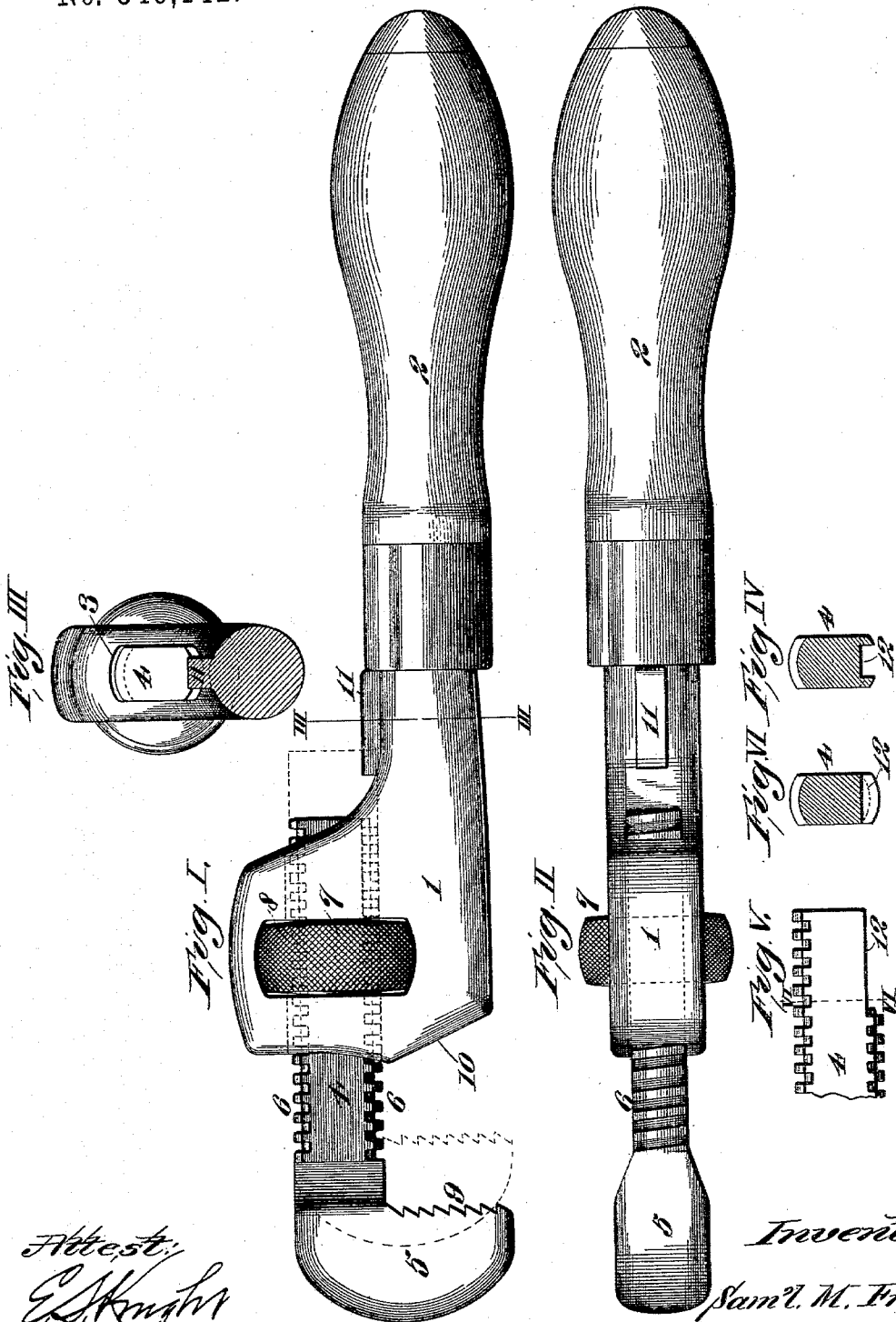


(No Model.)

S. M. FRIEDE.
PIPE WRENCH.

No. 546,142.

Patented Sept. 10, 1895.



Attest:
E. S. Knight
W. Finley

Inventor
Saml. M. Friede
By Knigh & Bond Attys

UNITED STATES PATENT OFFICE.

SAMUEL M. FRIEDE, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD TO
JOHN W. DONNELL, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 546,142, dated September 10, 1895.

Application filed December 26, 1894. Serial No. 532,942. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. FRIEDE, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement 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 certain improvements in pipe-wrenches; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a side view of my improved wrench. Fig. II is a top view of same. Fig. III is a transverse section taken on line III III, Fig. I. Fig. IV is a transverse section of the shank of the movable jaw of the wrench. Fig. V is a detail view of the shank of the movable part of the wrench, and illustrates a modification. Fig. VI is a section taken on line VI VI, Fig. V.

Referring to the drawings, 1 represents the head or stationary part of the wrench, which is provided with a handle portion 2. The head 1 is formed with an opening 3 to receive the shank 4 of the movable part 5 of the wrench. The shank 4 is formed with thread 6, that is engaged by a nut 7, fitting in an opening 8 of the head 1. The inner face of the member 5 is serrated, as shown at 9, and the lower inner face of the head 1 is formed with an inclined surface 10, that acts in conjunction with the serrated face of the member 5 to grip the pipe.

The opening 3 in the head 1 is made somewhat deeper than the width of the shank 4, so that when the wrench is applied to a pipe there will be a slight rocking action between the serrated end of the member 5 and the in-

clined face 10 of the head 1. The effect of this rocking movement is to cause the wrench to take a better grip of the pipe, and at the same time provides for a freer release of the wrench from the pipe in the backward movement of the wrench.

The shank of the head 1 of the wrench is provided with a ledge or projection 11, and the shank 4 of the movable part 5 of the wrench is formed with a groove or cut-away portion 12 (see Fig. IV) to receive the projection 11 when the member 5 is moved inwardly with relation to the head 1 a sufficient distance to cause the inner end of the shank to leave the head, so that when the inner end of the shank 4 is removed from the guiding and bracing influence or effect of the head it will be held and guided by the projection 11, as illustrated by dotted lines in Fig. I.

Instead of forming the groove 12, or instead of leaving a portion of the teeth or screw on the lower face of the shank 4 where the groove 12 is formed, the screw at this part of the shank may be entirely removed, as shown in Figs. V and VI.

I claim as my invention—

In a pipe wrench, the combination of the head 1 provided with a handle 2, an opening 3 and a jaw 10, a movable jaw 5 provided with a threaded shank 4 which is adapted to pass through the opening 3, a nut 7 working on said shank 4, a groove or cut-away portion 12 in the shank 4, and a projection or ledge 11 formed on the head 1 back of the opening 3, substantially as and for the purpose set forth.

SAMUEL M. FRIEDE.

In presence of—

E. S. KNIGHT,
N. FINLEY.