

No. 868,176.

PATENTED OCT. 15, 1907.

H. FISHER.
WRENCH.

APPLICATION FILED OCT. 17, 1904.

Fig 1

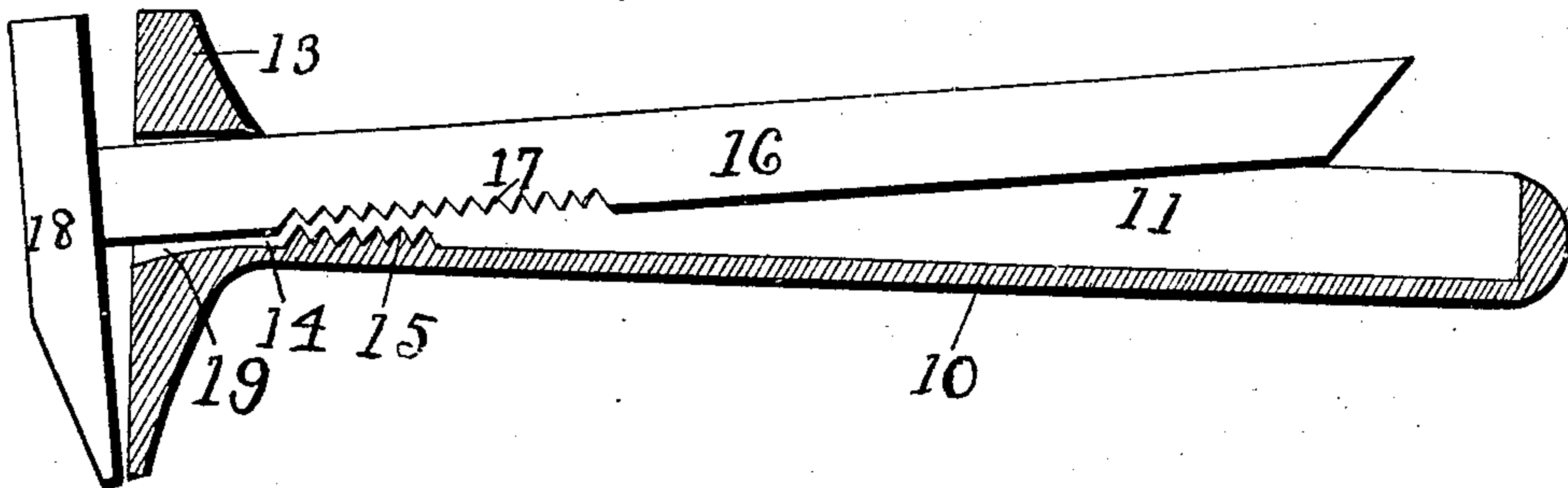


Fig 2

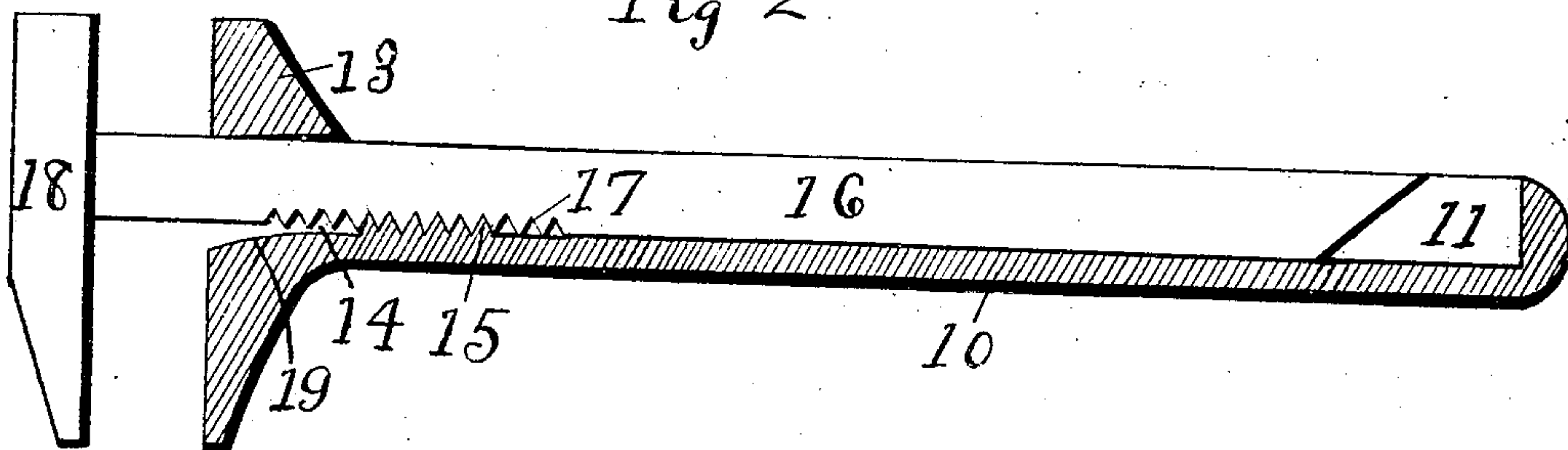
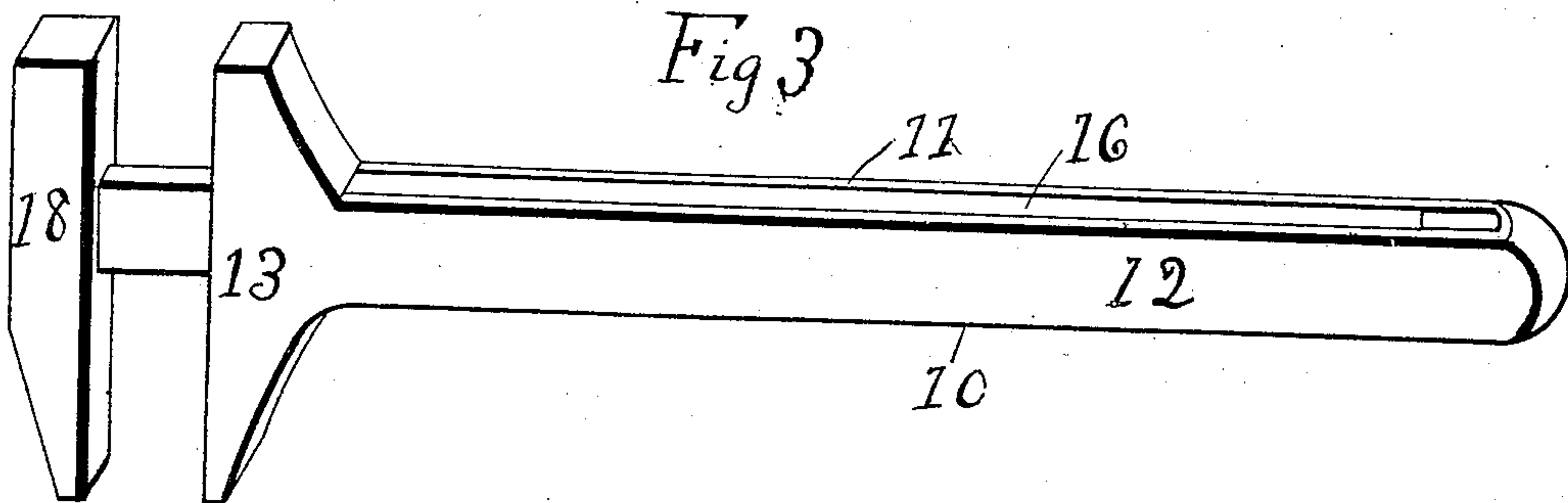


Fig 3



Witnesses:
Ralph Brockett.
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Inventor: H. Fisher
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UNITED STATES PATENT OFFICE.

HENRY FISHER, OF EVERLY, IOWA.

WRENCH.

No. 868,176.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed October 17, 1904. Serial No. 228,698.

To all whom it may concern:

Be it known that I, HENRY FISHER, a citizen of the United States, residing at Everly, in the county of Clay and State of Iowa, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

The objects of my invention are to provide a wrench of simple, durable and inexpensive construction which may be easily and readily adjusted from one position to another so as to be adapted for use in connection with bolts of various sizes.

A further object is to provide a wrench of this class in which the jaws are held in position relative to each other by the hand of the operator which holds the teeth on the shank of the wrench in engagement with the teeth in the casing forming the handle of the wrench.

A further object is to provide a wrench in which the movable member is maintained in position relative to the handle by the engagement of the outer portion of the shank with the portion through which it slides when the operator holds the rear end of the shank on the interior of the handle.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of the handle of the wrench and one of the jaws, showing in side elevation the movable shank and the jaw which is attached to it, showing the shank in position for being adjusted. Fig. 2 is a sectional view of the wrench taken in the same way, and Fig. 3 is a perspective view of the wrench.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate the handle of the wrench which is in the shape of a hollow casing, having the two sides 11 and 12 therein and having the jaw 13 at one end thereof through which there is an opening designed to receive the shank of the wrench, to be hereinafter described. Immediately inside of the jaws 13 and extending upwardly from the bottom portion of the handle is a series of teeth 15. Extending through the opening 14 is the shank 16 having a series of teeth 17 in its lower portion, designed to engage the teeth 15 when the wrench is in condition for use. Attached to

that end of the shank 16 which is designed to be outside of the jaw 13 is a jaw 18 which is designed to coact with the jaw 13 in use. The opening 14 is larger at its outer end than at its inner end, so that the metal which forms the lower portion of the opening is rounded at 19 to enable the shank 16 to slide freely over this rounded portion when the teeth 17 are out of engagement with the teeth 15, and also to enable the teeth to be thrown more easily out of engagement with each other.

In practical use and assuming that the jaws are in engagement with each other, and it is desired to separate these jaws, the operator raises the inner end of the shank 16 out of the handle 10, thus throwing the teeth 17 out of engagement with the teeth 15. He then moves the shank outwardly until the jaw 18 has reached the desired position relative to the jaw 13, and he then presses downwardly on the inner end of the shank 16 to force the upper portion of the shank in engagement with the upper portion of the jaw 13 and the teeth 17 into engagement with the teeth 15. By simply holding his hand around the handle when the inner end of the shank 16 is inside of it, the shank 16 and the jaw 18 will be held firmly in position relative to the handle 10 and the jaw 13. By removing the shank from the hollow handle, this shank with its jaws may be used as a hammer as it is adapted for that purpose.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States therefor is—

An improved wrench comprising a hollow handle portion closed at its bottom, sides and rear end and open at its top, a jaw portion formed on the forward end of the handle portion and having a longitudinal opening through it in line with the hollow handle, a number of teeth formed in the handle portion projecting upwardly into the interior thereof, adjacent to the opening in the jaw portion, and a second member comprising a jaw and a shank, said shank projecting through the opening in the first mentioned jaw portion and capable of lying wholly within the hollow handle when the jaws are together, said shank portion formed with teeth to co-act with the teeth on the said handle portion, the said slot in the opening in the first mentioned jaw portion having its side adjacent to the teeth curved to permit the said shank portion to tilt within said opening to thereby permit the co-acting teeth to disengage.

Des Moines, Iowa, August 23, 1904.

HENRY FISHER.

Witnesses:

J. O. CLIFTON,
MICHAEL FELL.