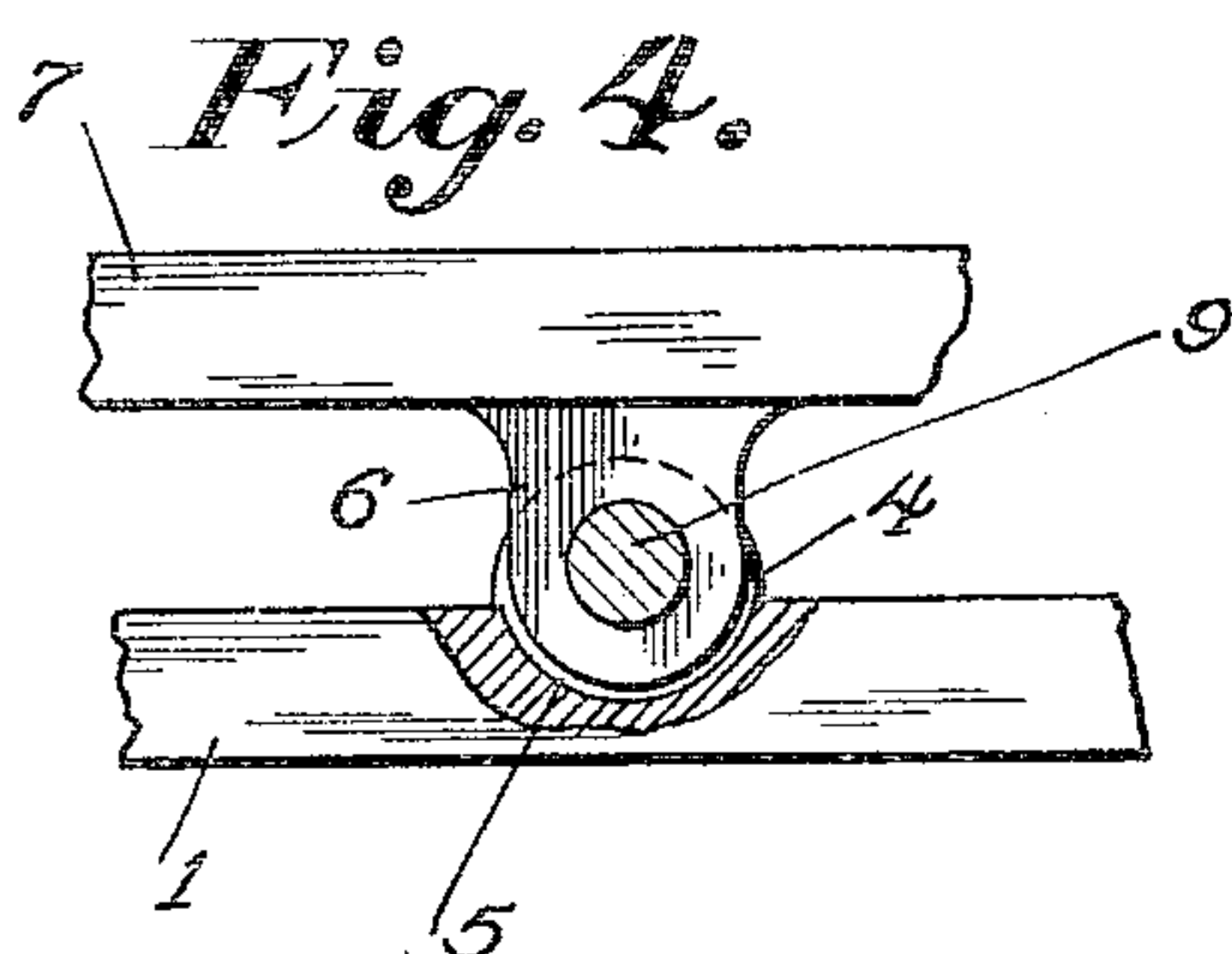
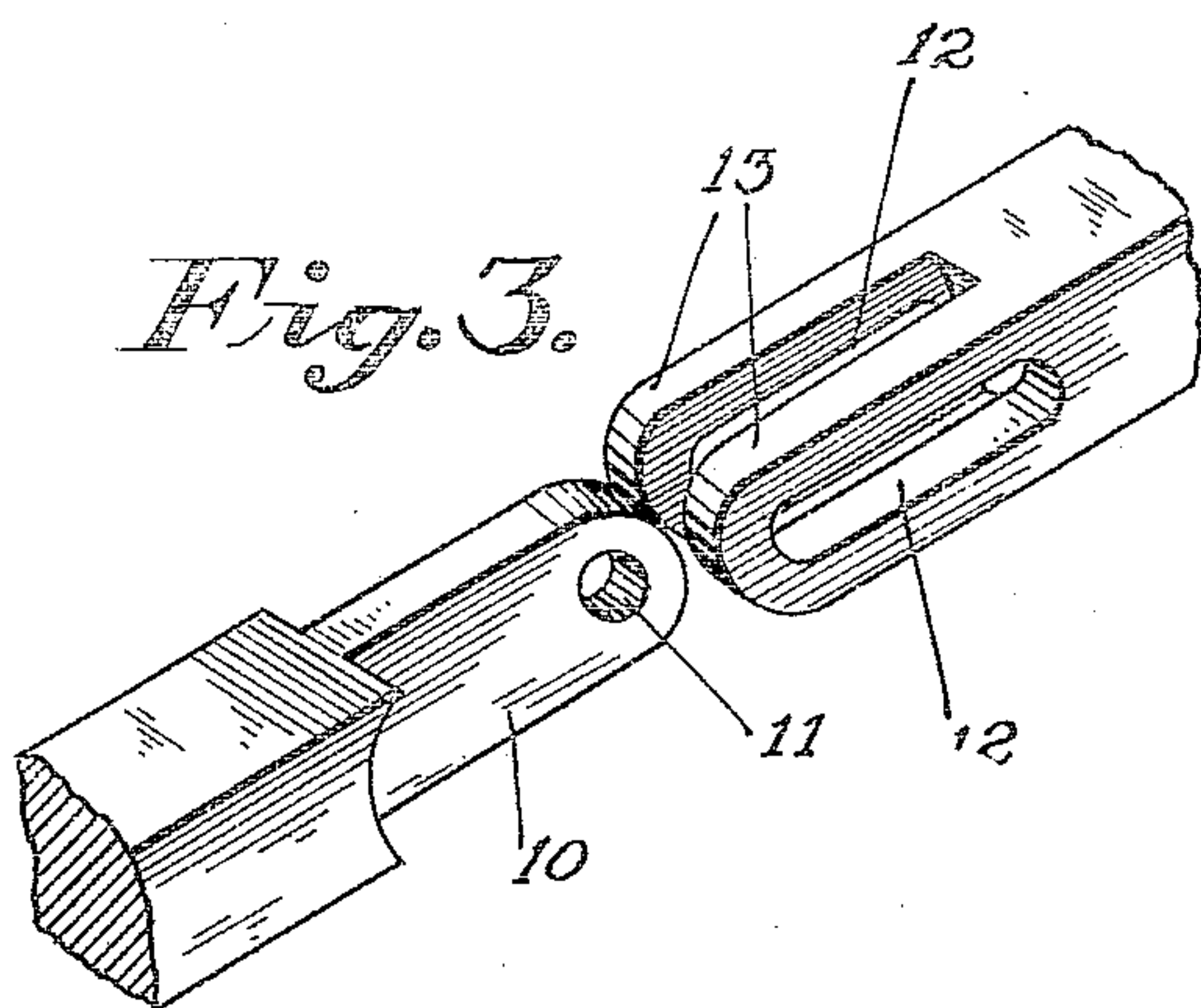
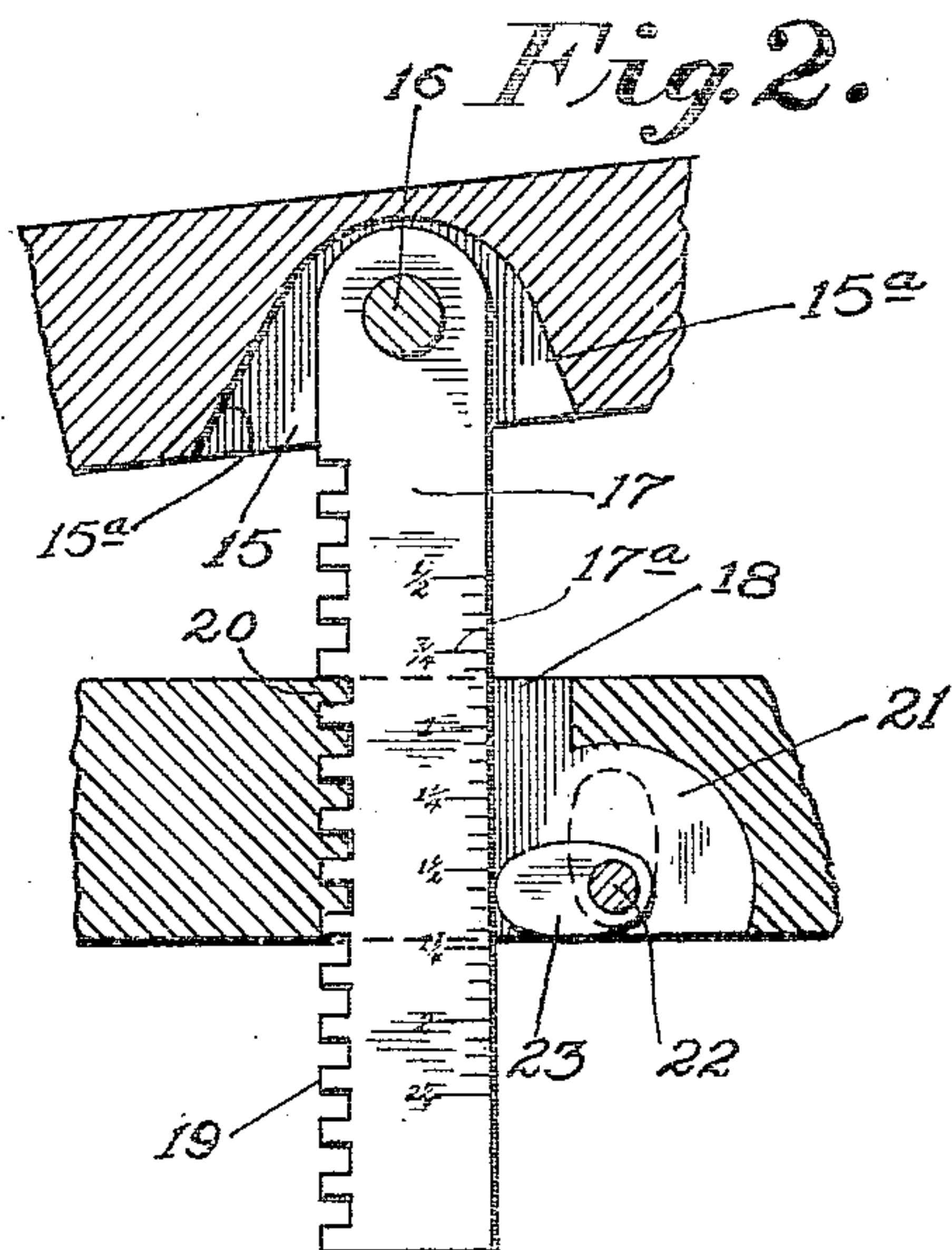
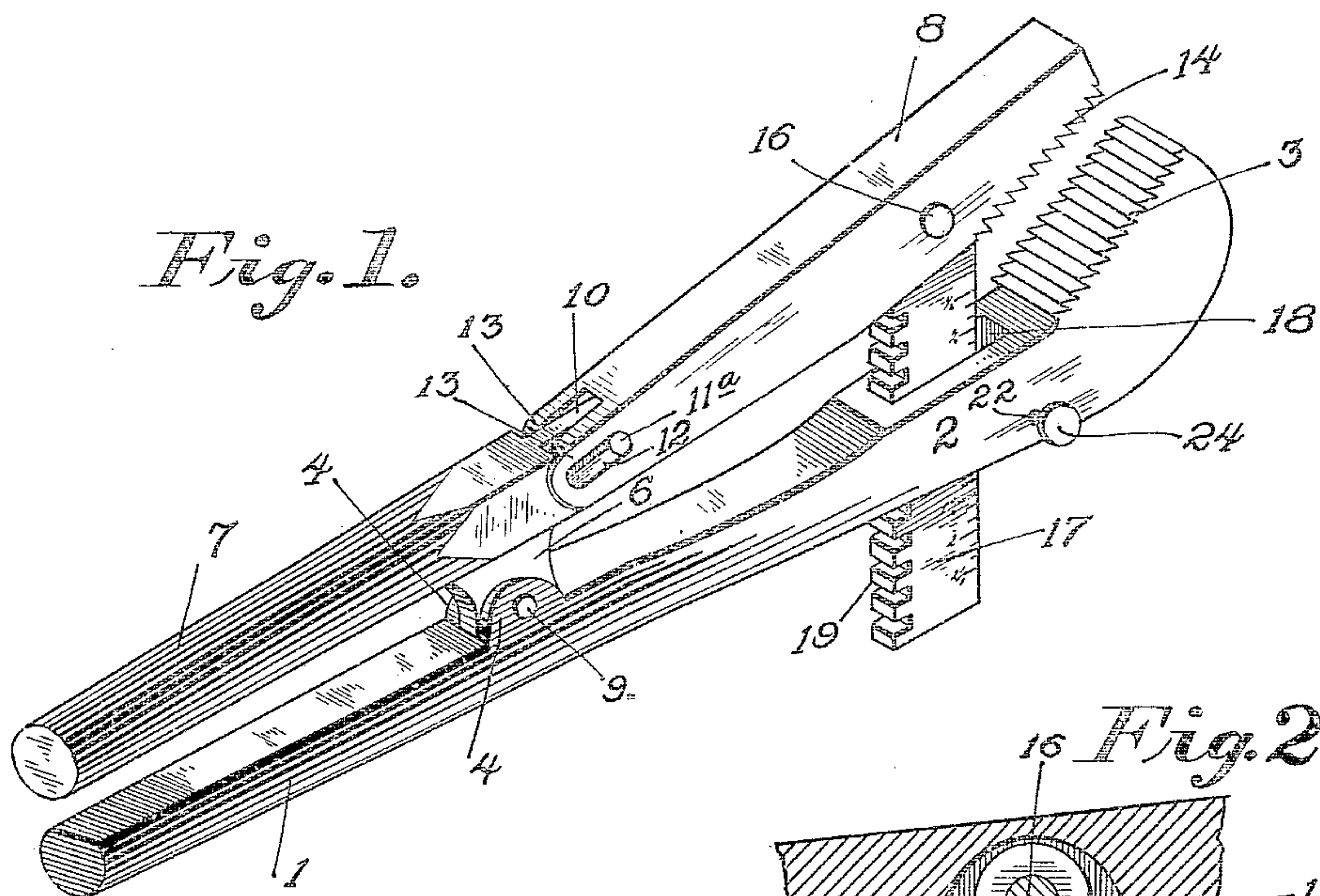


A. M. HALL.
PIPE WRENCH.
APPLICATION FILED MAY 24, 1909.

953,610.

Patented Mar. 29, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

ABNER M. HALL, OF WILLIAMSPORT, PENNSYLVANIA.

PIPE-WRENCH.

953,610.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed May 24, 1909. Serial No. 497,864.

To all whom it may concern:

Be it known that I, ABNER M. HALL, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to wrenches especially adapted for use in connection with pipes, and the principal object of the same is to provide means whereby the same may be quickly adjusted for various sizes of
15 pipes, and when so adjusted, may be rigidly held in such position.

In carrying out the object of the invention generally stated above, it is contemplated employing two gripping jaws, one of
20 which is a stationary one, the other being a pivoted one which is adapted for both lateral and longitudinal adjustment relative to the stationary jaw and which may be locked in rigid relation to said stationary
25 jaw.

In producing a wrench capable of performing the above stated functions it will, of course, be understood that the essential features of the same are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved wrench. Fig. 2 is a fragmentary sectional view of the same, showing the manner of locking the two jaws together. Fig. 3 is a detail perspective view showing the manner of connecting the movable jaw with
40 its handle. Fig. 4 is a detail side elevation, partly in section, showing the hinge connection between the handles of the jaws.

Referring to the accompanying drawings by numerals, 1 designates the handle of the
45 stationary jaw 2, said jaw having a thickened head and being provided with an inclined toothed gripping surface 3 on its inner side. The handle 1 of said jaw 2 intermediate of its length carries outstanding
50 spaced apart pivot ears 4 between which the material of the body is recessed as indicated at 5 to provide clearance space for the outer end of a pivot ear 6 carried by a handle 7 of a movable jaw 8. The pivot ear 6 is re-

tained between the pivot ears 4 by means 55 of the pin or rivet 9.

The handle 7 at its forward end carries an outstanding pivot ear 10 provided with an opening 11 for the reception of a pivot pin which projects through a slot 12 extending longitudinally of the bifurcated end
60 members 13 of the movable jaw 8. The said movable jaw 8 has the inner side of its end portion provided with inclined toothed surface 14 complementary to the toothed portion 65 of the stationary jaw 2. The movable jaw 8, adjacent to the inner end of its gripping surface 14 is provided with a recess 15 through which a pivot pin 16 extends and upon which is mounted one end of an ad-
70 justing bar 17 the free end of which projects through a slot 18 formed in the stationary jaw 2, said bar 17 being provided with teeth 19 on one edge adapted to engage with similar teeth 20 formed in one end of said
75 recess or slot 18. The other end of said slot 18 is provided with a recess 21 through which a pivot pin or shaft 22 projects and on which a locking cam 23 is mounted which when turned in one direction forces
80 said adjusting bar into locking engagement with the teeth in the end of the slot 18, as is shown in Fig. 2. One end of said shaft 22 projects beyond the side of the stationary jaw and has mounted thereon a head 24 by
85 means of which the shaft 22 may be readily rotated to cause its cam to force the adjusting bar into engagement with the teeth of the recess, or release the same.

As is shown more clearly in Fig. 2 of the
90 accompanying drawings, the recess 15 of the movable jaw is provided with flaring sides 15^a, by means of which, and the slot and bolt connection between the said jaw and
95 its handle, the movable jaw may be moved longitudinally of the stationary jaw a slight distance when it is desired to obtain a firm grip upon the article to be grasped between the two jaws.

From the foregoing it will be seen that
100 the present invention is one in which the necessary adjustments may be readily obtained so as to adapt the wrench for various sizes of pipes, and also through the described adjusting bar and means for lock-
105 ing the same in engagement with the toothed end of the slot 18, the jaws may be rigidly locked in the desired adjusted position. It

will also be understood that while in the foregoing particular stress has been laid on the value of the present invention for use in connection with pipes, the same may be used
5 for adjusting nuts upon bolts, and the like.

Preferably the adjusting bar 17 is provided with marks or graduations scaled to indicate sizes of pipes or nuts, as indicated at 17^a, so that the necessary adjustments for
10 the jaws may be quickly made when the size of the work to be operated upon is known.

What I claim as my invention is:—

1. A wrench comprising a stationary jaw provided with a handle, a movable handle
15 pivoted to the stationary handle, a jaw having a slotted pivotal connection with said handle and provided with a recess having flaring sides, an adjusting bar having one end pivotally mounted in said recess and
20 projecting through the stationary jaw, and

means for locking said bar in engagement with said stationary jaw.

2. A wrench comprising a stationary jaw provided with a handle, a movable handle having a pivotal connection therewith and
25 provided with a pivot ear at its forward end, a movable jaw having a bifurcated end the members of which are slotted, a pivot pin for holding the bifurcated end of said
movable jaw in pivotal engagement with
30 the movable handle, and an adjusting bar carried by said movable jaw and adapted to be locked in rigid engagement with the stationary jaw.

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

ABNER M. HALL.

Witnesses:

L. F. VOLLMAN,
G. W. CODER.