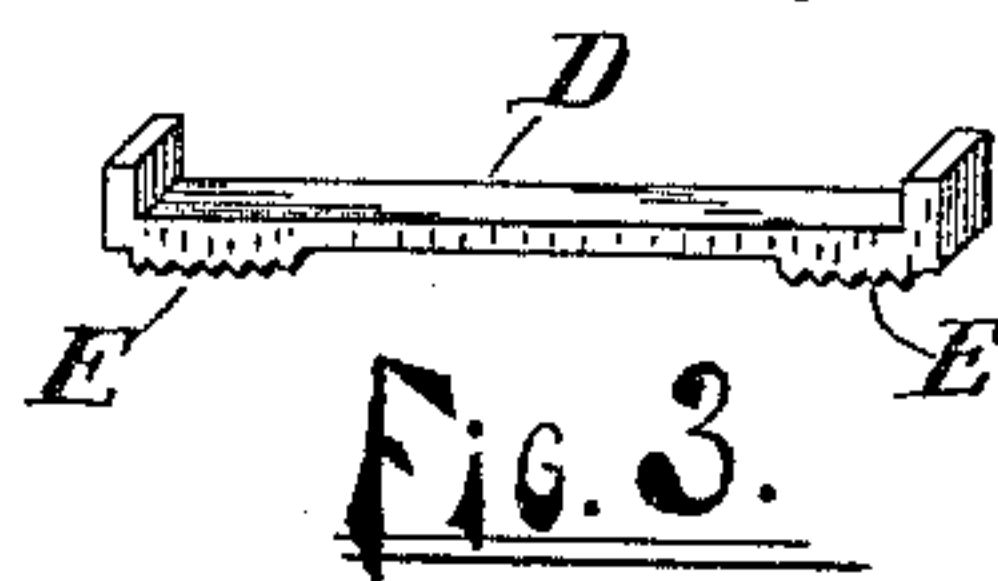
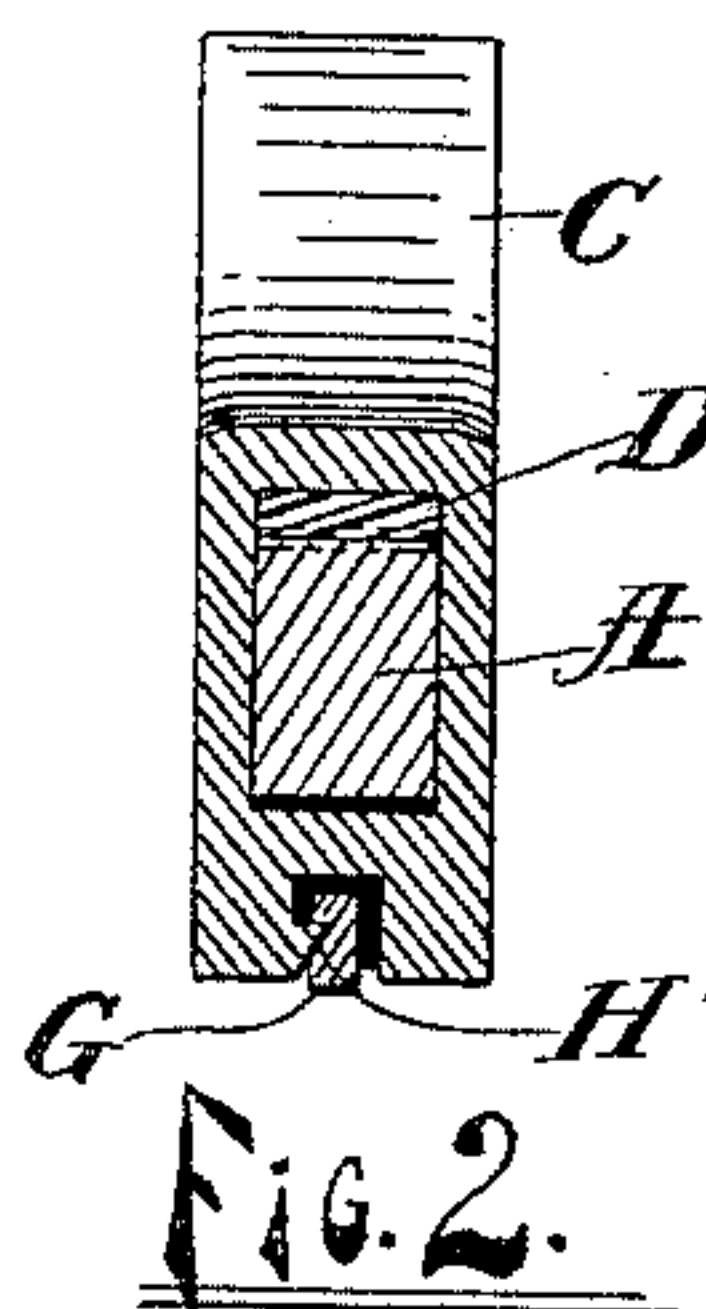
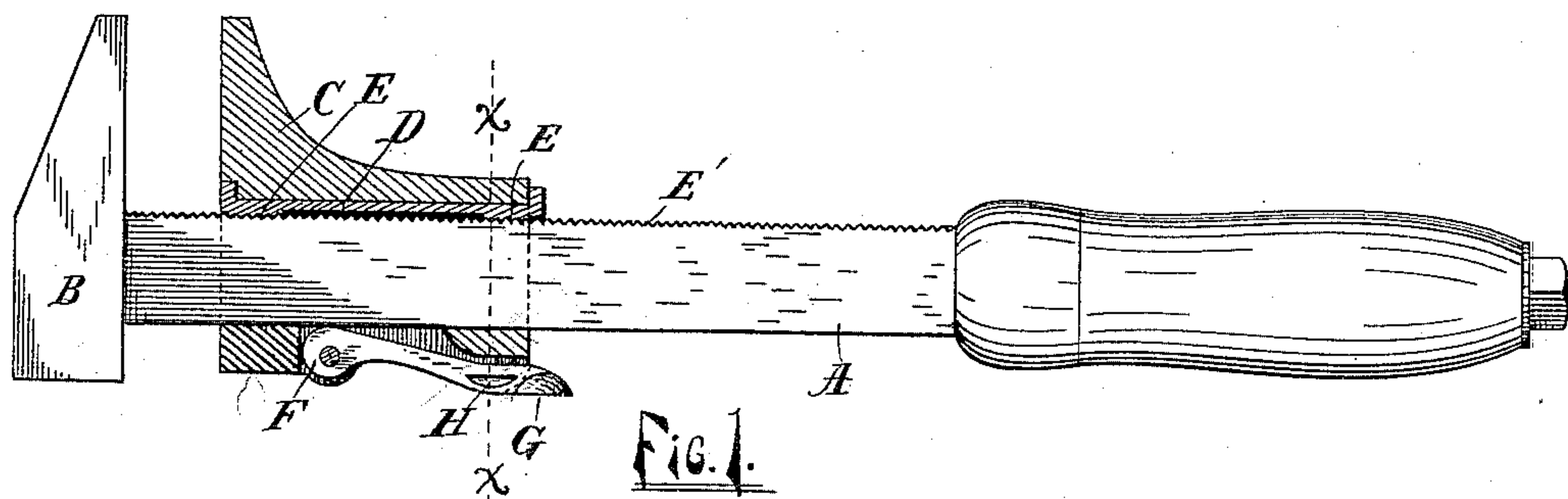


(No Model.)

A. HAMELEHLE.
WRENCH.

No. 448,146.

Patented Mar. 10, 1891.



WITNESSES:
Charles H. Tuttle
Claude A. Buchanan

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

ADOLPH HAMELEHLE, OF GRAND RAPIDS, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 448,146, dated March 10, 1891.

Application filed December 22, 1890. Serial No. 375,477. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH HAMELEHLE, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Adjustable 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.

My invention relates to adjustable wrenches; and its object is to provide a wrench that can be instantly adjusted, easily made and repaired, and also durable. I accomplish these results by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention; Fig. 2, a transverse section of the same on the line X X of Fig. 1, and Fig. 3 a perspective detail of the detachable gib.

A represents the shank of rectangular cross-section and parallel sides, having the fixed jaw B at its end and having one side serrated, as at E'.

C represents the movable jaw which surrounds and slides freely upon A, and is provided with a detachable gib D, provided with teeth or transverse ridges E, adapted to engage the serrations E' in the shank A. Within a suitable recess in said movable jaw C and engaging the side of the shank opposite the gib is pivoted a cam F, which is actuated by a lever G, having a depression H in one side, with which a projection H' on said movable jaw engages to lock the same. Said lever is narrower than the chamber in which it rests, and is laterally flexible to permit of disengagement with the projection H'. It will be evident that by the construction shown the gib D can be replaced when worn, may be made of steel and hardened without much expense, and that the entire structure is cheap and easily made. So, also, that by springing the lever G to one side with the thumb it is released, when the movable head can be

moved instantly to any desired point and quickly secured again by depressing and securing the lever G. By adjusting the cam to throw slightly beyond its fullest point the fastenings H H' for the lever G may be dispensed with. So, also, as the device becomes worn it may be tightened by putting a packing or shim under said gib to force it toward the shank.

What I claim is—

1. In a wrench, a shank having parallel sides rectangular in cross-section, having one side serrated and a fixed jaw at one end, a movable jaw provided with a gib having teeth adapted to engage said serrations, and a cam engaging the side of said shank opposite said gib, substantially as described.

2. In a wrench, a shank having a fixed jaw attached and serrations in one side, a movable jaw provided with teeth adapted to engage said serrations, and a cam engaging the opposite side of said shank, substantially as described.

3. In a wrench, a shank having a fixed jaw attached and serrations in one side, a movable jaw having teeth engaging said serrations, and a cam engaging the opposite side of said shank, said cam provided with a laterally-flexible lever having a depression in one side adapted to engage a projection on said movable jaw, substantially as described.

4. In a wrench, a shank of rectangular cross-section having one side serrated and a fixed jaw attached, a movable jaw surrounding said shank having a detachable gib provided with teeth engaging said serrations, and a cam opposite said gib having a laterally-flexible lever having a depression in its side engaging a projection on said movable jaw, substantially as described.

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

ADOLPH HAMELEHLE.

Witnesses:

LUTHER V. MOULTON,
LEONIDAS G. WOOLLEY.