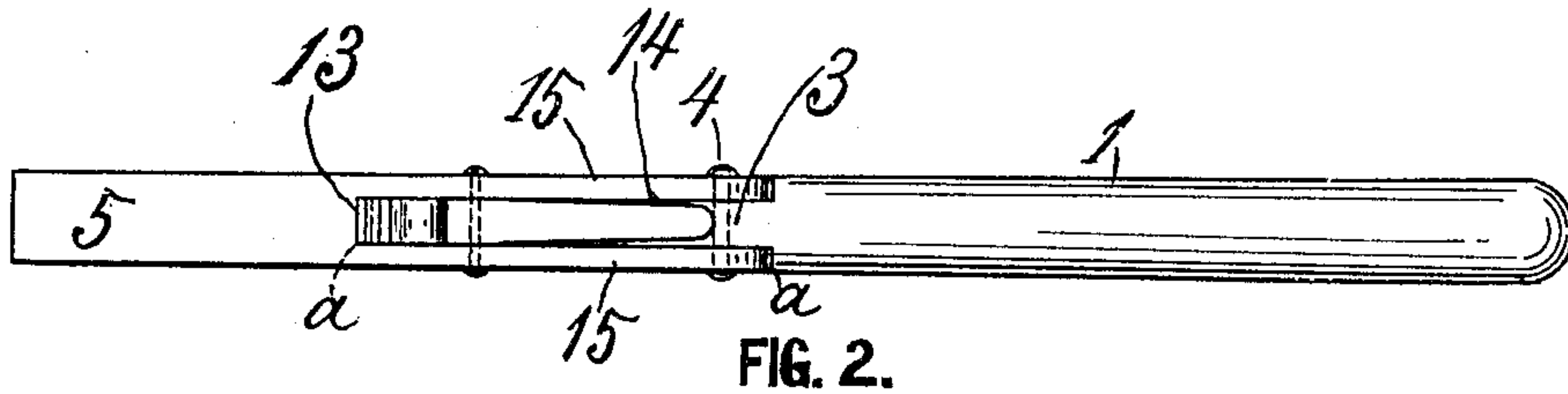
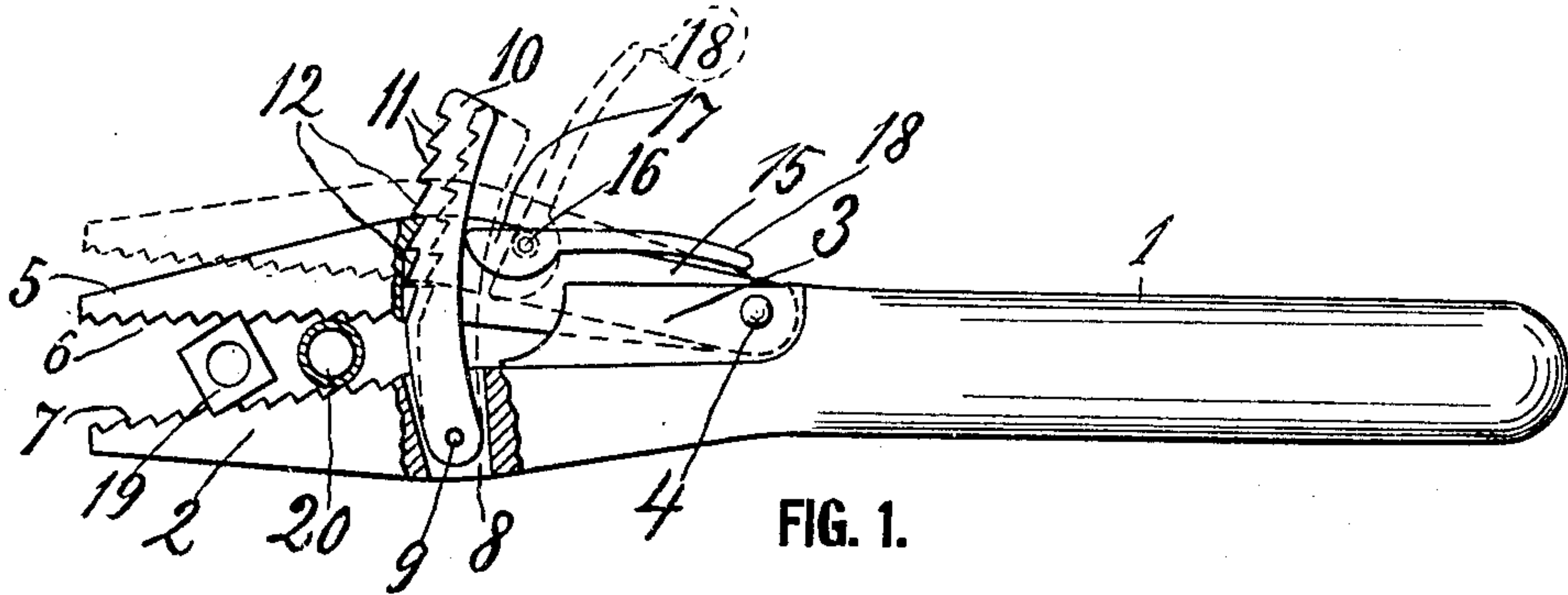


H. CHRISTOPHERSON.
WRENCH.
APPLICATION FILED JULY 3, 1908.

906,614.

Patented Dec. 15, 1908.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HALVOR CHRISTOPHERSON, OF KIDDER, SOUTH DAKOTA.

WRENCH.

No. 906,614.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed July 3, 1908. Serial No. 441,833.

To all whom it may concern:

Be it known that I, HALVOR CHRISTOPHERSON, a citizen of the United States, residing at Kidder, in the county of Marshall and State of South Dakota, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to wrenches of the class known as alligator wrenches; and the object is to provide a wrench of said class in which the angle of the V-shaped gap may be changed and the gap enlarged or reduced. This object I attain by the construction and arrangement of parts illustrated in the accompanying drawing, in which:—

Figure 1 is a partly sectional view of my improved wrench with the portion *a—a* in Fig. 2 broken away from the upper jaw. Fig. 2 is a top view of Fig. 1 with all parts intact.

Referring to the drawing by reference numerals, 1 designates the handle of the wrench and from its front end extends a fixed toothed jaw 2 and a flat guiding rib 3. Straddling said rib so as to be guided by it and pivoted at 4 thereto is a similar jaw 5 having ratchet teeth 6 inclined in reverse direction of the teeth 7 of the fixed jaw. In a slot 8 in the fixed jaw is pivoted at 9 an arched ratchet toothed rack 10 whose teeth 11 are adapted to engage teeth 12 in the front terminus 13 of the gap 14 which separates the rear arms 15 of the pivoted jaw and straddles the rib 3. In said gap 14 is pivoted at 16 a cam 17 having a finger lever 18 by which it may be turned so as to hold the rack in mesh with the teeth of the jaw

or permit its disengagement therefrom while the jaws are being regulated to the desired width from each other.

At 19 is shown a nut and at 20 a pipe as engaged by the jaws of the wrench.

From the above description it will be understood that in contradistinction to alligator wrenches with the jaws integral, the adjustability of my wrench enables its size to be enlarged for turning pipes and nuts of much larger sizes than an integral wrench of the same size would do, and if the pipe or nut is not very large but requires an extra tight grip to be turned, then such grip or hold is secured by closing the jaws in beyond the normal position.

What I claim is:

An alligator wrench comprising a handle, a jaw fixed at the front end thereof and having a toothed face, another jaw pivoted to the handle and having a toothed face standing normally at an acute angle to the first mentioned face and means for holding the pivoted jaw at various inclines to the fixed jaw, said means consisting of a ratchet-toothed rack pivoted with one end to one of the jaws and teeth on the other jaw for the rack teeth to engage and a cam lever pivoted to said other jaw for holding the rack engaged with said teeth when the wrench is in use.

In testimony whereof I affix my signature, in presence of two witnesses.

HALVOR CHRISTOPHERSON.

Witnesses:

O. HARLEN,
CARL J. MOHN.