

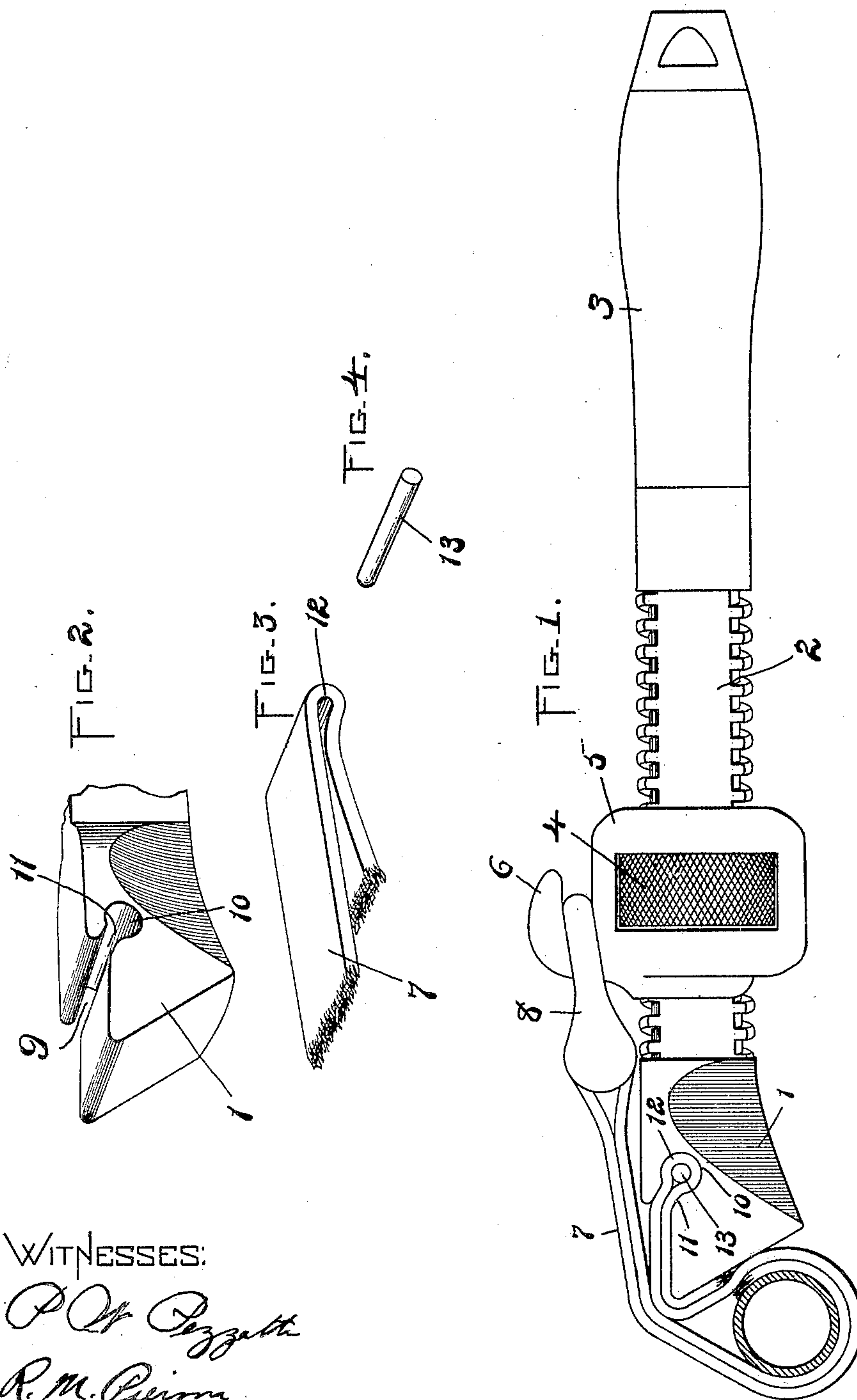
No. 667,853.

Patented Feb. 12, 1901.

F. E. SANDS.
PIPE WRENCH.

(Application filed Mar. 19, 1900.)

(No Model.)



WITNESSES:

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FRED E. SANDS, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO THE
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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 667,853, dated February 12, 1901.

Application filed March 19, 1900. Serial No. 9,242. (No model.)

To all whom it may concern:

Be it known that I, FRED E. SANDS, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

This invention relates to pipe-wrenches; and it consists of an improvement in the means for attaching the flexible pipe-encircling member to the head of the wrench.

Of the accompanying drawings, Figure 1 represents a side elevation of a pipe-wrench embodying my improvement. Fig. 2 represents a perspective view of the head of the wrench. Fig. 3 represents a perspective view of the fixed end of the pipe-encircling member. Fig. 4 represents a perspective view of the retaining-pin.

The same reference characters indicate similar parts or features in all the drawings.

Referring to the drawings, 1 is the head of the wrench, 2 the screw-threaded shank or stem, and 3 the handle.

4 is the adjustable nut mounted on the stem 2, and 5 is the saddle embracing said nut and having a hook 6.

7 is a flexible pipe-encircling member attached at one end to the head 1 of the wrench and having at the other end a loop 8, which takes over the hook 6. The movement of the nut 4 and saddle 5 along the stem 2 adjusts the flexible member 7 for different diameters of pipe. The flexible member 7 is attached to the head 1 of the wrench by novel means, which constitute my present invention and, as herein shown, consist of a transverse recess or groove 9, formed in the head 1 and having an enlarged body portion and a contracted neck 11, a bight or loop 12, formed by doubling the flexible member 7 within the recess 9, and a retaining-pin 13, inclosed by the bight or loop 12 within the enlarged portion 10 of the groove and acting to expand said bight within said enlarged portion to prevent the withdrawal of the member 7 by longitudinal movement. The pin 13 is inserted and removed by a movement longi-

tudinally of the groove 9 and transverse to the head 1 of the wrench.

Owing to the fact that the front and rear walls of the recess 9 are integral with the head a structure is provided which is much stronger and less liable to displacement of parts than one employing a removable wall. While the recess 9 is shown in Fig. 2 as open at both ends, it is obvious that one end might be closed. It is essential, however, that one end be open for the insertion of the loop or bight 12 and the pin 13 contained in said loop or bight. The rigid integral walls of the recess, particularly the contracted neck thereof, hold the flexible pipe-encircling member with sufficient friction against the inner walls of the recess and also around the pin to prevent accidental slipping of the parts endwise during manipulation of the wrench.

I claim—

1. A pipe-wrench provided in the head thereof with a recess open at one or both ends and having an enlarged body and a contracted neck, the front and rear walls of said recess being integral with the head, and a flexible pipe-encircling member attached to the head by being doubled to make a bight or fold within said recess and a retainer to expand said bight within the body of the recess.

2. A pipe-wrench provided in the head thereof with a transverse recess or groove having an open end and an enlarged body and a contracted neck, the front and rear walls of said recess being integral with the head, and a flexible pipe-encircling member attached to the head by being doubled to make a bight or fold within said recess, and a retaining-pin inclosed by said bight within the body of the recess and acting to expand the bight therein.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRED E. SANDS.

Witnesses:

C. W. WILSON,
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