. 4 is a detached perspective view of the locking member; Fig. 5 is a detached perspective view of the plate for actuating the locking member.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device comprises a body or stock represented as a whole at 10 and having a stationary jaw 11 at one end and provided with a longitudinal guideway 12 to slidably receive a bar 13 carrying the movable or outer jaw 14 which co-acts with the jaw 11 in the ordinary manner. The stock 10 is provided with an interior oblong recess 15 communicating with the guideway 12 at one side and with a semi-circular recess 16 communicating with the guideway at the opposite side. The recess 16 is located next to the projecting portion of the stationary jaw 11 and is extended at one end into a relatively small oblong recess 17 and at the other end extended in the form of a longer longitudinal recess 18, all of the recesses communicating with the guideway 12 as shown. The slidable bar 13 is provided on

one side with a plurality of teeth or indentations 19 which extend entirely through the bar and provided at the opposite side with a longitudinal depression 20 having a gear rack 21 formed in the bottom of the recess. The stock 10 together with the jaw 11 and the protuberance which incloses the recess 16 is provided with a cover member 22 which corresponds in outline to the stock and is secured thereto by screws or other suitable fastening devices 23. Mounted for rotation through the stock 10 and the cover plate 22, is a shaft 24, the shaft being located centrally of the semi-circular recess 16. Mounted upon the shaft 24 within the recess 16, is a pinion 25 and a gear 26, the latter in constant engagement with the teeth of the rack 21. Slidably disposed transversely of the recess 16 and extending into the extension recesses 17—18 is a rack bar 27 adapted to engage constantly the teeth of the pinion 25. Pivoted at 28 to the bar 27 is a small lever arm 29 provided with a push button 30 extending through a slot 31 in the stock 10 and which communicates with the extension recess 18. By this arrangement the shaft 24 may be rotated by pressure applied to the button 28 and forcing the arm 29 and bar 27 longitudinally of the stock, the movement being limited by the length of the slot 31 and thus rotate the gear 26 to a limited extent.

Slidably disposed within the oblong recess 15 is a lock block or member 32 having inwardly directed teeth 33 adapted to engage in the teeth 19 of the bar 13 when the lock member is in its inward position as shown in Fig. 1. A spring 34 is located within the recess 15 between the lock member 32 and the bottom of the recess and operating to maintain the plate with its terminals 33 yieldably in engagement with the teeth of the stock. Slidably disposed in the bottom of the longitudinal slot 12 of the stock is another plate 35 having an upturned end 36 bearing against the locking member 32 and with a lateral arm 37 extending from the other end and against which the arm 29 bears. By this arrangement it will be obvious that when the button 30 is forced inwardly, the arm 29 will act upon the arm 37 and cause the plate 35 with its upturned end 36, to move the locking member against the resistance of the spring 34 and release the terminals 33 from the teeth 19 and with-

out releasing the rack bar 27 and permit the stock 13 and its movable jaw to be instantly adjusted to the required extent.

5 The rack bar 27 is supported by guide keepers 38, so that it may be moved longitudinally of the stock without being disconnected from the pinion, and also providing means for holding the rack bar in position to be actuated by the push button when the latter is forced inwardly to actuate the releasing devices of the member 32. 10 By this means, the stock 13 and its jaw 14 may be adjusted by pressing the button 30 inwardly to release the member 32 and then moving the rack bar through the medium of the push button while holding the latter in its inward position. By this means it will be obvious that the bar 13 and its jaw 14, may be put in condition for instantaneous adjustment by simply depressing the button 28, and manipulating the latter, or 20 held firmly in fixed position by releasing the member 32 and permitting its terminals 33 to engage the teeth 19.

25 Having thus described the invention, what is claimed as new is:

1. In a wrench, a stock having a stationary jaw, a bar slidable relative to the stock and carrying a movable jaw having gear teeth in its edges, a locking member engaging the teeth at one edge of said bar, a gear wheel in constant engagement with said bar, a pinion rotative with said gear, a toothed rod slidably supported and engaging said pinion, and connecting means between said rod and said locking member. 30 35

2. In a wrench, a stock having a stationary jaw, a bar slidable relative to the stock

and carrying a movable jaw and provided with a plurality of teeth, a locking member 40 engaging the teeth of said bar, a gear wheel operatively engaging the teeth of said bar, a pinion associated with said gear, a rack bar slidable in said stock and engaging said pinion, and means whereby said bar locking 45 means and rack bar are simultaneously actuated.

3. In a wrench a stock having a longitudinal guideway and oppositely disposed recesses communicating with the guideway 50 and with a stationary jaw at one end and extended into a handle at the other end, a bar slidable in said guideway and with a movable jaw at one end and teeth in its opposite edges, a locking member spring-supported in one of said recesses and with inwardly directed terminals engaging with one set of said teeth, a pinion and a gear mounted for rotation in the other of said recesses, said gear engaging with the other 60 set of said teeth, a trip plate movable transversely of said guideway and having a lateral projection at one end engaging said locking member and with a lateral extension at the other end, a rack bar engaging 65 said pinion and adapted to bear against said lateral extension, an arm pivoted to said rack bar, and a push button connected to said pivoted arm.

In testimony whereof, I affix my signature in presence of two witnesses. 70

FRANK INTIHAR. [L. S.]

Witnesses:

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