

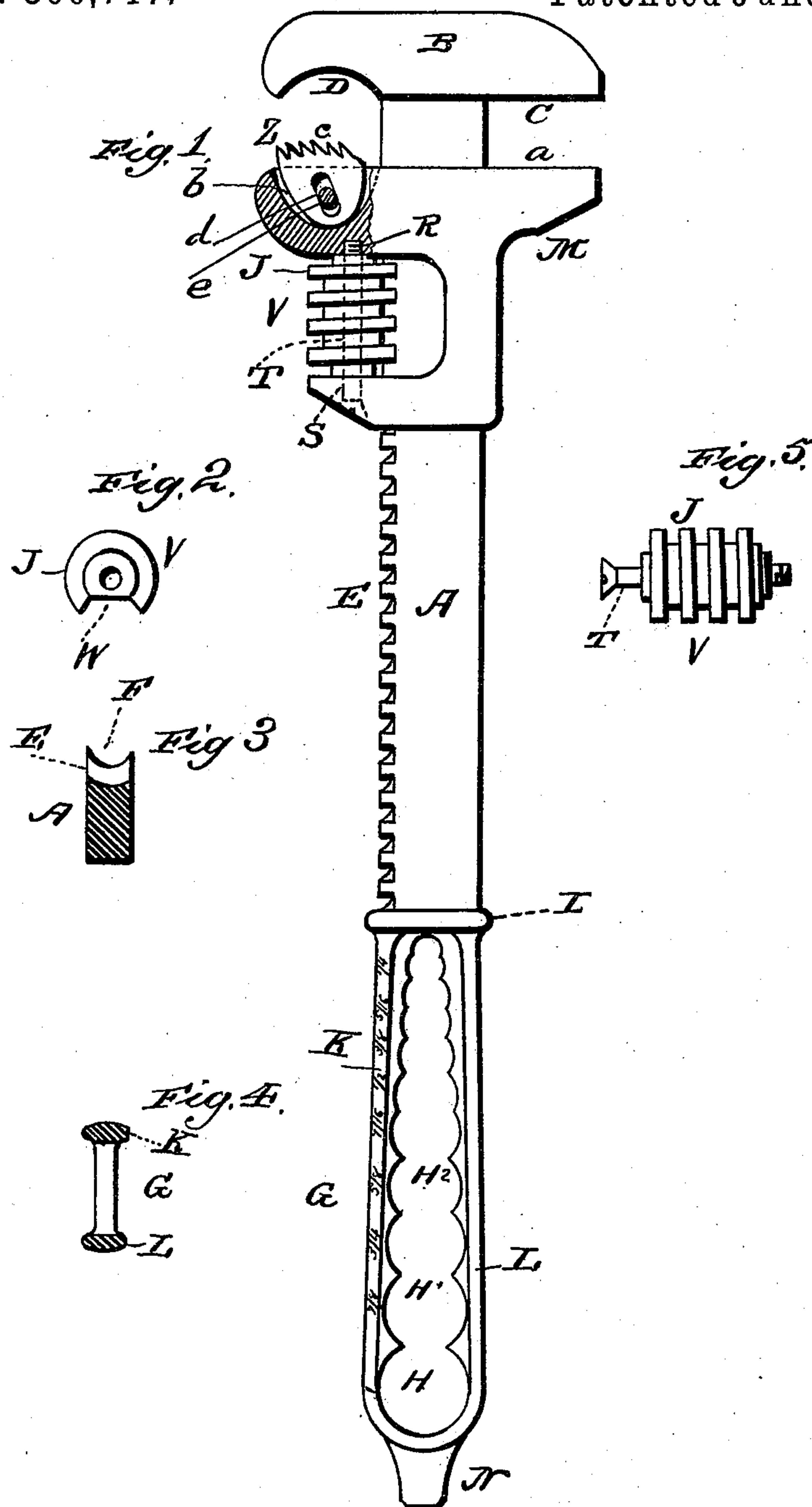
(No Model.)

F. W. MERRICK.

WRENCH.

No. 300,717.

Patented June 17, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

FRANK WALDO MERRICK, OF SANDUSKY, OHIO, ASSIGNOR OF ONE-HALF
TO THOMAS HICKLING, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 300,717, dated June 17, 1884.

Application filed March 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. MERRICK, a citizen of the United States, residing at Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Wrenches; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view, part sectional, of my device. Fig. 2 is an end view of the nut. Fig. 3 is a cross-sectional view of the shank. Fig. 4 is a cross-sectional view of the handle; and Fig. 5 is a side view of the nut.

This invention has relation to wrenches having sliding jaws; and it consists in the construction and novel arrangement of devices, all as hereinafter set forth and claimed.

In the accompanying drawings, the letter A designates the shank of the wrench, which is cast entire from the T-head to the end of the shank-handle. The cross-head B is formed with a straight bearing, C, on one side and with a concave bearing, D, on the other side. The shank is formed with the rack-teeth E, which are slightly inclined, and are concave on their ends, as shown at F. The handle portion G is slotted longitudinally, the slot being in the form of a succession of circular apertures of gradually-decreasing size, joining each other, as shown, and serving to form a bolt-gage. For this purpose the successive circular interspaces H H' H'' are accurately formed to receive bolts of corresponding diameters, and the numbers of the gage intervals or measures are stamped on the plane edge K of the strengthening-rib L, which extends around the handle, as shown. N represents a small bit or flat projection at the end of the handle, which is designed to serve as a screw-driver or as a cleaning device. The breadth and thickness of the handle should not be greater than that of the shank, so that when the movable jaw M is slipped on the shank it can be readily passed over the handle portion.

I designates a collar, which is shrunk on the shank at the inner end of the handle to keep the movable jaw from becoming casually disconnected. The movable jaw M is formed with a longitudinal passage, through which the shank passes. This passage is open in front to expose the rack-edge of the shank, and the upper and lower portions of the jaw are provided with bearings, as at R and S, to receive the ends of the screw T, upon which the cam V turns. The upper bearing, R, is threaded to engage the threaded end of said screw. The cam V is cast with several circular flanges, J, which are parallel and have a slight inclination, a rise of one-eighth of an inch from the end being sufficient. These flanges do not extend entirely around the cam, but are intersected by the longitudinal slide-way W, which is of sufficient breadth to allow the cam to slide on the rack from end to end. This construction is designed to enable the jaw M to be quickly moved to position, and then engaged by its flanges with the rack-edge of the shank. On one side of the movable jaw is provided the straight bearing *a* opposite the straight jaw of the T-head. On the other side or arm of the movable piece M is formed a concave recess-bearing, *b*, in the face of the arm, and opposite the concavity D on this side of the T-head.

Z indicates a bit, having a serrated edge, *c*, which is seated in the recess *b*, so that its serrated edge projects, as shown. This bit is formed with an oblique slot, *d*, which engages a holding-pin, *e*, which extends through the wall of the recess. While the pin holds the bit in place there is no strain upon it, as the curved edge of the bit is in contact with the curved wall of the recess, and the bit is designed to have a rolling movement in contact with said curved wall when in operation upon a piece of pipe. The inclination of the bit and its slot is upward and outward, or in the general direction of the serrations of the bit.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The wrench slotted to form a bolt-gage, as shown, cast in one piece with the shank and head, and having the slot-collar shrunk on, substantially as specified.

2. As an improved article of manufacture,
the wrench herein described, consisting of the
rack-shank A, having at one end a slotted
portion to form a bolt-gage and at its opposite
5 end a fixed head, having a recess, D, the slid-
ing jaw M, having a slot for the passage of the
shank, the recess b, bit Z, seated in the said
recess b, and provided with the elongated slot
d, for the passage of the pivot-bolt e, and the

movable jaw, having the bearings R and S, for 10
the screw T, carrying the turning notched cam
V, substantially as specified.

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

FRANK WALDO MERRICK.

Witnesses:

JOHN A. DAVIS,
S. S. STANLEY.