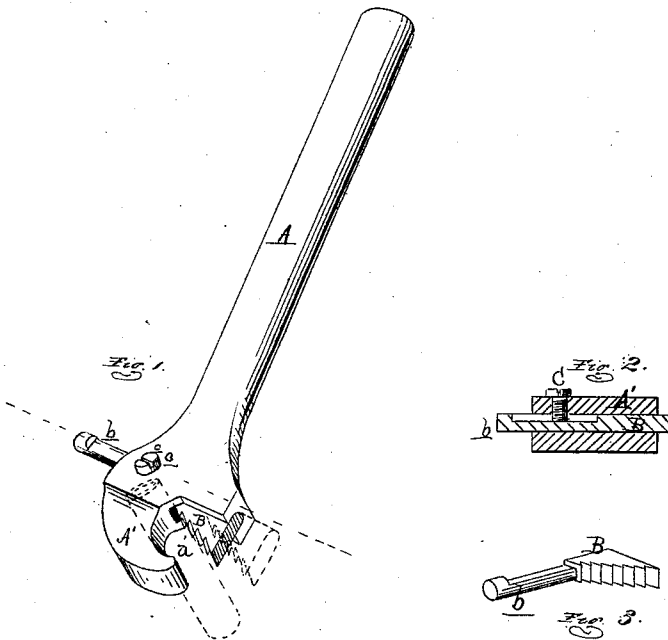


G. WARSOP.
Pipe Wrenches.

No. 140,561.

Patented July 1, 1873.



ATTEST:

H. F. Chubb

INVENTOR:

Geo Warsop
By atty-
Thos S Sprague

UNITED STATES PATENT OFFICE.

GEORGE WARSOP, OF QUEEN'S ROAD, NOTTINGHAM, ENGLAND, ASSIGNOR
TO JAMES B. WAYNE, OF DETROIT, MICHIGAN.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **140,561**, dated July 1, 1873; application filed
February 3, 1873.

To all whom it may concern:

Be it known that I, GEORGE WARSOP, of Queen's Road, Nottingham, England, have invented a new and useful Improvement in Pipe-Wrenches; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my improved wrench. Fig. 2 is a cross-section of the same at *xx* in Fig. 1, and Fig. 3 is a detached perspective view of the sliding jaw.

Like letters refer to like parts in each figure.

This invention relates to an improved and simplified construction of wrenches for turning pipes and other cylindrical objects of various diameters. The invention consists in a lever formed with a hook at one end, and transversely slotted at the base of the hook to receive a serrated jaw or bit, which slides in the slot at a right angle with the lever, and in the plane of the hook.

In the drawing, *A* represents a metallic lever enlarged at one end to form a head, the extremity of which is a hook, *A'*. Through the base of the head is a longitudinal slot, *a*, through which passes the shank *b* of the wedge-like serrated jaw *B*, whose serrations are presented toward the hook. The inner

end of the slot *a* is enlarged to receive the smaller part of the jaw, the back of which is received in a groove in the open part of the head, and thus gives it the necessary support. One side of the shank *b* is flattened, and a screw, *c*, is inserted into the cavity so formed by tapping it through the side of the head, as seen in Figs. 1 and 2, which thus prevents the jaw from being entirely withdrawn from the head *A'*.

When a cylindrical object is grasped by the hook, and the jaw wedged back against the same, the rotation of the tool to the right, when in the position shown in Fig. 1, wedges the object between the jaw and the hook with a force proportionate to the power applied to the lever, while a reverse movement of the lever releases the hold of the jaw.

Other means than the screw *c* may be employed to secure the wedge-like jaw in the slot—such as a transverse pin in the end thereof.

I claim as my invention—

A pipe-wrench having the hook-headed lever *A A'* provided with the slot *a*, and the serrated jaw *B b*, and set-screw *c*, constructed substantially as herein shown and described.

GEORGE WARSOP.

Witnesses:

JOHN BLACK,
HENRY W. HILL.