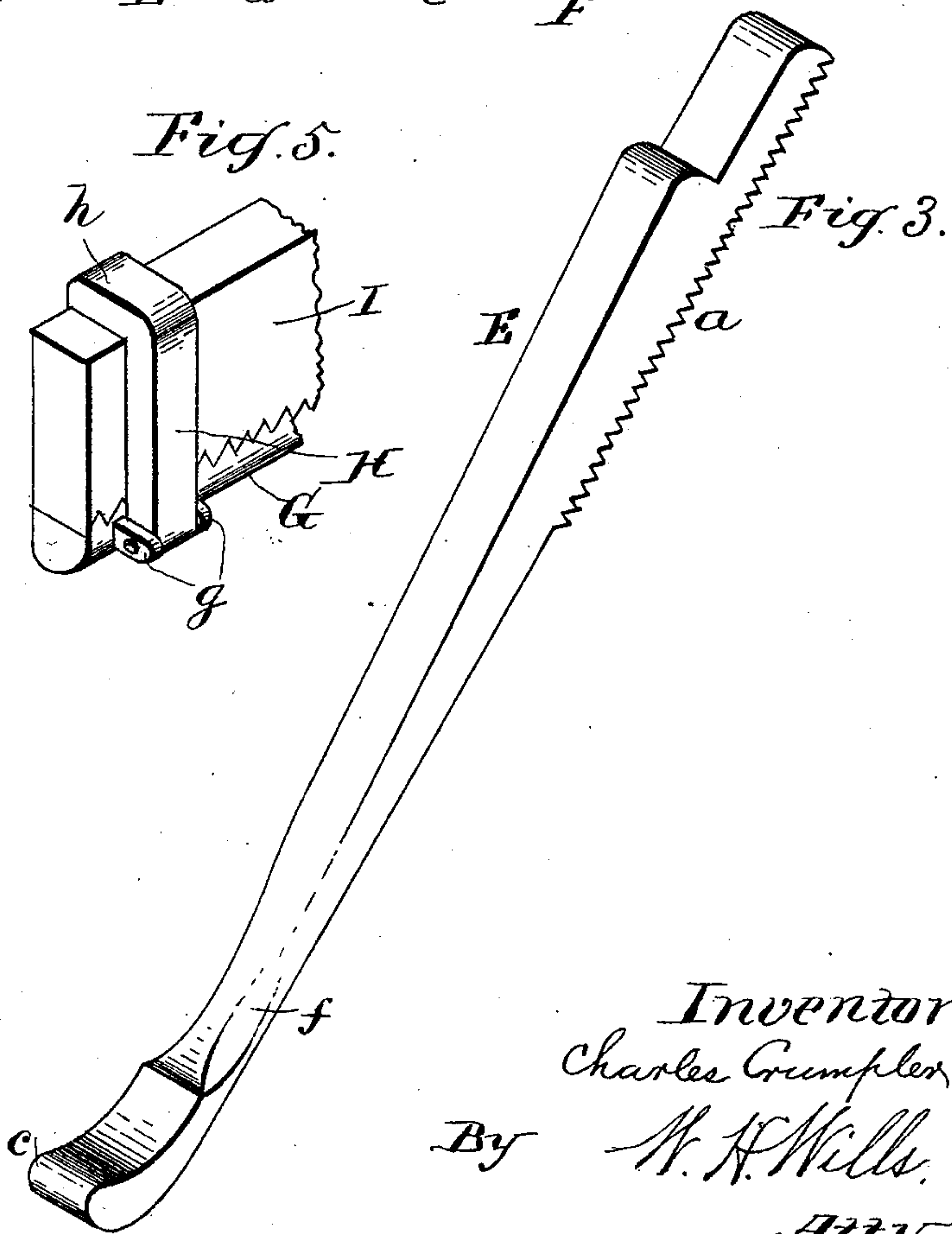
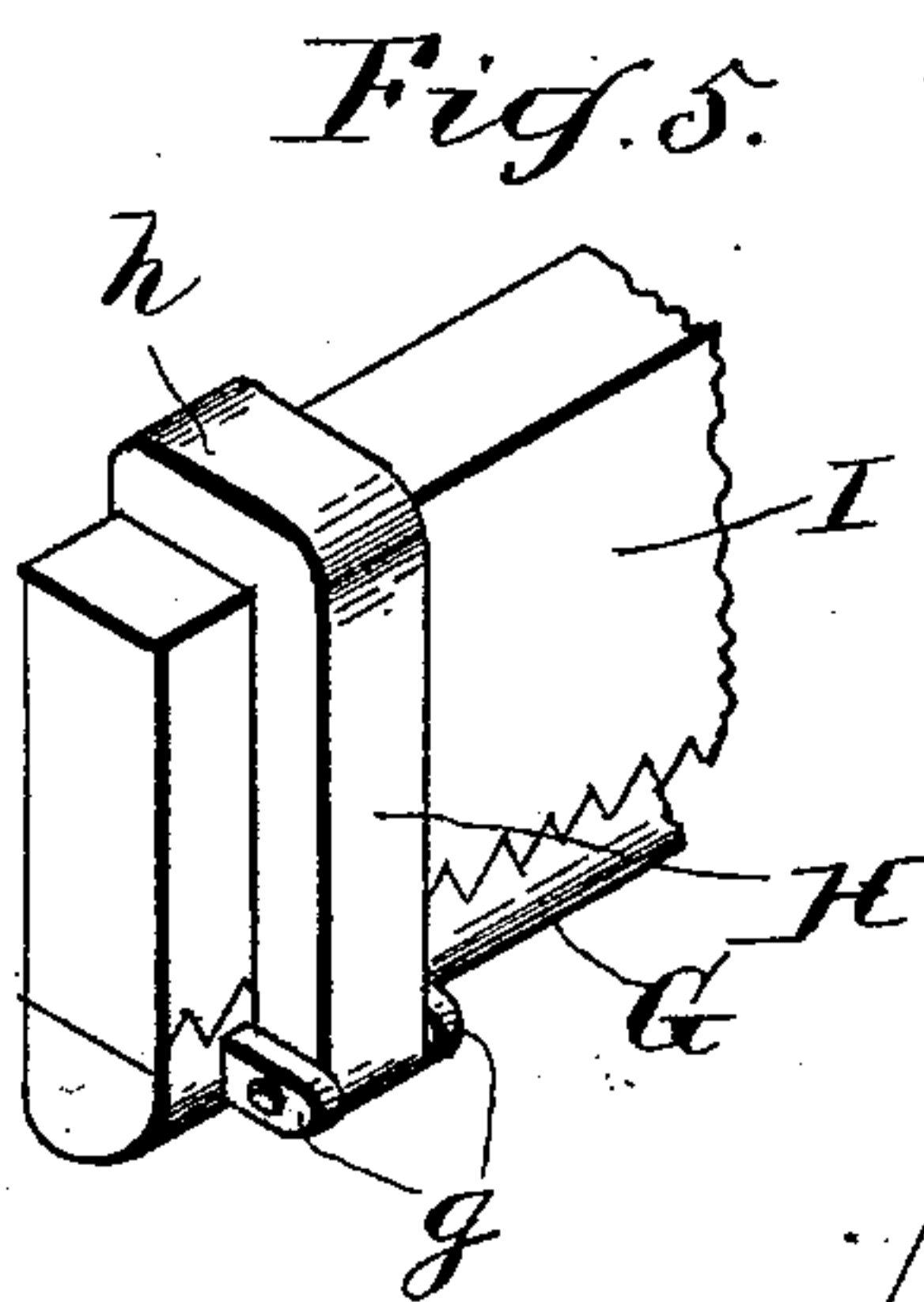
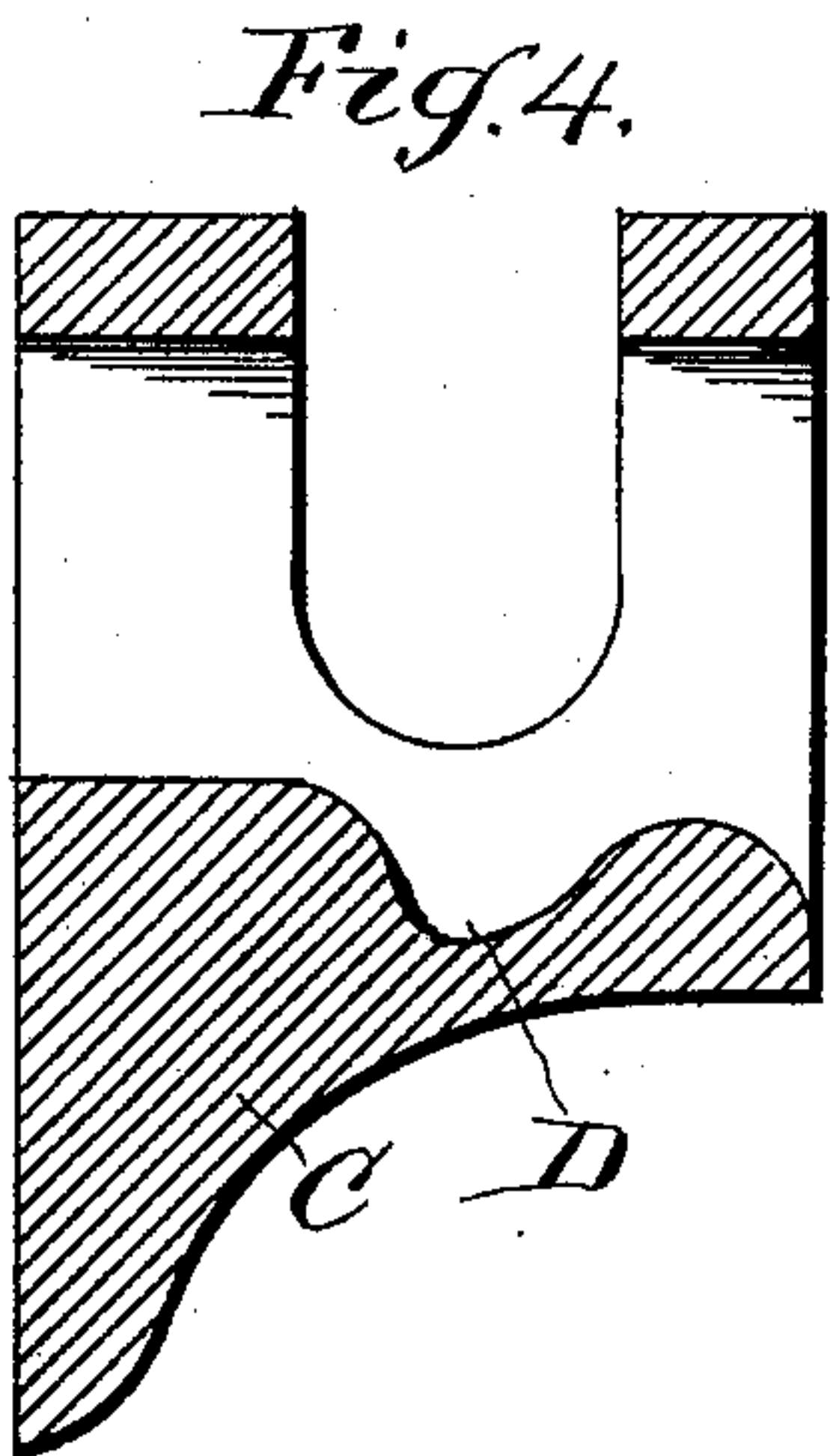
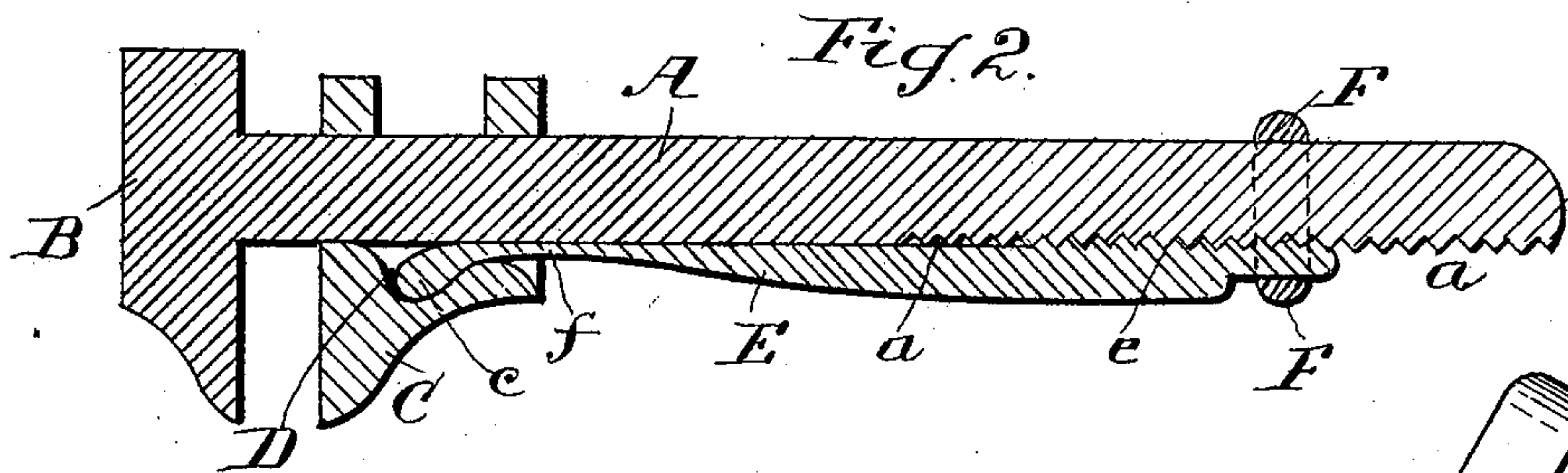
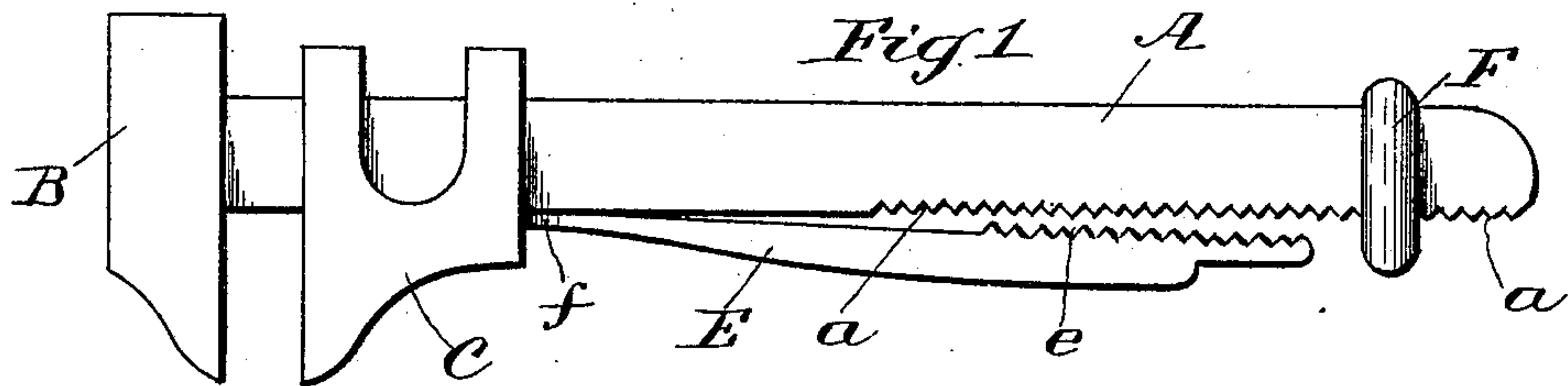


(No Model.)

C. CRUMPLER.  
WRENCH.

No. 587,186.

Patented July 27, 1897.



Witnesses:  
John D. Stump  
C. E. Stebb.

Inventor  
Charles Crumpler  
By M. H. Wills.  
Atty.



# UNITED STATES PATENT OFFICE.

CHARLES CRUMPLER, OF CLINTON, NORTH CAROLINA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 587,186, dated July 27, 1897.

Application filed February 5, 1897. Serial No. 622,176. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES CRUMPLER, a citizen of the United States, residing at Clinton, in the county of Sampson and State of North Carolina, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to nut-wrenches; and the object of the invention is to provide a wrench having a slidable jaw, with a lever separate from the wrench-stem and said jaw and adapted to lock the latter to the said stem.

The invention consists in the novel construction and arrangement of parts and resides, essentially, in the recessed slidable jaw and the lever for operating and controlling said jaw.

In the accompanying drawings, forming part of this application, Figure 1 is a side elevation of my improved wrench. Fig. 2 is a longitudinal section with the lever locked. Fig. 3 is a perspective view of the lever. Fig. 4 is an enlarged section of the slidable jaw. Fig. 5 is a perspective view, partly broken away, showing modified form of locking means.

The same letters of reference denote the same parts throughout the several figures of the drawings.

The wrench-stem A has the usual fixed jaw-head B and is provided with teeth or corrugations *a*.

The slidable jaw C is of the ordinary construction, except that in the lower body portion is formed a recess or cavity D in the path of the wrench-stem A. This cavity or recess is provided to receive the end *c* of the lever E, which has teeth or corrugations *e*, adapted to mesh with the teeth *a* of the wrench-stem, said end *c* being held in the cavity D by the wrench-stem, and the lever E is locked with said stem by a link F, the latter being slipped from the lever end to permit free action of the said lever.

The lever E is reduced at *f* to give a spring to the lever that it may return to normal position when pressure upon its toothed end is released.

Referring to the modification shown in Fig. 5, the lever G has ears or lugs *g*, to which is pivoted a lever H, having an angle lip or extension *h*, which engages the wrench-

stem I for locking the lever G and stem I together.

It will be observed that the lever and the slidable jaw are separate or not secured together, thus avoiding the usual pivot or swinging connection and rendering the parts readily separable by simply removing the slidable jaw from the stem.

I do not wish to be understood as limiting myself to any particular size or shape of wrench, nor to a special shape or form of lever, but I reserve to myself the right to make such changes as may be found most advantageous in the application of my invention.

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

1. A wrench comprising a main stem having teeth and a jaw-head, a slidable jaw, and a lever one end of which is held in the slidable jaw by the said stem and the other end provided with teeth adapted to mesh with the teeth of said stem, to lock the slidable jaw to the stem, as set forth.

2. A wrench comprising a stem having teeth and a fixed jaw, a slidable jaw, and a spring-lever, the end of which forward of the spring portion being held in the slidable jaw by the said stem and the free end of which being provided with teeth adapted to mesh with the teeth of the wrench-stem to lock the slidable jaw to the said stem, as set forth.

3. The combination in a wrench, the stem having a fixed jaw and provided with teeth, a slidable jaw having a recess or cavity, and a lever one end of which is retained in said recess or cavity by the said stem and the other end having teeth to mesh with the teeth of the wrench-stem, as set forth.

4. The combination in a wrench, a wrench-stem having a fixed jaw and provided with teeth, a slidable jaw having a cavity in the path of said stem, a lever one end of which is confined in said cavity by the stem and the other end having teeth to mesh with the stem-teeth, and a link secured to the lever and surrounding the said stem, as set forth.

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

CHARLES CRUMPLER.

Witnesses:

D. A. CULBRETH,  
R. H. HUBBARD.