

No. 818,901.

PATENTED APR. 24, 1906.

A. MEFFERT.
PIPE WRENCH.

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Fig. I.

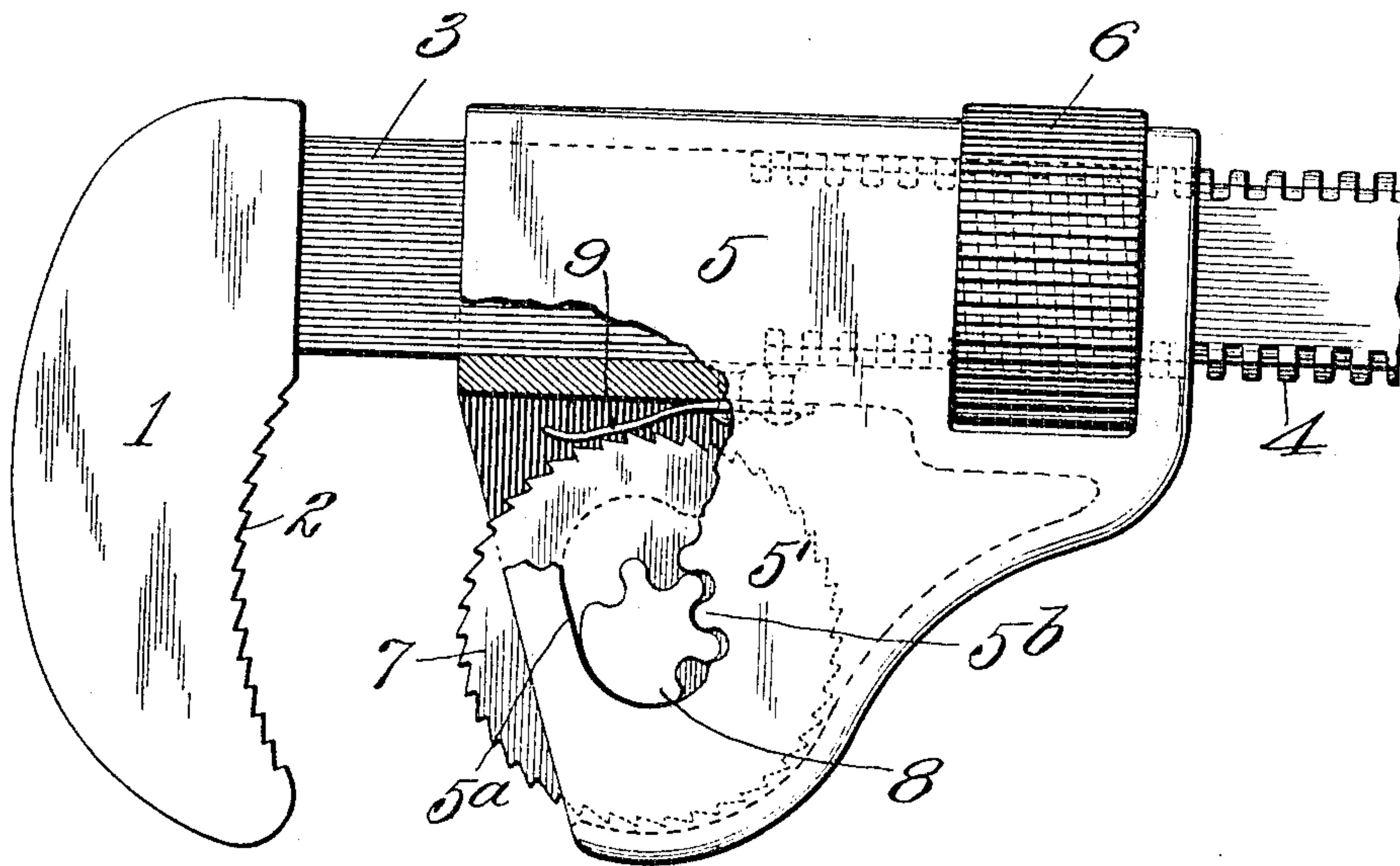
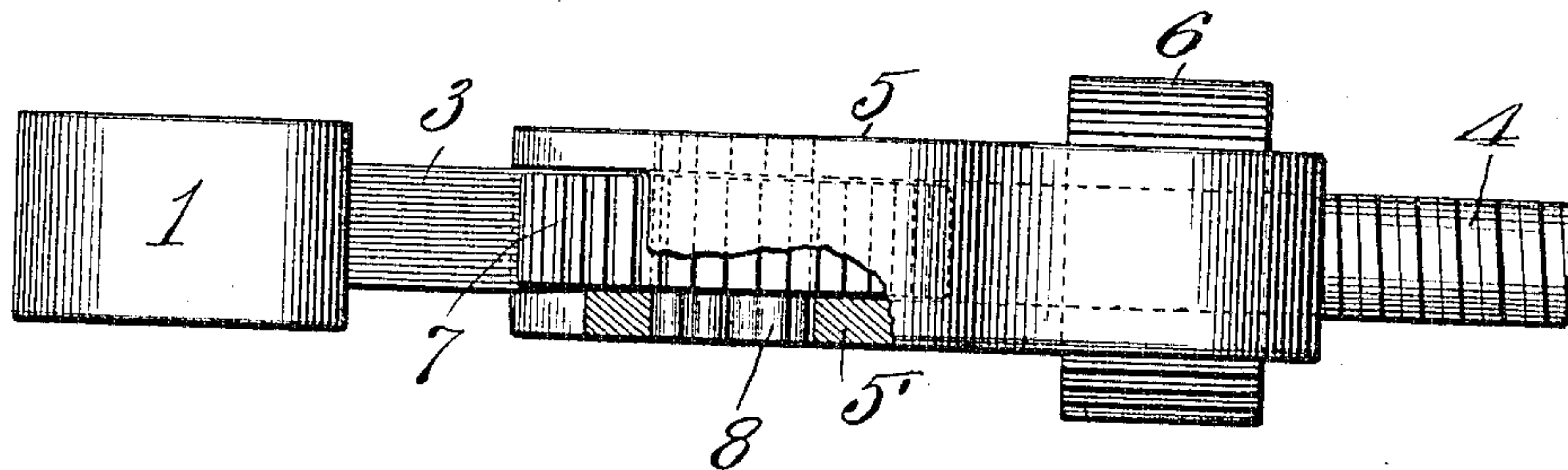


Fig. II.



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ALEXANDER MEFFERT, OF ST. LOUIS, MISSOURI.

PIPE-WRENCH.

No. 818,901.

Specification of Letters Patent.

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Application filed November 27, 1905. Serial No. 289,177.

To all whom it may concern:

Be it known that I, ALEXANDER MEFFERT, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have

invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification. My invention relates to that class of wrenches used for gripping and turning pipes; and it has for its object to provide in a wrench of this character a simple movable gripping member that is caused to approach the fixed jaw of the wrench and the pipe between said fixed jaw and gripping member when the wrench is operated, whereby a firm grip is secured upon the pipe.

Figure I is a side view of my wrench, partly broken out. Fig. II is an edge view of the wrench, partly broken out.

1 designates the fixed jaw of my wrench, which is provided at its pipe-engaging inner face with serrations 2. The jaw 1 is readily carried by a shank 3, that may have at its end opposite to that at which the jaw is located in a handle. (Not shown.) The shank 3 is provided with screw-threads 4.

5 designates a movable jaw that is slidably fitted to the shank 3, and within which is positioned a nut 6, adapted to operate upon the threaded portion of the shank 3 for the purpose of reciprocating said movable jaw. The portion of the movable jaw that opposes the gripping-face of the fixed jaw 1 is recessed to provide a pair of side walls 5'. In each of these side walls is an elongated opening extending transversely through the wall. The forward face of each of said openings is inclined, as seen at Fig. 5^a, Fig. I, and at the rear of each opening are teeth 5^b, these teeth being preferably disposed in an inclined line corresponding to that of the inclined forward faces 5^a.

7 designates a rotatable pipe-gripping member which is provided at its periphery with serrations or teeth. This gripping member 7 is located between the side walls of the movable jaw in opposition to the serrated inner face of the fixed jaw 1, and it is adapted to when rotated have movement imparted to it in a direction toward the fixed jaw independent of movement of the movable jaw by which it is carried. This movement of the gripping member is secured through the medium of a pair of toothed segments or

rack members 8, projecting from the sides of the gripping member at its axis and arranged to mesh with the teeth 5^b of the movable jaw.

When my pipe-wrench is applied to a pipe, the movable jaw is first advanced sufficiently to cause the gripping member 7 to touch the pipe at a point diametrically opposite that against which the serrations of the fixed jaw bear. The wrench is then moved in a circular path relative to the pipe, and as it is so moved the gripping member 7 is caused to approach the pipe and be firmly pressed thereagainst, due to the operation of the teeth of the rack members 8 in the teeth 5^b of the movable jaw, whereby the most forward portions of the rack members are caused to travel on the inclined forward faces 5^a.

9 designates a spring secured to the movable jaw and having a free end which rests against the periphery of the gripping member 7 and serves to hold said gripping member retracted except when the wrench is applied to a piece of pipe, at which time the spring yields and permits the gripping member to partake of the movement described. When the wrench is removed from the pipe, the spring serves to return the gripping member to its normal position.

I claim—

1. In a wrench, the combination of a shank and a fixed jaw carried thereby, a movable jaw slidably fitted to said shank, and a rotatable gripping member loosely mounted in said movable jaw and having engagement with said movable jaw whereby it is rotated and moved in a direction transverse to its axis, substantially as set forth.

2. In a wrench, the combination of a shank and a fixed jaw carried thereby, a movable jaw slidably fitted to said shank, and a rotatable member loosely mounted in said movable jaw and geared to said movable jaw, substantially as set forth.

3. In a wrench, the combination of a shank and a fixed jaw carried thereby, a movable jaw slidably fitted to said shank and having side walls provided with elongated openings, and a rotatable gripping member mounted in said elongated openings and geared to said movable jaw, substantially as set forth.

4. In a wrench, the combination of a shank, and a fixed jaw carried thereby, a movable jaw slidably fitted to said shank, means for reciprocating said jaw, and a rotatable gripping member mounted in said movable jaw; said movable jaw having side walls provided

with openings and said gripping member being provided with means located in said openings arranged to impart a forward movement to said gripping member, substantially
5 as set forth.

5. In a wrench, the combination of a shank and a fixed jaw carried thereby, a movable jaw slidably fitted to said jaw, a rotatable gripping member mounted in said movable
10 jaw and provided with rack members at its sides; said movable jaw having side walls between which said gripping member is located provided with openings and having teeth arranged in mesh with the teeth of said rack
15 members, substantially as set forth.

6. In a pipe-wrench, the combination of a shank and a fixed jaw carried thereby, a movable jaw slidably fitted to said shank and having side walls provided with openings, and teeth at the rear of said openings, a ro- 20 tatable gripping member located between said side walls and provided with rack members meshing with said teeth, and a spring carried by said movable jaw and bearing against said gripping member, substantially 25 as set forth.

ALEXANDER MEFFERT.

In presence of—

BLANCHE HOGAN,
H. G. COOK.