

J. J. DIXON.

WRENCH.

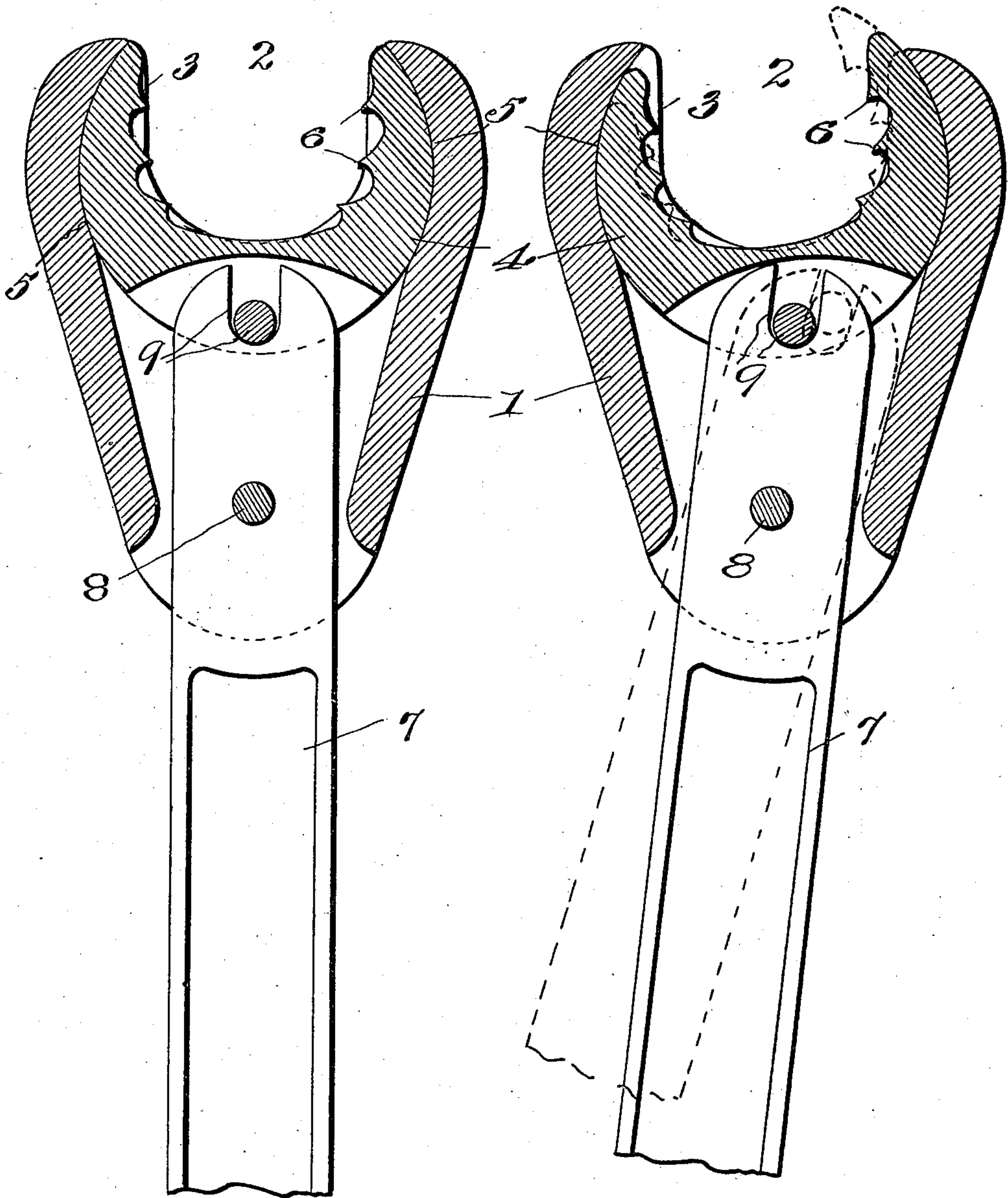
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FIG. 1.

FIG. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

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WRENCH.

996,841.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAY J. DIXON, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates particularly to pipe wrenches and its object is to provide a wrench consisting of very few parts and which is very positive and powerful in action.

In the accompanying drawing is shown one mechanical form in which the invention may be embodied but it is to be understood that the invention may be embodied in many different forms.

Figure 1 is a sectional view on the plane of the side of the handle. Fig. 2 is a sectional view on a similar plane showing the wrench in working position.

Reference character 1 designates the head provided with the open jaw 2 having substantially parallel gripping faces 3. In the head is mounted the movable jaw or clamping member 4, which has an opening or socket normally registering with the open jaw of the head. The movable jaw is rotatable in a socket consisting of arc-shaped segments 5 provided in the head and the periphery of the jaw is made circular to fit these segments. The sides of the movable jaw are provided with gripping members 6 generally in the form of claws or teeth as shown. The outline of these gripping members is generally a curve which is eccentric to the rotative axis of the jaw. The handle or lever 7 is pivoted in the head at 8 and has a pin and slot connection 9 with the movable jaw.

With the parts in the position shown in Fig. 1, the sockets in the head and jaw are placed in position on a pipe or other object to be turned. The lever is then slightly inclined in relation to the head as shown in full lines in Fig. 2, bringing the gripping member on one side of the movable jaw into contact with the pipe. The reaction forces the other side of the pipe against the opposite gripping face 3 of the head. Further movement of the handle then causes the movable jaw to more firmly grip the pipe and also rotates the pipe.

It will be noticed in Fig. 2, as shown in

dotted lines, that when the movable jaw approaches its extreme position its extended end is closer to the end of the opposite clamping face 3 of the head than the distance between the clamping faces 3 and therefore accidental escape from the wrench of the pipe or other member being operated upon is practically impossible. It is also to be noted that the gripping members of the movable jaw extend outward a considerable distance beyond the center of the socket and that this construction permits the pipe or other member to be clamped entirely between the movable jaw and the head and obviates the use of any additional closure for the wrench socket.

I claim:

1. The combination of a head provided with an open socket having a clamping face, a jaw revolvably mounted in the head and having a socket corresponding with the socket in the head, the jaw being provided with a gripping member non-concentric with the center of rotation of the jaw and head.

2. The combination of a head provided with an open socket having a clamping face, a jaw revolvably mounted in the head and having a socket corresponding with the socket in the head, the jaw being provided with a gripping member nonconcentric with the center of rotation of the jaw and head, and a lever pivotally connected to the jaw and head.

3. In a wrench the combination of a head having an open socket with a clamping face, a jaw movably mounted in the head and having an opening normally corresponding with the socket, and a lever pivotally connected with the head and jaw whereby relative movement of the lever and head causes the jaw to move somewhat out of registry with the head socket and clamp an object between said jaw and said clamping face.

4. In a wrench the combination of a head having an open ended socket with opposite clamping faces, a jaw rotatably mounted in the head and having an opening normally registering with said socket, said opening being eccentric to the center of rotation of the jaw and a lever connected with the head and jaw so that relative movement of the lever and head causes clamping of an object between the jaw and either of said clamping faces as desired.

5. In a wrench the combination of a head having an open ended socket, a jaw revolvably mounted in the head and having an opening normally registering with the socket and formed with side gripping members extending outward beyond the center of the object to be gripped, the opening in the jaw being eccentric to its center of rotation, and a lever pivotally connected to the head and jaw.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
