

No. 667,852.

Patented Feb. 12, 1901.

F. E. SANDS.
PIPE WRENCH.

(Application filed Feb. 5, 1900.)

(No Model.)

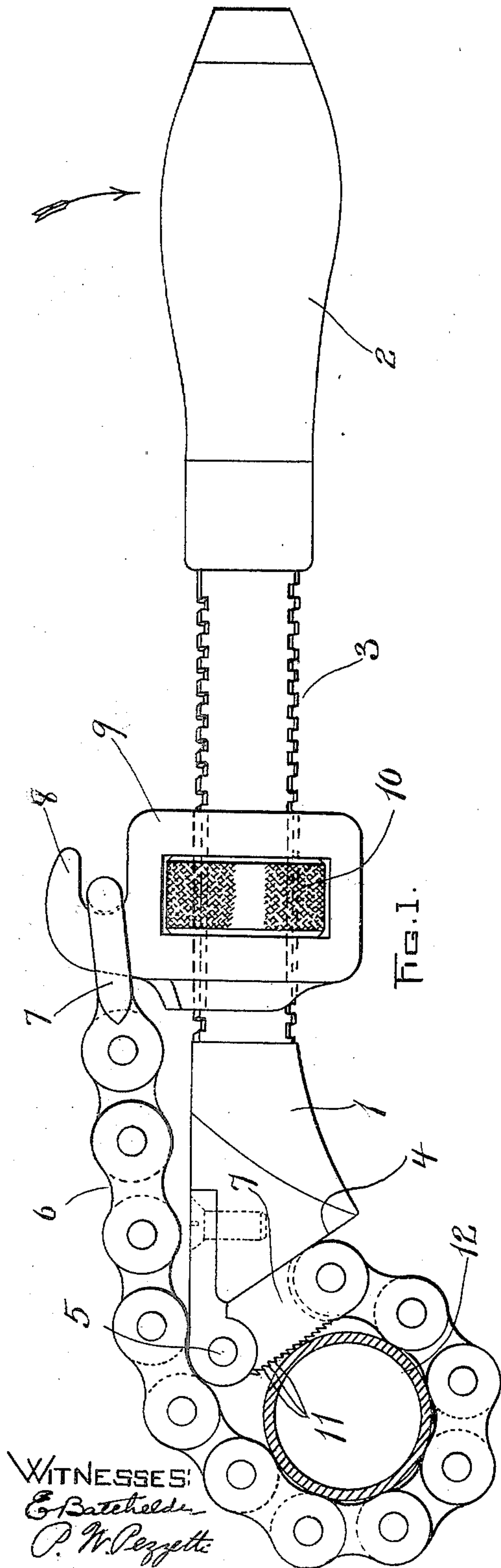


FIG. 1.

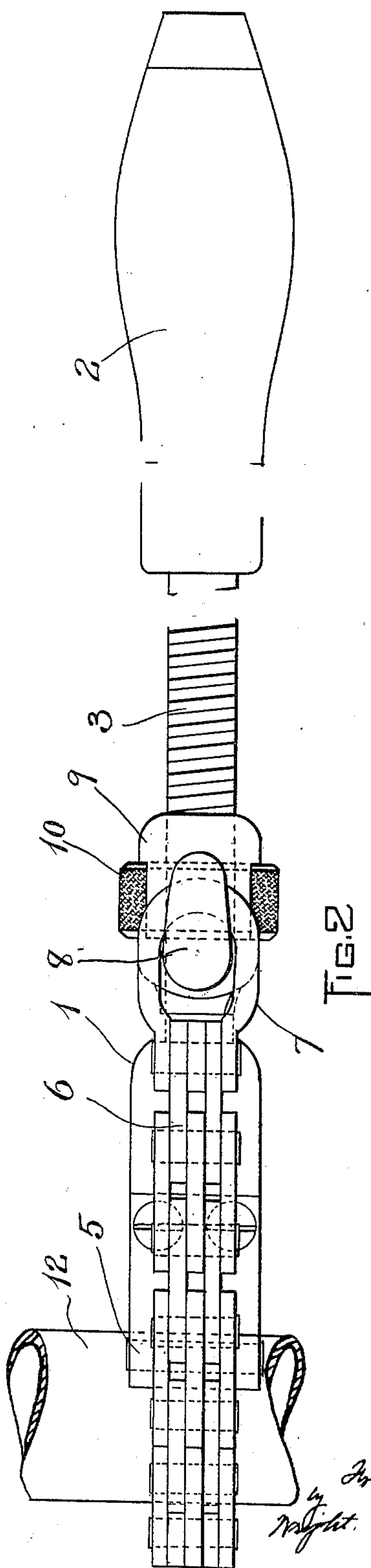


FIG. 2.

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FRED E. SANDS, OF CAMBRIDGE, MASSACHUSETTS, ASSIGNOR TO WILLIAM QUINBY, TRUSTEE, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 667,852, dated February 12, 1901.

Application filed February 5, 1900. Serial No. 3,923. (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 of the kind employing a chain to embrace the pipe.

10 The invention has for its object to increase the hold of the wrench on the pipe, at the same time distributing the pressure and affording as little defacement of the pipe as is consistent with the proper strength of hold
15 and a simple construction of the wrench.

Of the accompanying drawings, Figure 1 represents a side view of a pipe-wrench embodying my improvement. Fig. 2 represents a top edge view thereof.

20 The same reference characters indicate the same parts in both figures.

Referring to the drawings, 1 designates a frame equipped with a handle 2 at one end, a flattened screw-threaded shank 3, and a transverse terminal face 4, here shown as flat.

25 5 is a hinge projecting beyond the terminal face 4, at one end of said face, and therefore at one side or edge of the frame 1. On the hinge 5 is pivoted a chain 6, having at its
30 free end a loop 7, which is adapted to catch over a hook 8, located on the same side of the frame 1 as the hinge 5. For the purpose of adjusting the chain to different sizes of pipes the hook 8 is formed on a saddle 9, which embraces a nut 10, screwing on the threaded
35 shank 3. The first link 7 of the chain forms one member of the hinge 5 and is preferably provided on its inner edge with teeth 11, which catch in the pipe and prevent the
40 wrench from slipping on the pipe. The link 7 is adapted to lie across and against the terminal face 4 on the wrench-frame when the wrench has full grip on a pipe 12, the link and face mutually supporting each other.
45 The middle or free end portion of the chain 6 then lies across the knuckle or angle of the hinge 5, so that the chain completely surrounds the pipe 12. A strong grip and an equal distribution of pressure are thereby ob-
50 tained.

In applying the wrench to a pipe the chain

6 is passed around the pipe and its end caught on the hook 8. By moving the nut 9 up the shank 3 the loop of the chain is then drawn closely around the pipe, the body of the wrench being turned so that the link 7 stands out at an angle to the face 4. Then by exerting pressure on the handle 2 in the direction of the arrow in Fig. 1 the face 4 may be brought down against the link 7, still further tightening the loop on the pipe and causing the teeth 11 to bite on the surface of the pipe and prevents slipping. A continuation of this movement of the handle rotates the wrench as a whole around the pipe as a center and tends to turn the pipe.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all the forms in which it may be made or all of the modes of its use, what I claim, and desire to secure by Letters Patent, is—

1. A pipe-wrench having a frame with the transverse terminal face 4 and a screw-threaded shank, the hinge 5, located at one end of and projecting beyond said face, the chain 6, having the link 7 attached to said pivot and arranged to lie across the said terminal face, and a locking member at its other end, a nut on said shank, and a saddle embracing said nut and having a locking member adapted to engage the locking member on the chain and located on the same side of the frame as the hinge 5.

2. A pipe-wrench having a frame with the transverse terminal face 4 and a screw-threaded shank, the hinge 5, located at one end of and projecting beyond said face, the chain 6, having the link 7 attached to said hinge and arranged to lie across the said terminal face, and a locking member at its other end, a nut on said shank, a saddle embracing said nut and having a locking member adapted to engage the locking member on the chain and located on the same side of the frame as the hinge 5, and the teeth 11 on the inner edge of link 7.

3. A pipe-wrench having a frame provided with a transverse end face inclined so as to form an acute angle or corner close to one side of the frame, means on said side for the

attachment and adjustment of the free end
of the chain, and a chain attached to the
frame at said corner, the attachment being
by means of a rigid hinge member on the
5 frame, projecting longitudinally beyond the
said inclined end face, and a second hinge
member formed by the first link of the chain,
the said inclined end face forming an abut-
ment or support for the first chain-link, and
10 the free part of the chain abutting against

the bend of the hinge when the wrench is ap-
plied to a pipe, the bight of the chain form-
ing substantially a complete circle around the
pipe.

In testimony whereof I have affixed my sig- 15
nature in presence of two witnesses.

FRED E. SANDS.

Witnesses:

HORACE BROWN,
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