No. 706,127. Patented Aug. 5, 1902.

P. TAROLI.

WRENCH.

(Application filed May 17, 1902.)

(No Model.)

Fig. I.

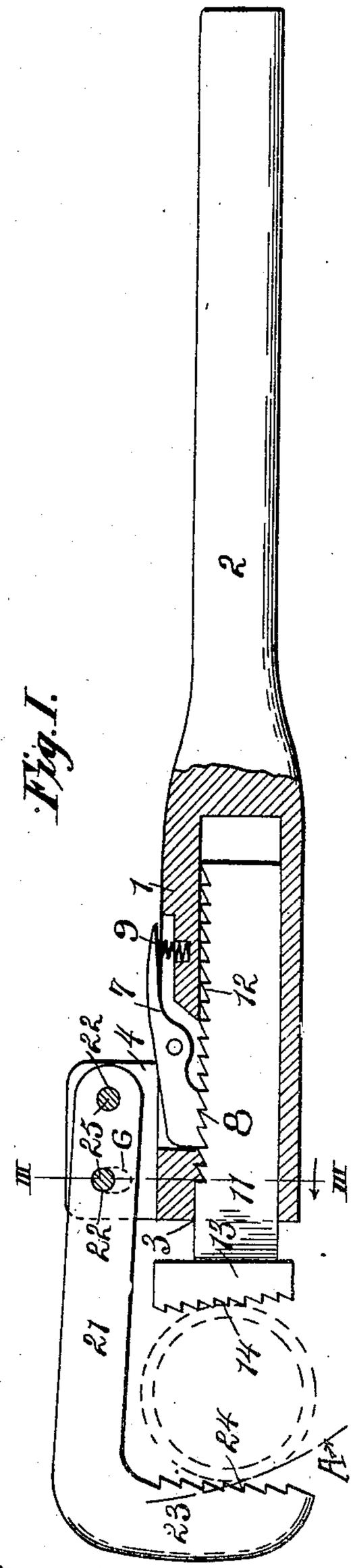


Fig. II.

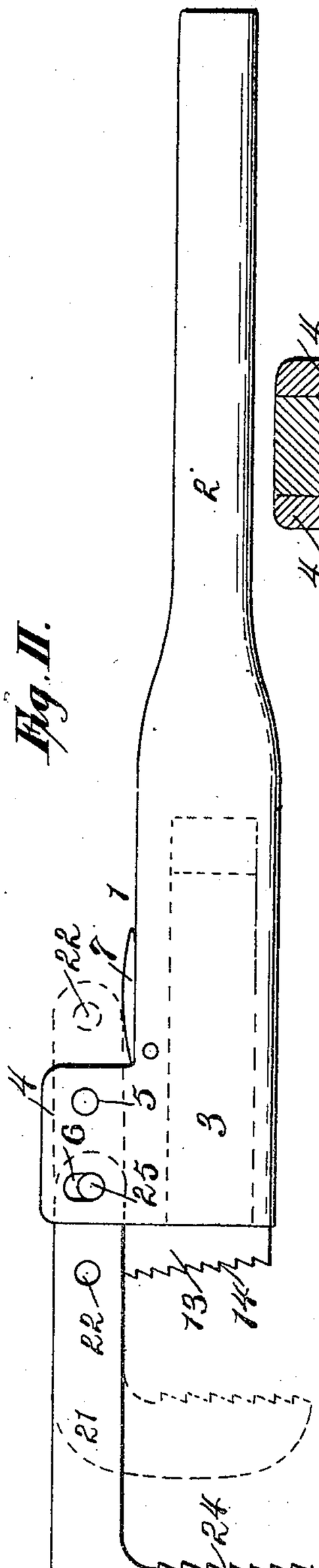
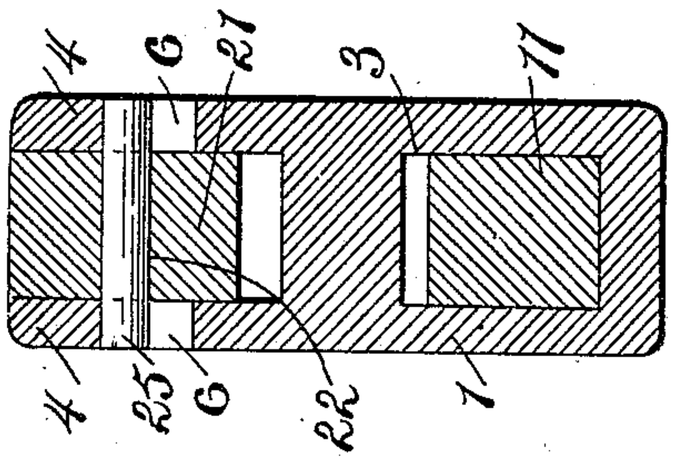


Fig. III.



Witnesses:

Geo. E. Frech.

F. R. Fitton

Inventor:

Peter Taroli,

By Dollamer & Co.,

Attorneys.

UNITED STATES PATENT OFFICE.

PETER TAROLI, OF DELRAY, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 706,127, dated August 5, 1902.

Application filed May 17, 1902. Serial No. 107,730. (No model.)

To all whom it may concern:

Be it known that I, PETER TAROLI, a citizen of the United States, and a resident of Delray, Wayne county, State of Michigan, have invented certain new and useful Improvements in Wrenches; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to wrenches such as are commonly used for turning pipes or round articles, and more especially to wrenches of that type which have a pivoted outer jaw; and the object of the same is to improve the details of construction thereof.

To this end the invention consists in a wrench made as hereinafter more specifically set forth and as shown in the drawings, wherein—

Figure I is a central longitudinal section of this wrench with its pivoted jaw in the usual position, showing the tool ready for application to a pipe which is indicated in dotted lines. Fig. II is a side elevation of this wrench with its pivoted jaw shown in full lines in its outermost position and in dotted lines in its innermost position. Fig. III is a cross-section on the line III III of Fig. I.

In the drawings, 1 is the body, having a handle 2 at one end and a hollow casing 3 at the other end, above which casing rise side wings 4, pierced with round holes 5 near their rear edges and oval or oblong holes 6 near their front edges for a purpose to appear below. Pivoted within a suitable recess in the body is a catch 7, whose forward operative end has teeth 8, which are borne normally downward toward the interior of the hollow casing 3 by a spring 9.

The inner jaw comprises a stem 11 of a shape to slide within the interior of the casing 3 and having teeth 12 on its upper edge to engage those numbered 8 on the catch, and at the forward extremity of the stem is a head 13, whose front face 14 inclines slightly downward and inward, as seen, and is preferably provided with teeth facing downwardly.

The outer or pivoted jaw comprises a stem 21, provided near its rear rounded extremity with holes 22 and having at its forward extremity a head 23, which depends from the stem like the foot of an L and is preferably toothed on its inner face 24, with the teeth facing upwardly.

25 designates two bolts passing, respectively, through the pairs of holes 5 and 6 in the wings and through the holes 22 in the outer jaw.

All parts are of the desired sizes, proportions, and materials, and additions to the details may be made without departing from the spirit of my invention.

In operation the catch is raised and the inner jaw inserted. It is obvious that this jaw can be drawn out as may be desired, the catch slipping over the teeth 12. Since the outer jaw is rarely adjusted, this movement of the inner jaw really makes the latter the movable jaw. The head 23 of the outer jaw is hooked over the pipe or article to be turned, while said outer jaw stands slightly raised above a line parallel with the length of the body, as seen in Fig. I, and the inner jaw is then drawn out until it contacts with the inner face of the pipe. Thereafter a downward movement of the handle 2 causes the outer jaw to turn around the bolt through the hole 5, so that its toothed face 24 approaches the toothed face 14 slightly or sufficiently to cause these teeth to bite the pipe, and further movement of the handle in the same direction turns the pipe. It follows that the arc A inscribed by the tooth which touches the pipe must in this movement approach the tooth 14, which touches the pipe on the other side, and the incline of the face of the head 13 must be at an angle which will not prevent the operation of the tool. If the incline were in the opposite direction, the arc would more rapidly approach the head 13. Therefore the incline in the direction shown serves to assist the biting action and reduce the distance of the pivot-bolt from the axial center of the tool. Under ordinary conditions the bolt through the hole 6, which is oval, limits the movement of the outer jaw, while yet permitting a slight movement. If great strength is desired on a small pipe or bolt, both bolts may be withdrawn and one only inserted through the holes 5 and the forwardmost of the holes 22, as seen in dotted lines in Fig. II. If great capacity is desired, one bolt only is inserted through the holes 6 and the rearmost of the

holes 22, as seen in full lines in Fig. II. At this time the pivoted jaw may be raised to withdraw the sliding jar, as for repair, or when arranged as in Fig. I the sliding jaw may be withdrawn by first removing the forward bolt and raising the pivoted jaw.

What is claimed as new is—

1. In a wrench, the combination with the body having laterally-projecting wings pierced with two pairs of holes, an L-shaped outer jaw having two holes through its stem adapted to register with those in the wings, and two bolts removably seated in said holes; of an inner jaw having a stem entering the body and provided with teeth, a head on this jaw whose face is inclined downwardly and inwardly, and a catch on the body adapted to engage said teeth, all as and for the purpose set forth.

2. In a wrench, the combination with the body having laterally-projecting wings pierced with two pairs of holes of which the forward pair is oval, an L-shaped outer jaw having two holes through its stem adapted to register with those in the wings, and two bolts removably seated in said holes; of an inner jaw having a stem entering the body and adjustable longitudinally therein, a head on this jaw whose forward face stands in a plane slightly oblique to an upright line at right angles to its stem, and means for holding this stem in adjusted position.

3. In a wrench, the combination with the body having laterally-projecting wings pierced with two pairs of holes, an L-shaped outer jaw having two holes through its stem adapted to register with those in the wings, and two bolts removably seated in said holes; of an inner jaw having a stem entering the body and provided with teeth, and a catch on the body adapted to engage said teeth, all as and for the purpose set forth.

4. In a wrench, the combination with the body having laterally-projecting wings pierced with two pairs of holes of which the forward pair is oval, an L-shaped outer jaw having two holes through its stem adapted to register with those in the wings, and two bolts removably seated in said holes; of an inner jaw having a stem entering the body and adjustable longitudinally therein, and means for holding this stem in adjusted position.

In testimony whereof I have hereunto subscribed my signature this the 12th day of May, A. D. 1902.

PETER TAROLI.

Witnesses:
PETER B. DE LISLE,
RUBY GORDIER.