

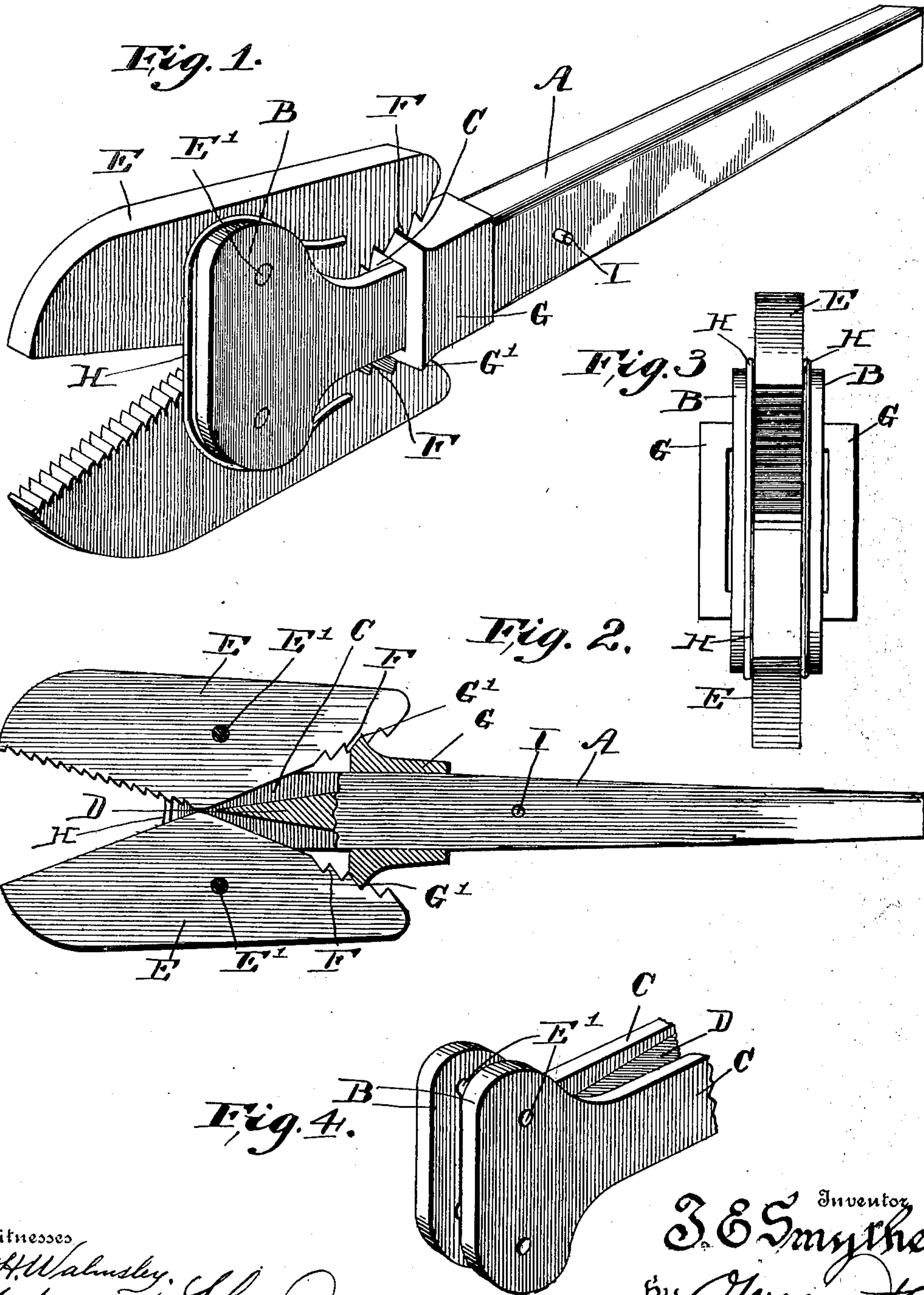
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Patented May 28, 1901.

T. E. SMYTHE.  
PIPE WRENCH.

(Application filed Sept. 29, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS E. SMYTHE, OF CRESTLINE, OHIO.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 675,023, dated May 28, 1901.

Application filed September 29, 1900. Serial No. 31,566. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS E. SMYTHE, a citizen of the United States, residing at Crestline, in the county of Crawford and State of Ohio, have invented a new and useful Pipe-Wrench, of which the following is a specification.

This invention relates generally to wrenches, and more particularly to a wrench intended for use upon pipes, rods, and the like, and consequently I designate my invention a "pipe-wrench."

The object of my invention is to provide a pipe-wrench which can be quickly and easily adjusted for use and one which will be highly efficient and durable.

Another object is to construct the wrench of few parts which can be quickly and easily put together, thus permitting the wrench to be made and sold at a low price.

With these various objects in view my invention consists, essentially, of a shank or handle having a bifurcated head in which the jaws are pivoted, the forward end of said jaws being shaped to engage a pipe or rod, while the rear ends of the jaws are constructed for engagement with a sliding collar moving upon the shank or handle below the head and adapted to force the rear ends of the jaws apart and bring their forward ends into position to grip the pipe or rod, said jaws being normally opened or spread apart by means of a spring or springs shaped to embrace or surround the member of the head and engage the jaws at points to the rear of the pivots.

My invention consists also in certain details of construction and novelties of combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a wrench constructed in accordance with my invention. Fig. 2 is a side view, one member of the head being broken away and the collar shown in section. Fig. 3 is an end view. Fig. 4 is a detail perspective view of the head of the shank.

In carrying out my invention I employ a shank or handle A the forward end of which is somewhat enlarged, as shown at B, thus providing a head which is bifurcated, as shown at C, and the sides of the shank or han-

dle are grooved, as shown at D, said grooves terminating at or leading into the bifurcation of the head. The jaws E are pivoted between the members of the head, adjacent to the ends of the head, short rivets or studs E' being employed as pivots. The forward ends of the jaws are shaped in any suitable manner to grip a pipe or rod, and in the drawings I have shown one jaw provided with teeth and the other without teeth; but it will be understood that both may be toothed, if desired. The rear ends of the jaws are made tapering, as shown, and the inner or contiguous faces of said ends are notched, as shown at F, and a collar G is arranged upon the shank or handle A, said collar being of such size and shape as to fit between the rear ends of the jaws E when said collar is forced toward the head B, thus spreading the rear ends of the jaws E and forcing the forward ends together.

The forward end of the collar G is slightly beveled, as shown at G', in order to better engage the notches F with jaws E, thereby holding the jaws securely at any adjustment.

Inasmuch as the rear ends of the jaws are made tapering and their inclined faces adjacent, it will be readily understood that as the collar G is forced toward the head the forward ends of the jaws will be brought closer together. When the collar is withdrawn and slid back, the jaws are returned to their normal or open position by means of bow-springs H H, which encircle or surround the members of the head and are attached to the jaws at points to the rear of their pivots, as most clearly shown, and when the jaws are opened to their limit their rear ends rest in the grooves or recesses D, produced in the sides of the shank A adjacent to the head B, thus allowing the jaws E to be opened or expanded to a greater extent.

Any suitable stop, such as a pin I, may be employed to limit the backward movement of the collar G and prevent it sliding off the shank or handle A.

By arranging the springs as described they act positively upon the jaws, but do not interfere with the article to be gripped. If desired, a series of apertures may be made in the jaws to receive the ends of the springs, so that the tension of the springs can be varied, as described. The jaws being pivoted



in the head are always ready for use, and the only operation necessary to adjust them is to slide the collar up or down.

It will thus be seen that I provide an exceedingly cheap form of wrench which is highly efficient in operation, easily adjusted, and not likely to get out of order.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pipe-wrench comprising a shank, a handle bifurcated at its forward end, the jaws pivoted in said bifurcated end, and having their forward ends shaped to engage a pipe or rod, the rear ends being notched, a collar sliding upon the shank or handle and adapted to engage the notched ends of the jaws, and a spring or springs for opening the jaws, substantially as described.

2. A pipe-wrench comprising a shank or

handle, having a bifurcated head, jaws pivoted in said head, and having the rear ends tapered and notched, a collar sliding on the shank or handle and having its forward edge beveled, and a spring connecting the rear ends of the jaws to normally hold the forward ends apart, substantially as described.

3. A pipe-wrench comprising a shank or handle, having a bifurcated head, the jaws pivoted between the members of said head, the rear ends of said jaws being tapered and notched, the sliding collar having its front end beveled, and the bow-springs surrounding the members of the head, and having the ends connected to the jaws at points to the rear of the pivots, substantially as described.

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