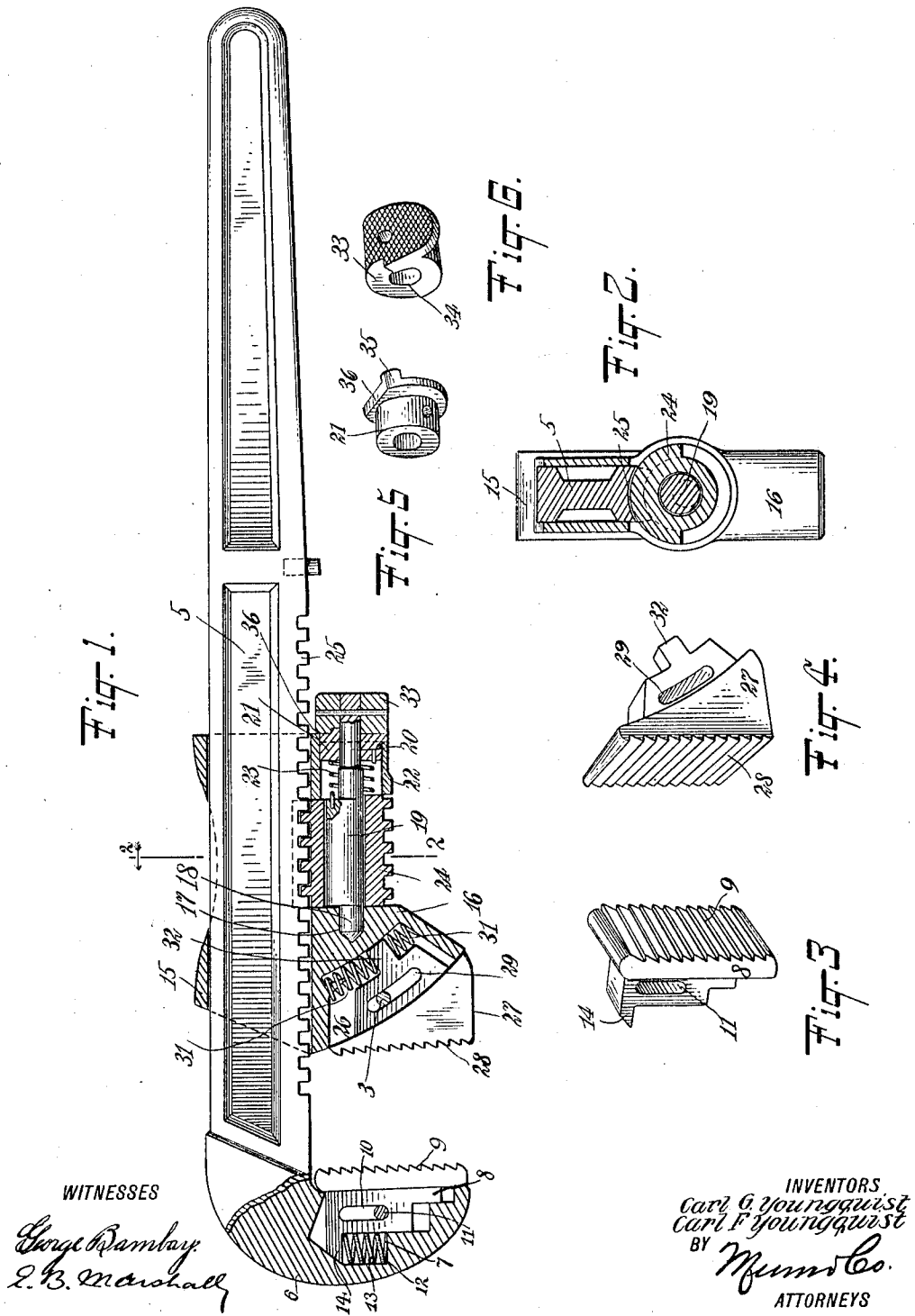


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WRENCH.

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1,048,380.

Patented Dec. 24, 1912.



UNITED STATES PATENT OFFICE.

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WRENCH.

1,048,380.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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To all whom it may concern:

Be it known that we, CARL G. YOUNGQUIST and CARL F. YOUNGQUIST, citizens of the United States, and residents of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

Our invention relates to wrenches and it has for its object to provide one with jaw members which are movable relatively to their supporting heads to assist in obtaining a firm hold on a pipe, resilient means being provided for holding the jaw members yieldingly in position relatively to the supporting heads.

Additional objects of the invention will appear in the following complete specification, in which the preferred form of our invention is disclosed.

In the drawings similar characters of reference denote corresponding parts in all the views, in which—

Figure 1 is a side sectional elevation of the invention; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; Fig. 3 is a perspective view showing one of the pivoted jaw members; Fig. 4 is a perspective view showing the other pivoted jaw member; and Figs. 5 and 6 are perspective views showing the collars which assist in holding the eccentric yieldingly in position.

By referring to the drawings it will be seen that a shank member 5 is provided, having a head member 6, with a recess 7, the said angular recess extending through the inner side of the head member 6. In this recess 7 there is disposed a jaw member 8, provided with the usual outwardly disposed teeth 9, the jaw member 8 having a slot 10, in which is disposed a pin 11, secured to the sides of the head member 6. There is a shoulder 12 in the recess 7, against which is disposed one end of a spring 13, the other end of the spring 13 being disposed against a flange 14, integral with the jaw member 8.

It will be understood that with this construction the jaw member 8 will normally be disposed relatively to the head member 6, as shown in the drawings, but that the said jaw member 8 may be moved downwardly against the tension of the spring 13 to assist in obtaining a firm grip on a pipe. A sleeve 15 of the usual form is provided, in which the shank 5 is disposed, the head

member 16 being mounted on this sleeve 15, there being a bearing 17 in the said head member 16, in which is journaled a stud 18 of the eccentric 19. The other stud 20 of the said eccentric is journaled in a collar 21, disposed in the sleeve 22, which is integral with the sleeve 15. A spring 23 is provided, which is disposed around the stud 20, one end of the spring 23 being secured to the eccentric 19, and the other end to the collar 21. Mounted on the eccentric 19 there is a screw member 24, the teeth of which are adapted to mesh with the teeth 25 on the shank member 5. There is a recess 26 in the head member 16, and in this recess there is disposed a jaw member 27, having outwardly disposed teeth 28. The jaw member 27 is provided with a curved slot 29, in which is disposed a pin 30, the said pin 30 being secured to the sides of the head member 16. Springs 31 are disposed against the upper and lower walls of the recess 26, the springs 31 pressing against the flange 32 which is integral with the jaw member 27. The stud 20 projects beyond the collar 21, and it has secured to it a collar 33, having a set-off portion 34, adapted to engage a lug 35, on the collar 21. The collar 21 has a flat upper surface 36 disposed against a flat surface on the sleeve 22 to prevent its rotation relatively to the said sleeve.

In using the invention the eccentric member 19 is rotated with the sleeve 33, until the screw member 24 is moved so that its teeth will be freed from the teeth 25 on the shank member 5. When this has been done, the sleeve 15 is moved readily to a position where the jaw members 8 and 27 will be disposed with their teeth against a pipe or other object which is to be held by the wrench. When this is done the eccentric 19 is permitted to be rotated by the spring 23 so that the teeth on the screw member 24 will again mesh with the teeth 25 on the shank member 5. The jaw member 27 is then forced against the pipe or other object by the turning of the screw member 24, the jaw members 8 and 27 accommodating themselves to the surfaces of the pipe or other object. This movement is permitted by the springs 13 and 31.

It will be understood that not only will the wrench serve all the purposes for which wrenches of this type are designed, but that it will also perform all the functions for which Stilson wrenches have been devised.

Having thus described our invention we claim as new and desire to secure by Letters Patent:

1. In a wrench a shank having a head, a
5 second head mounted for moving on the shank to and from the first-mentioned head, the face of the second-mentioned head in the direction of the first-mentioned head having
10 a recess, and being curved convexedly from the shank away from the first-mentioned head, a jaw having teeth projecting away from the shank and a curved face, disposed against the said face, a guide on the jaw
15 with a curved slot and disposed in the recess, a pin disposed through the slot and secured to the second-mentioned head, and springs in the recess engaging opposite sides of the guide.
2. In a wrench a shank having a head
20 with a recess, a jaw disposed for sliding in the recess and having a slot, a pin disposed through the slot and secured to the head, a second head mounted for moving on the shank to and from the first-mentioned head,
25 the face of the second-mentioned head in the direction of the first-mentioned head having a recess, and being curved convexedly from the shank away from the first-mentioned head, a jaw having a curved face disposed
30 against the curved face of the second-mentioned head and having a guide with a

curved slot disposed in the recess, teeth on the second-mentioned jaw projecting away from the shank, a pin disposed through the curved slot and secured to the second-mentioned head, and springs in the second-mentioned recess engaging the opposite sides of the guide.

3. In a wrench a shank having a head, a second head mounted for moving on the
40 shank to and from the first-mentioned head, the face of the second-mentioned head in the direction of the first-mentioned head having a recess, with end members and being curved convexedly from the shank away
45 from the first-mentioned head, a jaw having a curved face disposed against the curved face of the head, and a guide with a curved slot disposed in the recess, the movement of the guide being limited by the end members
50 of the recess, a pin disposed through the slot and secured to the second-mentioned head, and springs in the recess engaging opposite sides of the guide.

In testimony whereof we have signed our
55 names to this specification in the presence of two subscribing witnesses.

CARL G. YOUNGQUIST.
CARL F. YOUNGQUIST.

Witnesses:

SENECA SMITH,
SAM R STOTT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."