

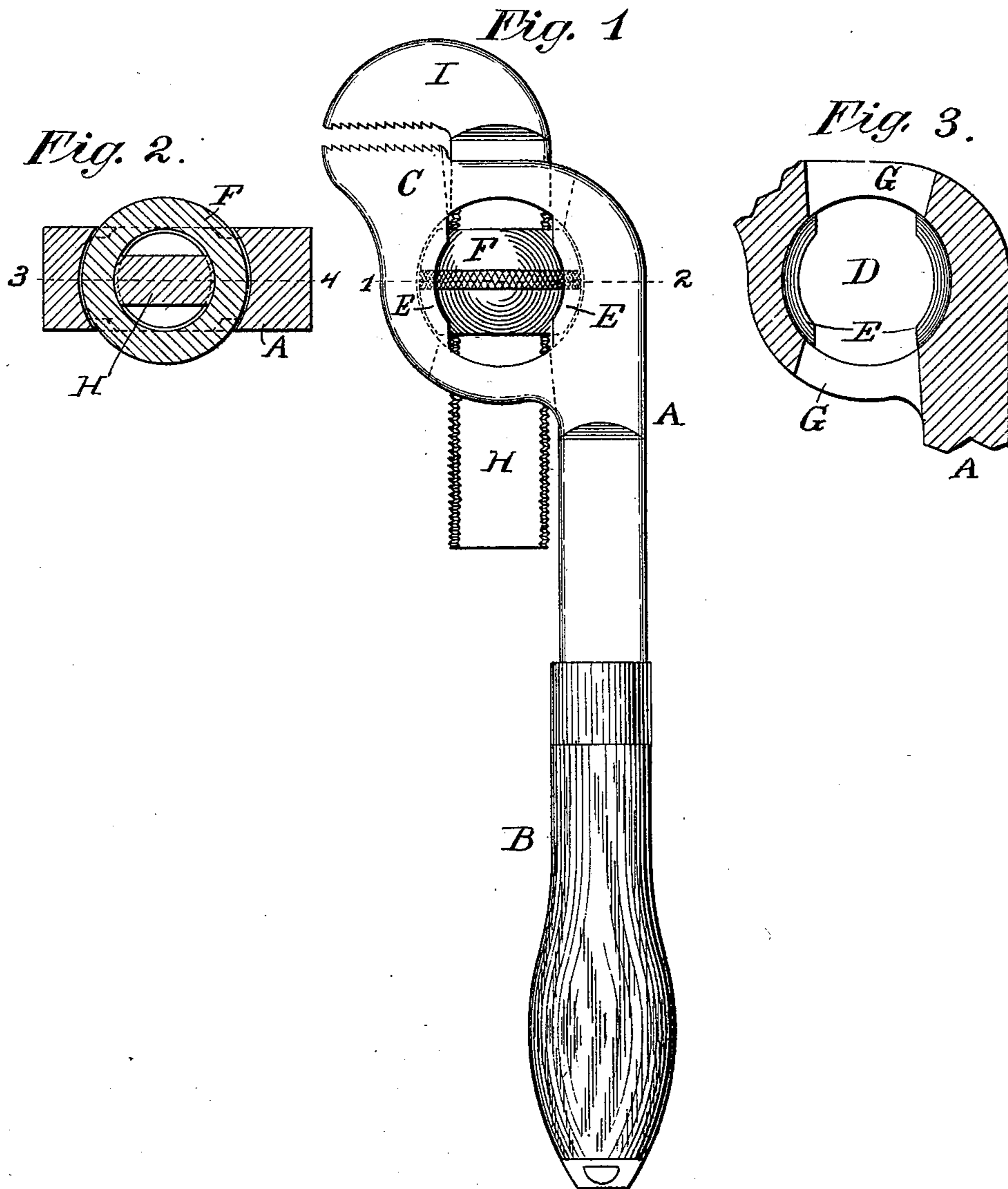
No. 630,523.

Patented Aug. 8, 1899.

C. W. SMITH.
WRENCH.

(Application filed Apr. 11, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

CLARENCE W. SMITH, OF COLD SPRING, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 630,523, dated August 8, 1899.

Application filed April 11, 1899. Serial No. 712,639. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE W. SMITH, a citizen of the United States, and a resident of Cold Spring, in the county of Putnam and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

The object of my invention is to produce a wrench for use in pipe or other work which shall combine all the usefulness of a pipe-wrench with the simplicity of the ordinary monkey-wrench.

In the drawings forming part of this specification, Figure 1 is a side elevation of one form of my wrench. Fig. 2 is a cross-section taken on the line 1 2 of Fig. 1. Fig. 3 is a vertical section taken on the line 3 4 of Fig. 2.

The lower part A of the wrench has the handle B at its lower end. The upper end is widened out to form the lower jaw C. This widened portion is provided with a circular orifice D, this orifice having around its edges for a portion of the circumference flanges E. Fitting in said orifice and retained therein by the flanges E is an adjusting-nut F of the shape shown, which is interiorly threaded. The widened portion of the lower part of the wrench is also slotted vertically, as shown at G, these slots being made flaring from the circular orifice in either direction.

The upper jaw I is in the form shown, having a straight shank H, which is screw-threaded to correspond with the threads of the adjusting-nut. The gripping-surfaces of the jaws are serrated, as shown. The screw-threaded portion of the upper jaw passes through the interiorly-threaded nut F and through the slots G in the lower jaw.

The operation of the device is as follows: The distance between the jaws is regulated by turning the nut F, which moves the upper jaw in one direction or the other. The wrench being placed upon the pipe, it will be seen that a motion of the handle to the left (looking at

Fig. 1) will cause the jaws to grip tightly on the pipe. A motion to the right will cause the jaws to be loosened, so as to adjust the wrench to a new position, as it will be seen that the lower jaw turns upon the nut as a pivot, the flaring slots G allowing this motion. In order to dismantle the wrench, the nut is turned until the screw-thread on the upper jaw-piece becomes disengaged. Said piece is then removed. The nut is then turned through a right angle, when it can be slipped out sidewise.

It will be obvious that the shape of the jaws may be varied to suit the particular kind of work for which the wrench is intended and that many details of the structure of the wrench may be modified without departing from my invention.

What I claim, and desire to secure by Letters Patent, is—

In a wrench the combination of the lower jaw having a widened and flattened portion, a handle part extending from one side of said flattened portion, a slot cut through said flattened portion between the gripping part of the jaw and the handle, said slot flaring outwardly at each end, a circular orifice running transversely through said widened portion, a substantially spherical nut in said orifice, flanges extending partially around the edges of said orifice to prevent removal of the nut in its normal position, a screw-threaded passage through said nut, and an upper jaw having a screw-threaded portion which passes through the slot in said widened portion and through the interiorly-threaded orifice in the nut, substantially as described.

Signed at New York, in the county of New York and State of New York, this 10th day of April, A. D. 1899.

CLARENCE W. SMITH.

Witnesses:

E. M. HARMON,
HERBERT J. LILLIE.