(No Model.)

A. C. WHITTIER.

PIPE WRENCH.

No. 464,168. Patented Dec. 1, 1891.

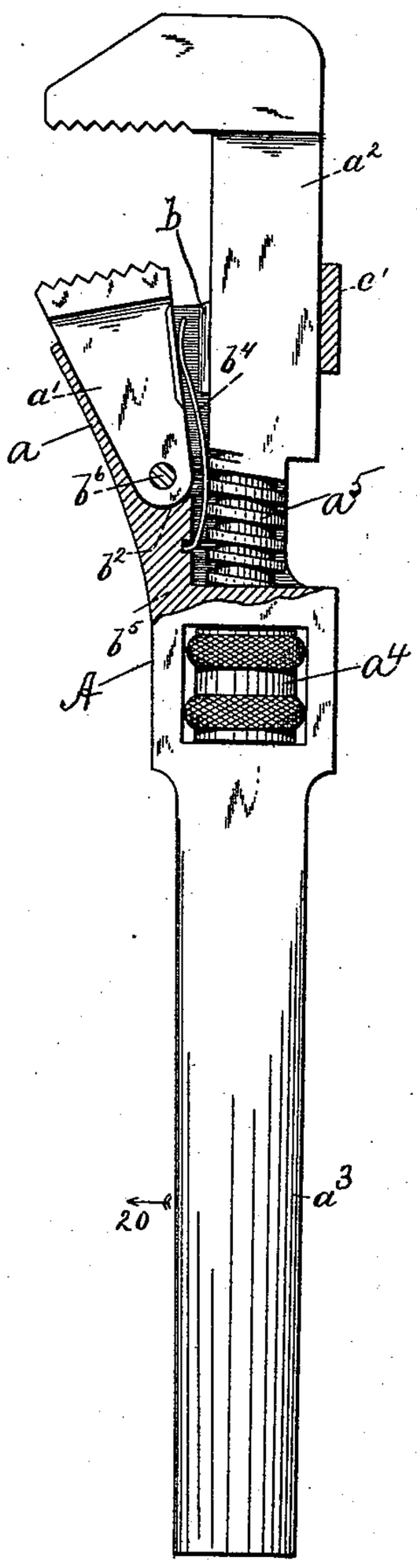

Fig. 3.

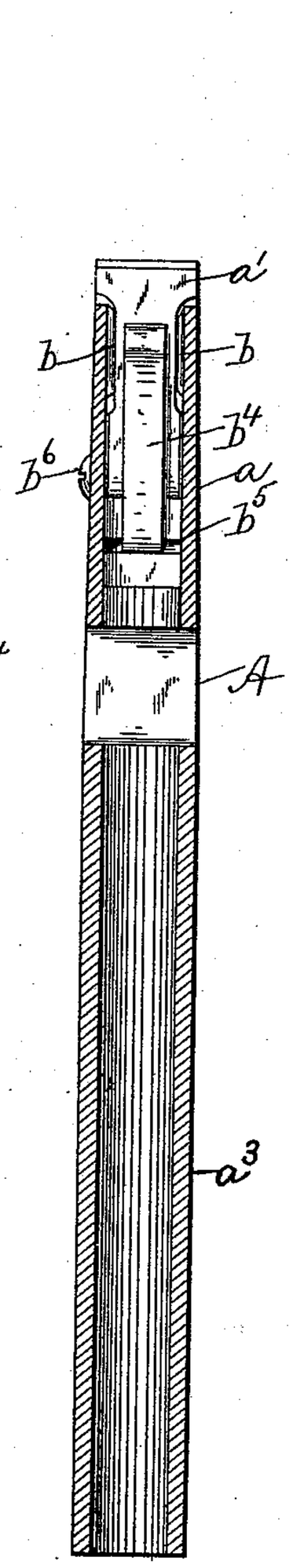

Fig. 2.

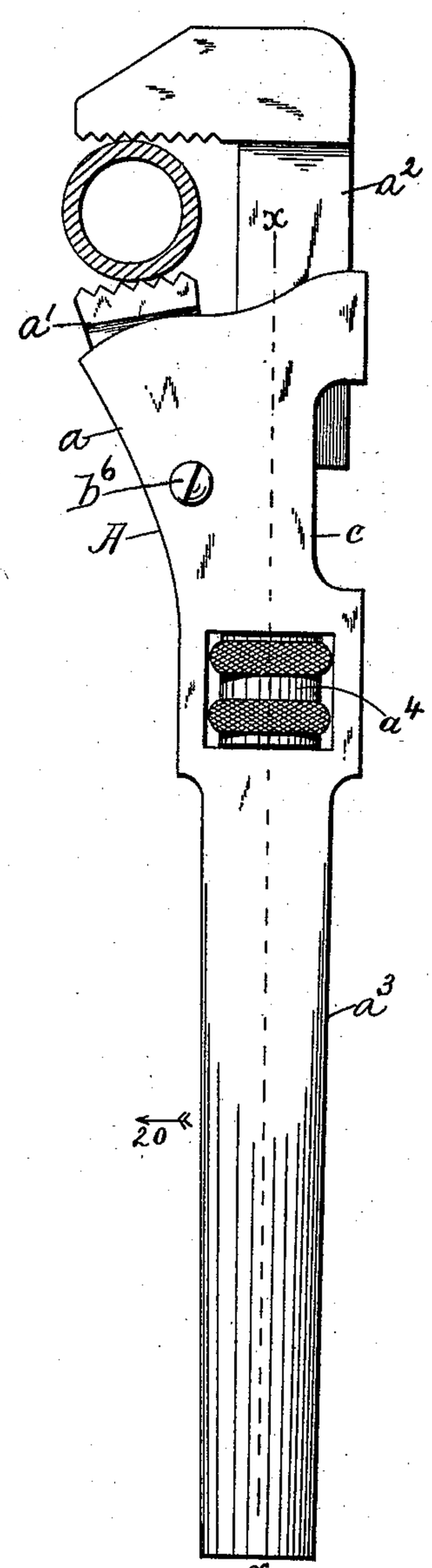

Fig. 1.

WITNESSES

J. Q. Brittain,

Irving H. Gay.

INVENTOR

Abel C. Whittier.

By Jas. H. Churchill

ATTY

UNITED STATES PATENT OFFICE.

ABEL C. WHITTIER, OF BOSTON, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 464,168, dated December 1, 1891.

Application filed June 3, 1891. Serial No. 395,010. (No model.)

To all whom it may concern:

Be it known that I, ABEL C. WHITTIER, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Pipe-Wrenches, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to wrenches of that class known as "pipe-wrenches," and has for its object to improve the construction of the same, whereby a strong, compact, simple, and efficient pipe-wrench may be obtained.

In accordance with my invention both jaws of the wrench may be and preferably are made movable, one being pivotally secured within a housing and the other adjustably extended through the said housing. The housing referred to is preferably cast in one piece with the handle of the wrench, which for the best results is made hollow, and the said housing on its inner sides is provided with spurs or lugs, forming with a back strap or piece of the housing a guide for the adjustable jaw. The adjustable jaw is provided with a threaded shank, preferably on one side of the longitudinal center of the adjustable jaw, whereby the housing or main casting may be made compact.

My invention therefore consists in the combination of the following instrumentalities, viz: a hollow housing divided to form two compartments, a movable jaw pivotally secured within one of said compartments, an adjustable jaw extended into the other of said compartments, and means to adjust the jaw, substantially as will be described.

Other features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a side elevation of a pipe-wrench embodying my invention; Fig. 2, a longitudinal section of the wrench on line $x\,x$, Fig. 1, with the adjustable jaw omitted; and Fig. 3, a side elevation, partially broken out, of the wrench shown in Fig. 1.

In accordance with my invention the casting or body A of my improved wrench is made hollow at its upper portion to form a housing a for a movable jaw a' and an adjustable jaw a^2. The housing or casting a is preferably made in one piece with a handle a^3, which for the best results is made hollow. The main casting A, between the handle a^3 and the upper part or housing a, is provided with an opening, into which is fitted an adjusting-nut a^4, through which is extended the threaded shank a^5 of the adjustable jaw a^2.

In order to enable the housing to be made as compact as possible, the threaded shank a^5 is made to one side of the longitudinal center of the adjustable jaw a^2, as shown in Fig. 3. The housing within it has secured to or forming part of its side walls one or more guiding spurs or lugs b, which divide the housing into two compartments, in one of which is located the movable jaw a' and through the other of which the adjustable jaw a^2 is extended. The movable jaw a' rests upon and rocks on a pivotal shoulder b^2 within the housing, and the said jaw is normally pressed outward by a spring b^4, having one end inserted into a notch or recess b^5 in the housing. The movable jaw a' is secured within the housing by a pin b^6. The housing is preferably cut away at its rear portion, as at c, to effect a saving in stock; but the side walls of the housing in practice are left of sufficient width to cover the threaded shank of the adjustable jaw a^2, so that the threaded shank is protected from injury from the careless handling of a workman. The guiding-spurs b co-operate with the back strap c' of the housing to form guides for the adjustable jaw a^2. The jaw a^2 may be moved toward and away from the movable jaw a' by rotating the nut a^3. The spring b^4, acting on the rear or back side of the movable jaw, keeps the said jaw out in its normal position when the pipe is engaged, and when the wrench is moved in the direction indicated by the arrow 20 the movable jaw is moved backward toward the adjustable jaw against the action of the spring b^4, and when the wrench is turned in the reverse direction to obtain a new bite upon the pipe the spring acts to force the movable jaw outward into its normal position, freely relieving the jaw from the pipe and preventing locking of the wrench upon the pipe.

I claim—

1. In a pipe-wrench, the combination of the following instrumentalities, viz: a hollow housing divided to form two compartments,

a movable jaw pivotally secured within one of said compartments, an adjustable jaw extended into the other of said compartments, and means to adjust the jaw, substantially as described.

2. In a pipe-wrench, the combination, with a housing and handle cast in one piece, of a jaw a^2, provided with a threaded shank set to one side of the longitudinal center of the said jaw, and means to adjust the jaw with relation to the housing, substantially as described.

3. In a pipe-wrench, the combination of the following instrumentalities, viz: a hollow housing provided on its inner side with one or more guiding-spurs and having cast integral with it a hollow handle, a jaw a', pivotally secured within the hollow housing, a spring to act on the rear side of the said jaw, an adjustable jaw a^2, provided with a shank extended through the housing, and means to adjust the jaw a^2 with relation to the housing, substantially as described.

4. In a pipe-wrench, the combination of the following instrumentalities, viz: a hollow housing divided to form two compartments, a bearing-shoulder in one of said compartments, a movable jaw pivotally secured in one of said compartments and resting upon the bearing-shoulder, a spring to act on the rear side of the movable jaw, an adjustable jaw extended through the other of said compartments, and means to adjust the said jaw, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ABEL C. WHITTIER.

Witnesses:

JAS. H. CHURCHILL,

L. A. WASHBURNE.