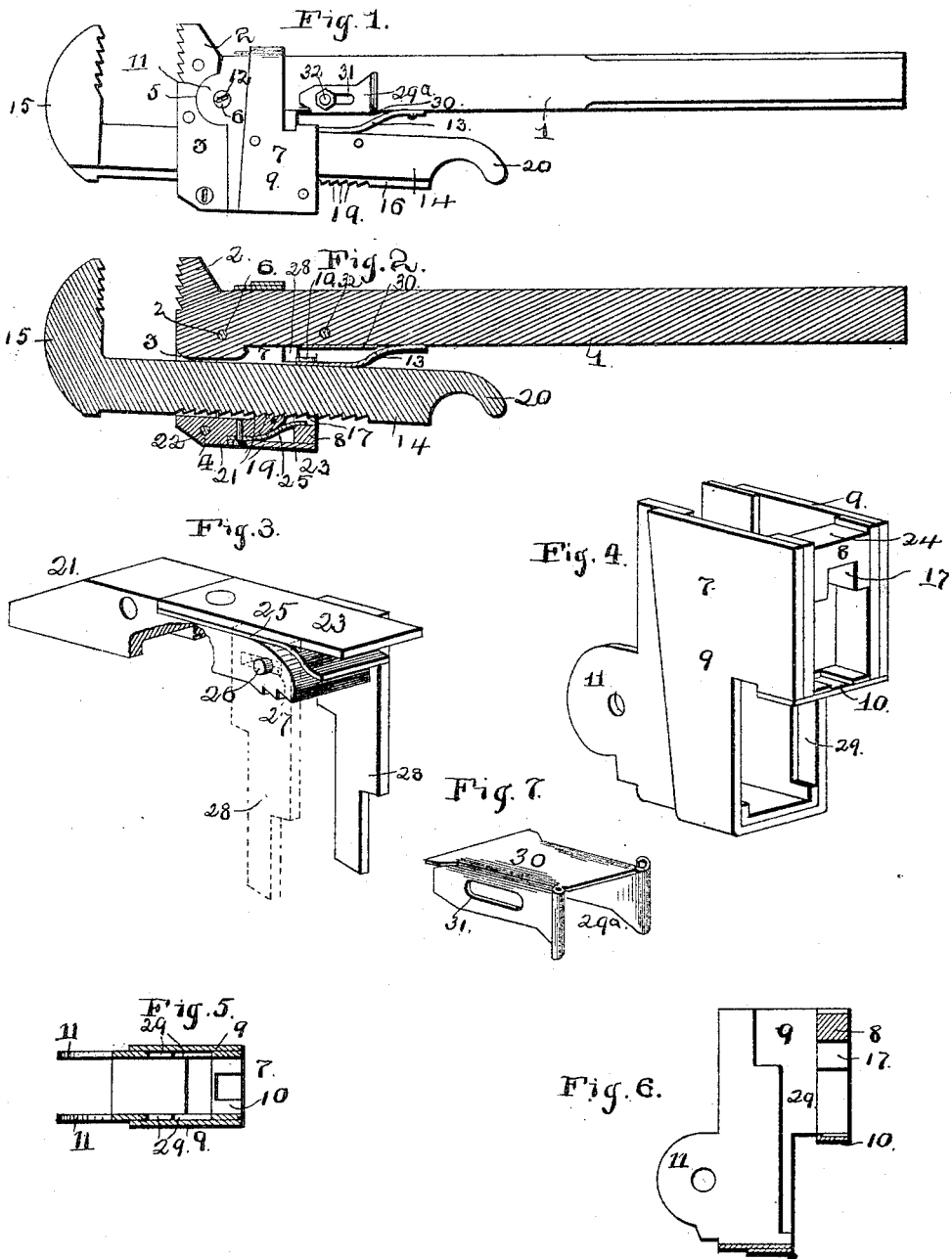


(No Model.)

M. CUMMINS.
ROD OR PIPE WRENCH.

No. 453,736.

Patented June 9, 1891.



Witnesses

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UNITED STATES PATENT OFFICE.

MICHAEL CUMMINS, OF LEADVILLE, COLORADO.

ROD OR PIPE WRENCH.

SPECIFICATION forming part of Letters Patent No. 453,736, dated June 9, 1891.

Application filed September 23, 1890. Serial No. 365,910. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL CUMMINS, a citizen of the United States, residing at Leadville, in the county of Lake and State of Colorado, have invented a new and useful Rod or Pipe Wrench, of which the following is a specification.

This invention has relation to rod and pipe wrenches, the objects in view being to provide a simple and convenient rod or pipe wrench adapted to be adjusted and manipulated by one hand of the operator, leaving the other hand free to be employed for any other purpose, such as holding a pipe or rod while applying the wrench.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is a detail in perspective of the spring-pressed locking-pawl. Fig. 4 is a detail in perspective of the rocking frame. Fig. 5 is a transverse section of the same. Fig. 6 is a vertical longitudinal section. Fig. 7 is a detail in perspective of the slide.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the main or stationary handle or stock of the wrench, the upper end of which is provided with a rigid jaw 2, extending beyond one edge of the stock. A pair of ears 3 extend rearwardly from the stock and in an opposite direction from the jaw 2, and said ears are provided near their rear ends with perforations 4. The inner edges of the ears 3 opposite the stock are provided with curved openings 5, and concentric with the openings a pivot-hole 6 is formed in the stock.

7 designates a rectangular frame open at its rear end for the reception of a narrow bar 8, connecting the opposite longitudinal sides 9 of the frame. The front portion of the frame at its lower edge is cut away or made narrower than the rear portion, and the front edges of the lower portion of the sides are connected by a transverse bar 10. The front or narrow portion of the frame receives the stock 1, and the upper edges of said frame

are provided with curved ears 11, through which and the opening of the stock is passed a pivot-bolt 12. A spring 13 is secured to the inner edge of the stock and serves to press against the transverse bar 10, and thus yieldingly maintain the frame with its lower end swung from the stock 1.

14 designates the sliding stock or shank, 60 which fits within the rear half of the rocking frame between the bars 8 and 11, and said stock terminates at its upper end in a head 15, designed to coact with the head or jaw 2, said heads or jaws being provided with oppositely-disposed serrations or teeth and at its opposite sides with shoulders, which rest upon the ears 3. The rear edge of the stock 13 is provided with a rib 16, which rib rides in a recess 17, formed in the bar 8. The rib is provided for a portion of its length with a series of outwardly-disposed teeth 19, and at its lower end is cut away to form a finger-rest 20.

21 designates a pawl pivoted in the perforation 4 of the ears by means of a pivot-bolt 22. The pawl 21 has its lower outer face cut away, and a plate 23 extends down opposite the same and rests in a recess 24 formed in the outer edge of the bar 8. A spring 25 is secured to the pawl between it and the plate, 80 and the lower end of the spring passes and presses upon the inside of the bar 8, thus serving to normally maintain the pawl in engagement with the teeth of the rack-bar of the reciprocating stock, so that said stock 85 may be drawn in to adapt the same for small-sized pipes or rods, but not extended to adapt the wrench for larger size. A pin 26 is passed through the lower end of the pawl and extends beyond the opposite sides of the same, the ends of the pin resting in transverse slots 27 formed in a pair of arms 28, said arms extending forwardly from the pawl and being seated in recesses 29 formed in the inner surfaces of the side walls of the rocking frame 95 and projecting over the cross-bar 11 and extending beyond the same. In this position it is yieldingly held by means of the spring of the pawl.

29^a designates a U-shaped slide, which embraces the inner edge of the stock 1, upon which it rides, terminates at its lower edge in a transverse rib 30, and above the same has its opposite sides slotted, as at 31, for the

reception of a transverse bolt 32, which passes through the stock, the head and nut of the bolt embracing the slide.

The operation of my invention, which consists simply in the manner of adjusting the same, whereby it is adapted to grip large and small pipes and rods, is as follows: Grasping the stock 1 with one hand, the thumb of the operator is first employed to force the slide upwardly to the end of its slot. The slide thus takes between the stock and the inner ends of the arms, and said arms are forced outwardly against the tension of the spring of the pawl, and being connected with the pawl serves to throw the teeth of the pawl out of engagement with the teeth of the rack-bar of the stock. When this has been accomplished, the thumb is removed from the slide and takes into the thumb or finger-rest of the stock, so that said stock may be raised or lowered a desired distance to adapt the same to a rod or pipe, in which condition the wrench is applied and an accurate adjustment obtained. The slide is now withdrawn, so that the pawl engages the rack-bar, and a lock of the sliding stock is accomplished, while at the same time a still finer adjustment may be obtained, inasmuch as, regardless of the position of the pawl, the sliding stock can always be drawn inwardly.

Having described my invention, what I claim is—

1. In a wrench, the combination, with a stock 1, terminating at its upper end in a jaw 2, and a rocking frame 7, pivoted to the stock and extending rearwardly therefrom and having an opening in its bottom, of a sliding stock 14, mounted in said opening and terminating at its upper end in a head 15 and provided upon its rear side with a rack-bar, a pawl 21, spring-pressed into engagement with the rack-bar and mounted in the frame, and means for throwing the pawl out of engagement with the frame and for spreading the stocks, substantially as specified.

2. In a wrench, the combination, with the fixed stock 1, terminating at its upper end in a jaw 2 and in rearwardly-disposed ears, and a frame 7, receiving the stock and pivoted thereto, of a sliding stock 14, mounted between the ears and passed through the frame, a pawl 21, pivoted between the ears, extending into the frame, a spring for pressing the pawl into engagement with a rack-bar on the movable stock 14, arms 28, extending from the pawl through an opening in the frame, a spring 13, secured to the fixed stock and pressing against the inner edge of the frame, and a slide 29^a, secured to the fixed stock and adapted to be wedged between the arms and said fixed stock, and thus throw the pawl out of engagement with the teeth, substantially as specified.

3. In a wrench, the combination, with a

fixed stock 1, terminating at its upper end in a forwardly-disposed jaw 2 and rearwardly-disposed ears 3, provided upon their under edges opposite the stock with semicircular recesses, a frame 7, oblong in shape, embracing the stock and provided with opposite perforated ears fitting in the recesses of the rearwardly-disposed ears, and a bolt 12, passing through the stock and the ears of the frame, of a sliding stock 14, mounted between the ears of the fixed stock and passing through an opening in the bottom of the frame, said stock terminating at its upper end in a forwardly-disposed jaw 15 and at its lower end in a finger-rest and upon its rear side provided with a rib having outwardly-disposed teeth, a pawl 21, pivoted between the ears of the fixed stock 1 and having its lower end engaging the teeth of the rack-bar of the stock 14, cut away upon its under side and provided with a plate fitting a recess in the rear end of the frame, a spring 25, secured to the rear side of the pawl and taking over a bar located in the frame, a flat spring 15, secured to the fixed stock and pressing against the inner end of the frame, a U-shaped slide 29^a, embracing the inner edge of the fixed stock, slotted and supported by a pin, a pin 26, passed through the lower end of the pawl, and opposite arms 28, having slots for the reception of the pin, forwardly disposed and extending through an opening formed in the frame opposite the slide, substantially as specified.

4. In a wrench, the main stock or handle 1, having the jaw 2, combined with the sliding supplemental and shorter stock 14, the rocking frame 7, pivoted to the stock 1 and having an opening, through which the sliding stock 14 passes, teeth formed on the stock 14, and a pawl carried by the rocking frame to engage the teeth of the sliding stock, as set forth.

5. In a wrench, the main stock or handle 1, having the jaw 2, combined with a sliding supplemental and shorter stock 14, the rocking frame 7, pivoted to the stock 1 and having an opening, through which the sliding stock 14 passes, teeth formed on the stock 14, and a pawl carried by the rocking frame to engage the teeth of the sliding stock, a spring 13, arranged between the two stocks to hold them apart, and a slide 29^a, adapted to be wedged between the frame carrying the pawl and the fixed stock to throw the pawl out of engagement, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MICHAEL CUMMINS.

Witnesses:

T. N. MCCORMICK,
J. F. LEWIS.