

No. 819,795.

PATENTED MAY 8, 1906.

E. M. PORTER.  
PIPE WRENCH.

APPLICATION FILED AUG. 17, 1904.

2 SHEETS—SHEET 1.

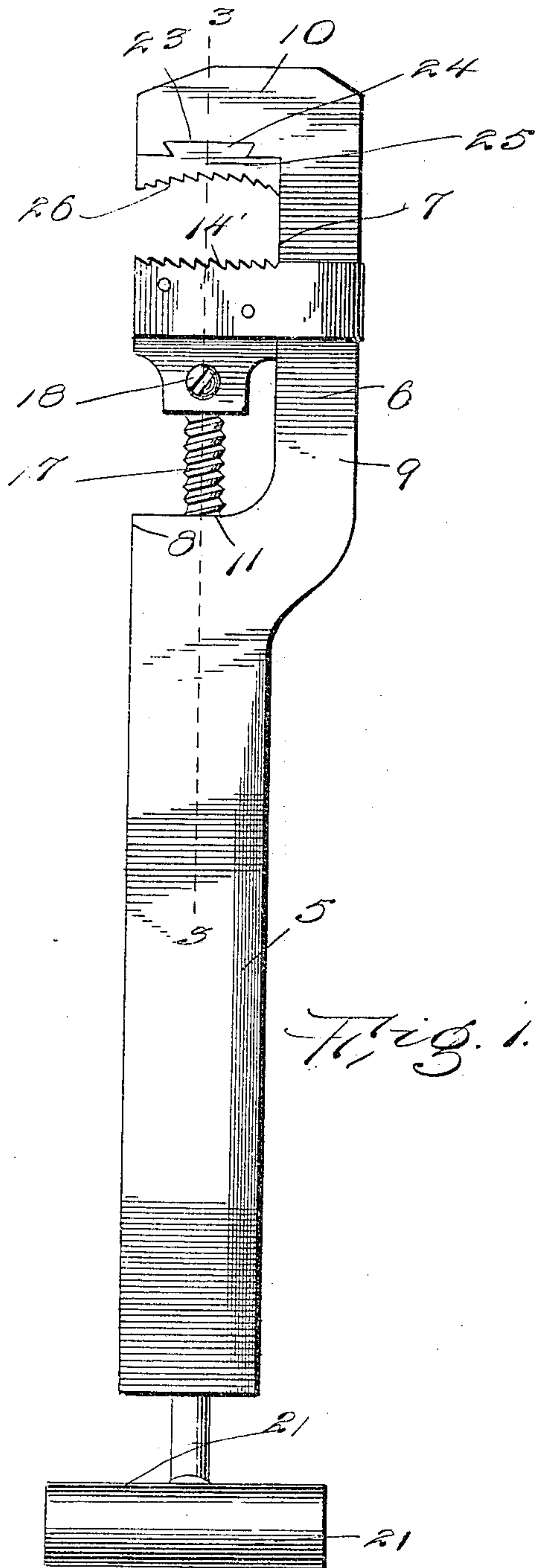


Fig. 1.

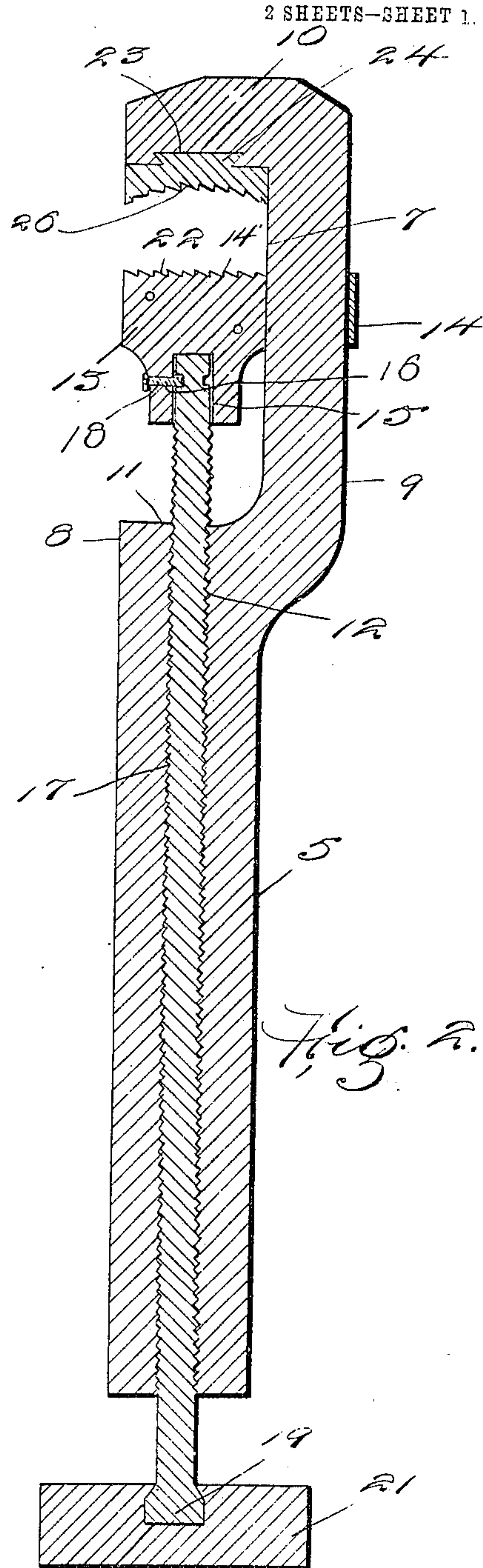


Fig. 2.

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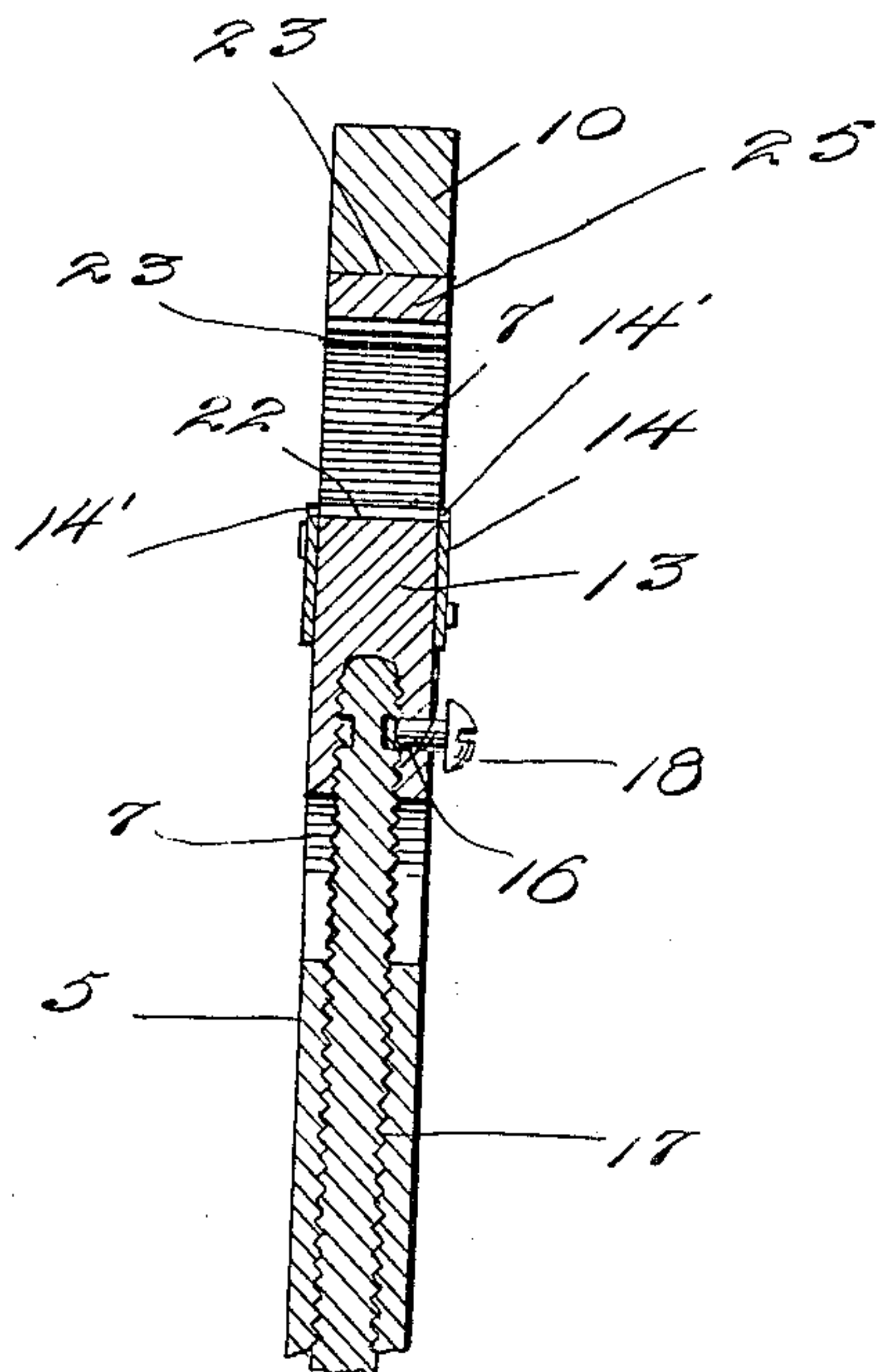


Fig. 3.

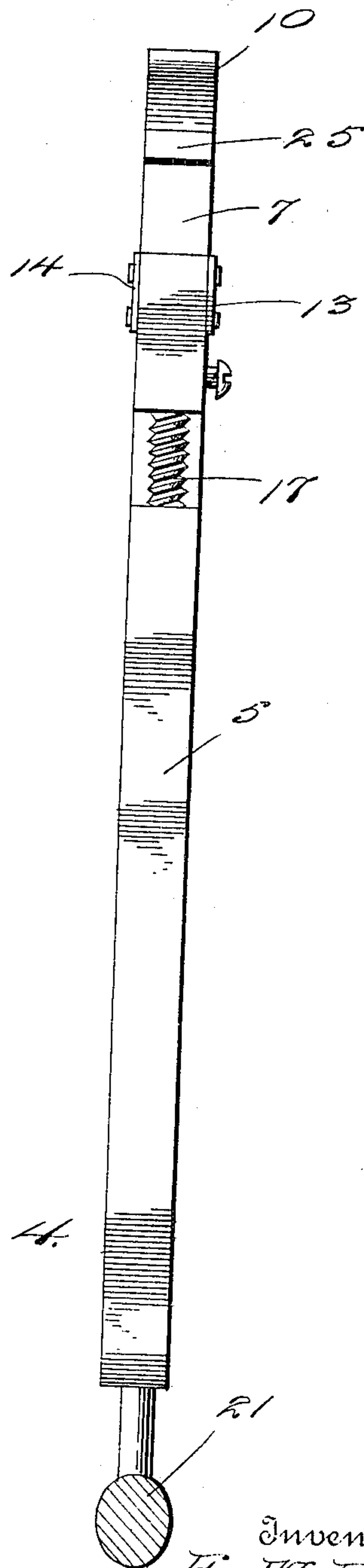


Fig. 4.

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# UNITED STATES PATENT OFFICE.

EPHRAIM M. PORTER, OF GOLINZA, PENNSYLVANIA.

## PIPE-WRENCH.

No. 819,795.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed August 17, 1904. Serial No. 221,109.

*To all whom it may concern:*

Be it known that I, EPHRAIM M. PORTER, a citizen of the United States, residing at Golinza, in the county of Forest, State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to wrenches, and more particularly to pipe-wrenches, and has for its object to provide a wrench which shall be durable in construction and inexpensive to manufacture.

A further object of the invention is to provide a wrench including a sliding jaw carried by the end of a threaded stem, the said stem extending entirely through the shank of the wrench to insure a rigid structure.

A still further object of the invention is to provide a wrench in which the fixed and sliding jaws are the same width as the shank or handle of the wrench and in which the said jaws lie in a common plane with the said shank.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the complete wrench. Fig. 2 is a longitudinal section of Fig. 1. Fig. 3 is a sectional view of the head of the wrench, taken on line 3 3 of Fig. 1. Fig. 4 is an edge view.

Referring now to the drawings, the reference character 5 designates a handle or stock having its head portion 6 bent outwardly therefrom, as at 9, forming a shoulder 11, the extremity of the portion 9 of the head 6 being directed inwardly over the shoulder 11 and in spaced relation thereto, forming a recess 7, communicating with the forward edge 8 of the tool, the inwardly-directed portion 10 lying at one end of the recess and the said shoulder lying at the opposite end thereof.

Formed longitudinally through the handle 5 and communicating with the recess 7 through the shoulder 11 is a threaded passage 12, and slidably disposed in the recess 7 is a jaw 13, having secured to its side the ends of a metallic yoke 14, the bight of which is engaged with the portion 9 of the head. The jaw 13 is provided with a recess 15, which lies in alinement with the passage 12, and formed through the side of the jaw 13 and

communicating with the recess 15 is a threaded passage 16. Engaged in the passage 12 is a threaded rod 17, which extends outwardly beyond the ends thereof, one end of the rod being revolubly engaged in the recess 15 and having a circumscribing groove into which projects the end of a set-screw 18, which is engaged in the passage 16, this set-screw thus preventing removal of the rod from the recess.

As mentioned above, the rod 17 projects beyond the free end of the handle 5, and at this end the rod is flattened, as shown at 19, and has its flattened portion engaged in a slot 20 in a transversely-extending handle-grip 21, which may be grasped, as may be readily understood, to rotate the rod 17 and move the jaw 13 toward or away from the jaw 10.

The face of the jaw 13 which lies in the direction of the jaw 10 is provided with a plurality of transversely-extending serrations 22, and the metallic yoke 14 is provided with notches 14' in its edges which lie flush with the serrated face of the jaw 13, these notches, as will be readily understood, registering with the spaces between the serrations. In its inner face the jaw 10 is provided with a transversely-extending dovetail groove 23, which receives a corresponding dovetail rib 24, carried by a hardened jaw-face 25, provided with serrations 26 upon its face which lies in the direction of the jaw 13, this face being concaved and the concavity extending longitudinally, as illustrated. It will thus be apparent that a wrench is provided in which the only portions which it is necessary to harden are the jaw 13 and the jaw-facing 25. By reason of the fact that the groove 23 extends transversely of the jaw 10 there is no tendency of the jaw-face to become displaced when the wrench is in use, as there would be did the groove extend longitudinally of the jaw, and the necessity of additional fastening means for the jaw-face is thus removed.

When it is desired to lock the sliding jaw 13 against movement, the set-screw 18 is operated to bear tightly against the rod 17, thus preventing rotation thereof within the recess 15.

What is claimed is—

A wrench comprising a handle having a threaded bore formed longitudinally there-through, a shank formed integral with said handle and extending laterally and thence

forwardly from one end thereof, the said  
shank having its inner edge face lying in the  
same plane as that occupied by the edge face  
of the handle from which the said shank ex-  
5 tends, said shank having its end portion bent  
laterally and inwardly to lie in a plane with  
the said handle to form a fixed jaw, a thread-  
ed stem engaged in the threaded bore in said  
handle, a movable jaw slidably mounted  
10 upon said shank and provided with a recess

for the reception of one end of the threaded  
stem, and a handle carried by the other end  
of said stem.

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

EPHRAIM M. PORTER.

Witnesses:

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JOHN W. DAUBENSPECK.