C. E. TOWNSEND.

WRENCH.

APPLICATION FILED APR. 15, 1908.

943,286. Patented Dec. 14, 1909.

Fig. 1

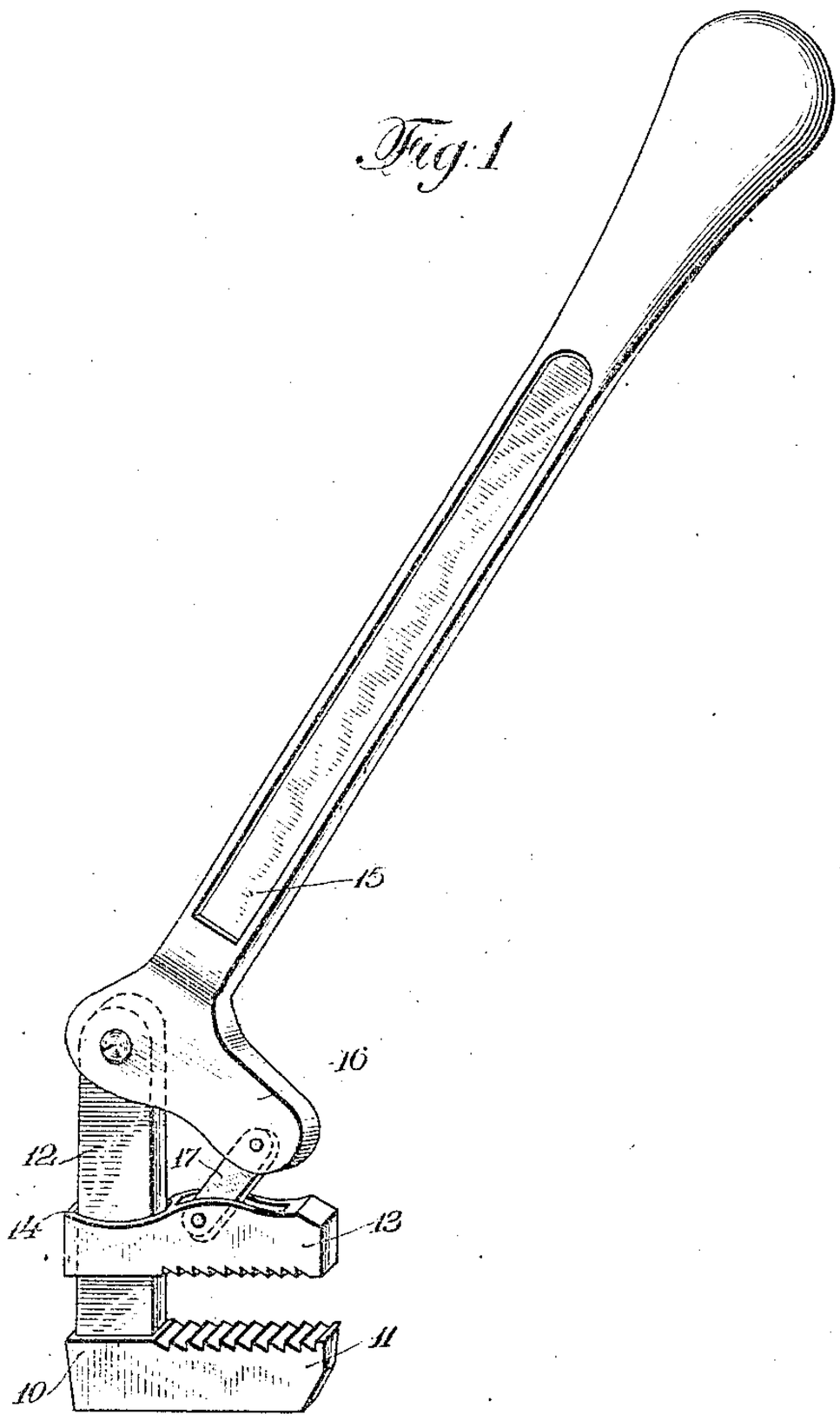
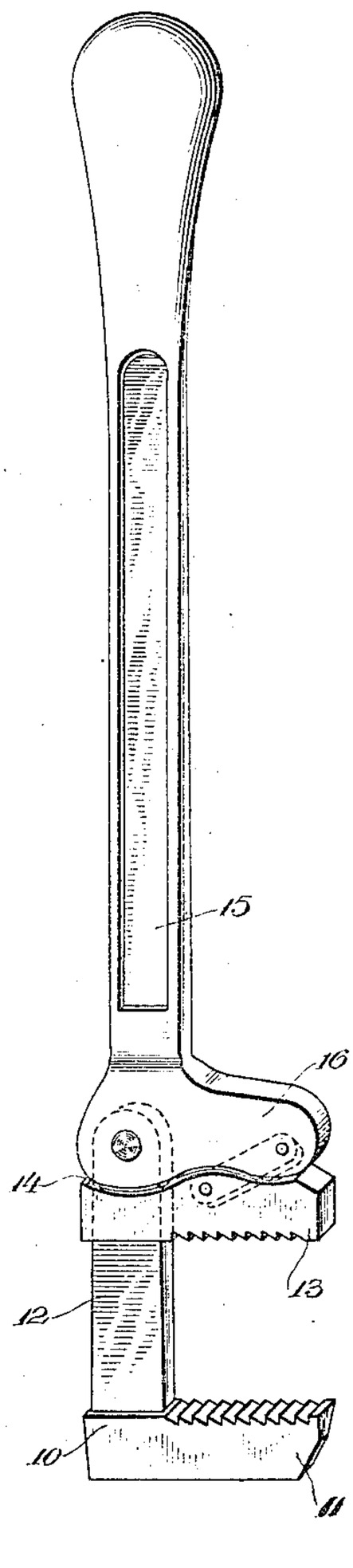



Fig. 2




WITNESSES

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CHARLES ELMER TOWNSEND, OF BILLINGS, MONTANA.

## WRENCH.

943,286. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed April 15, 1908. Serial No. 427,251.

*To all whom it may concern:*

Be it known that I, CHARLES ELMER TOWNSEND, of Billings, in the county of Yellowstone and State of Montana, have invented a certain new and useful Improvement in Wrenches, and do hereby declare that the following is a full and exact description thereof.

The object of my invention has been to provide a wrench that shall be simple in construction and powerful in action; and to such ends my invention consists in the wrench hereinafter specified.

Figures 1 and 2 are side elevations of a wrench embodying my invention, Fig. 1 showing the wrench closed, and Fig. 2 showing the wrench open.

In that embodiment of my invention which I have chosen for illustration, there is an L-shaped body 10 having a jaw 11 and an arm 12 at right angles to each other. The jaw preferably has teeth on its engaging surface. A second jaw 13 is slidably mounted on the arm 12, the jaw having a socket 14 which is adapted to receive the said arm. The jaw 13 is likewise provided with teeth on its engaging face. A lever 15 is pivoted to the arm 12 at its outer end, and an arm 16 is formed on the said lever. A link 17 is pivoted to the arm 16 and to the jaw 13. A convenient and strong construction for the pivots is to form a recess in the lever for the inner end of the arm 12, and to form recesses in the jaw 13 and arm 16 for the ends of the link 17; but these are details which may be varied as desired.

In the operation of my wrench, the object to be turned, such as a pipe, is placed between the jaws, and the arm 12 held from rotation about the object while the lever is swung about its pivot until it has forced the jaws together sufficiently to engage the object. The whole strength can then be applied to the lever; and as the swinging of the lever tends to straighten the toggle joint, formed by the arm 16 and the link 17, the inner jaw, if the parts be properly proportioned to the diameter of the object to be gripped, is forced with great pressure against the object so that no slipping between the jaws and the object occurs.

While I have described my invention above in detail, I wish it to be understood that many changes might be made therein without departing from the spirit of my invention.

I claim:

A wrench, consisting of the combination of an L-shaped body, comprising an outer jaw and an arm, substantially perpendicular to each other, an inner jaw having a socket adapted to embrace and slide upon said arm, a lever pivoted to the inner end of said arm, said lever comprising a handle and an arm at an angle to each other, and a link pivoted to said lever arm and to said inner jaw the inner jaw when withdrawn being adapted to lie substantially contiguous to the arm of the lever

In testimony that I claim the foregoing I have hereunto set my hand.

CHARLES ELMER TOWNSEND.

Witnesses:
LOUIS F. SCHROEDER,
C. J. BRACKETT.