

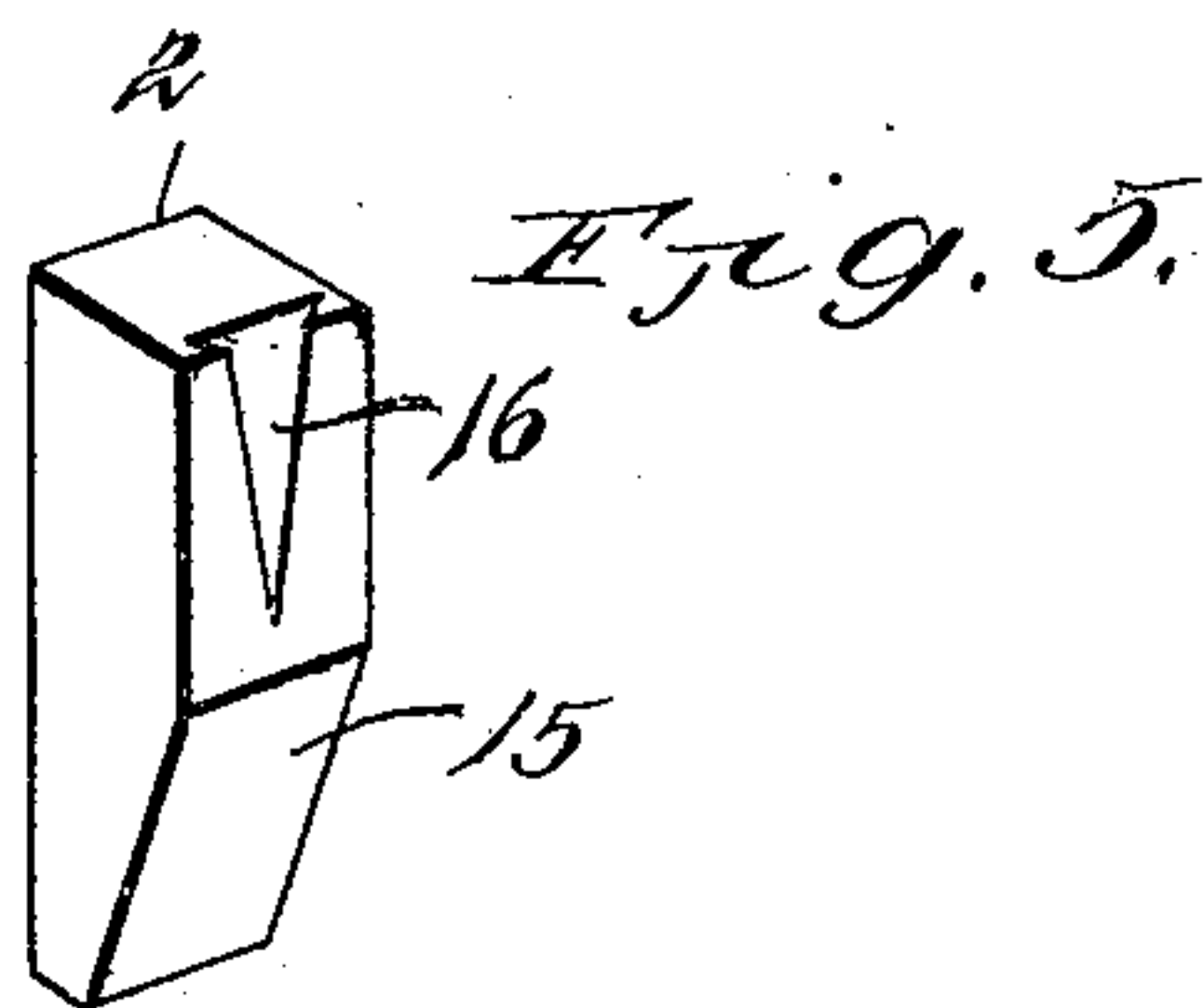
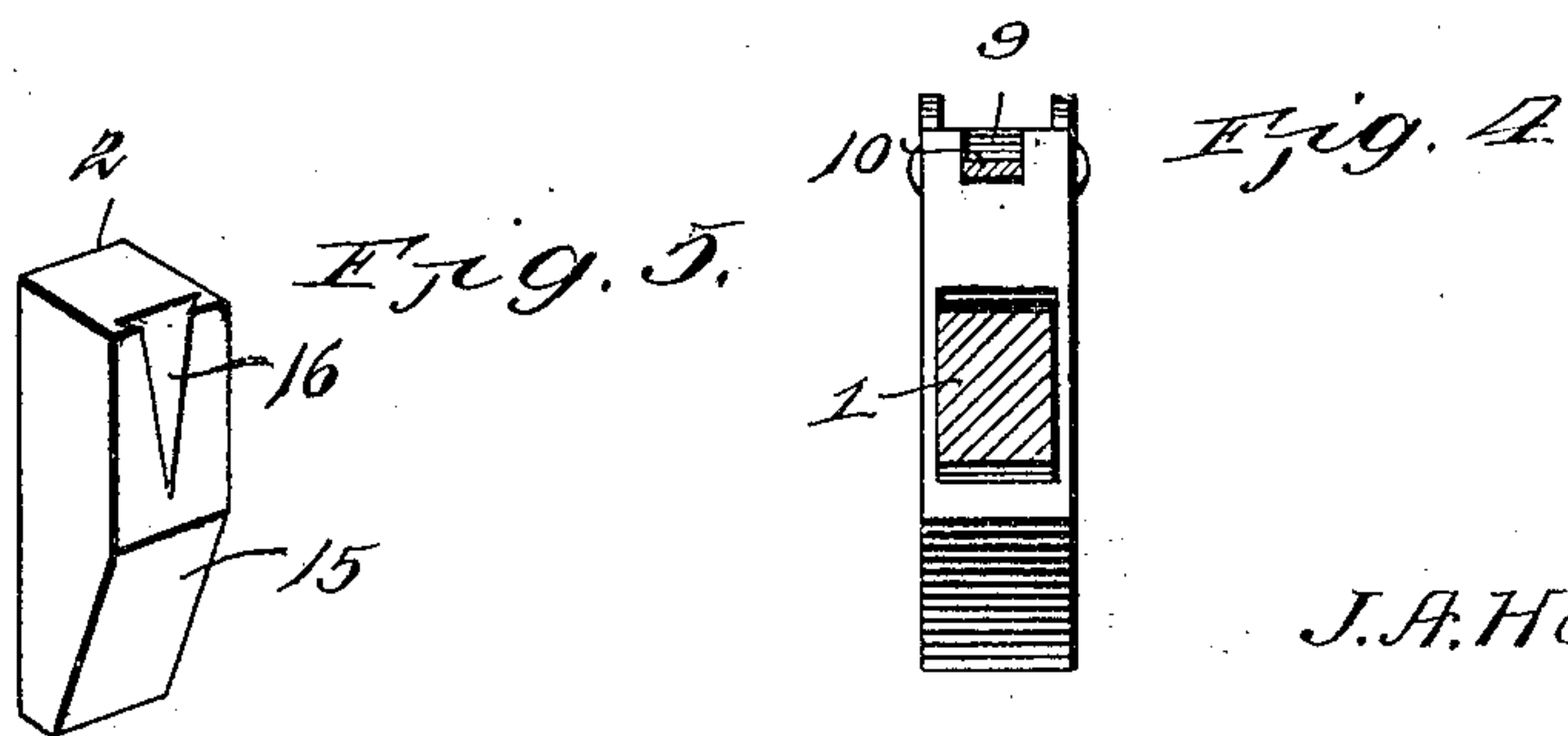
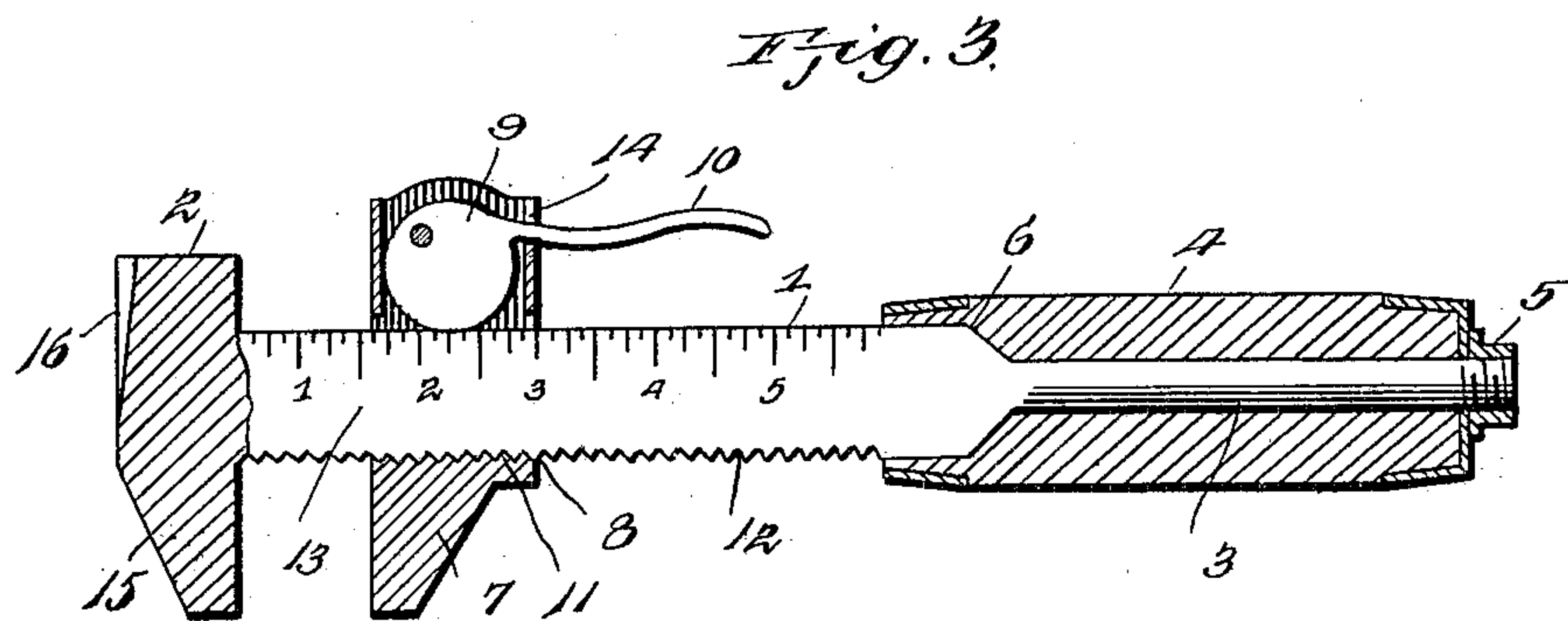
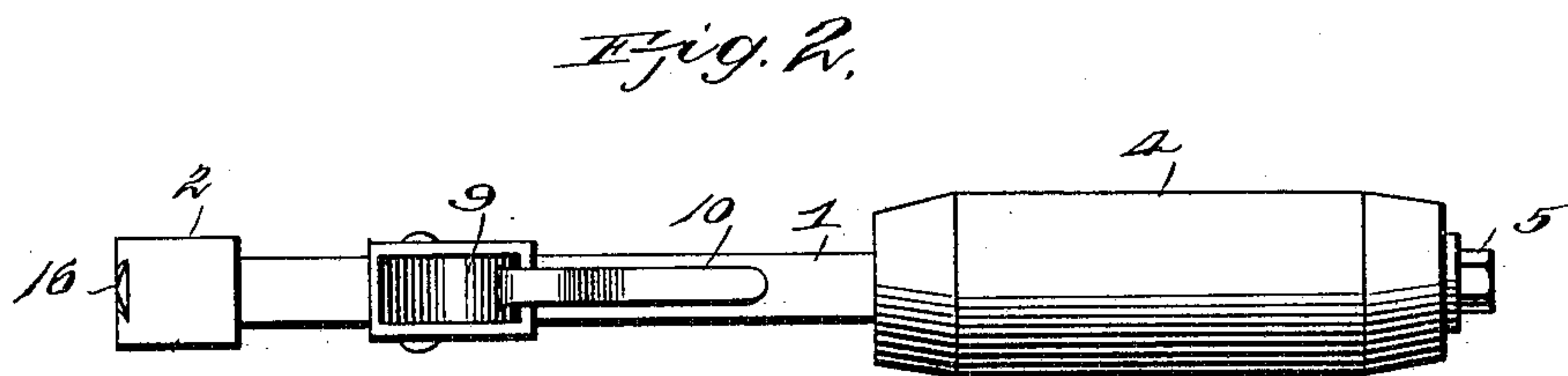
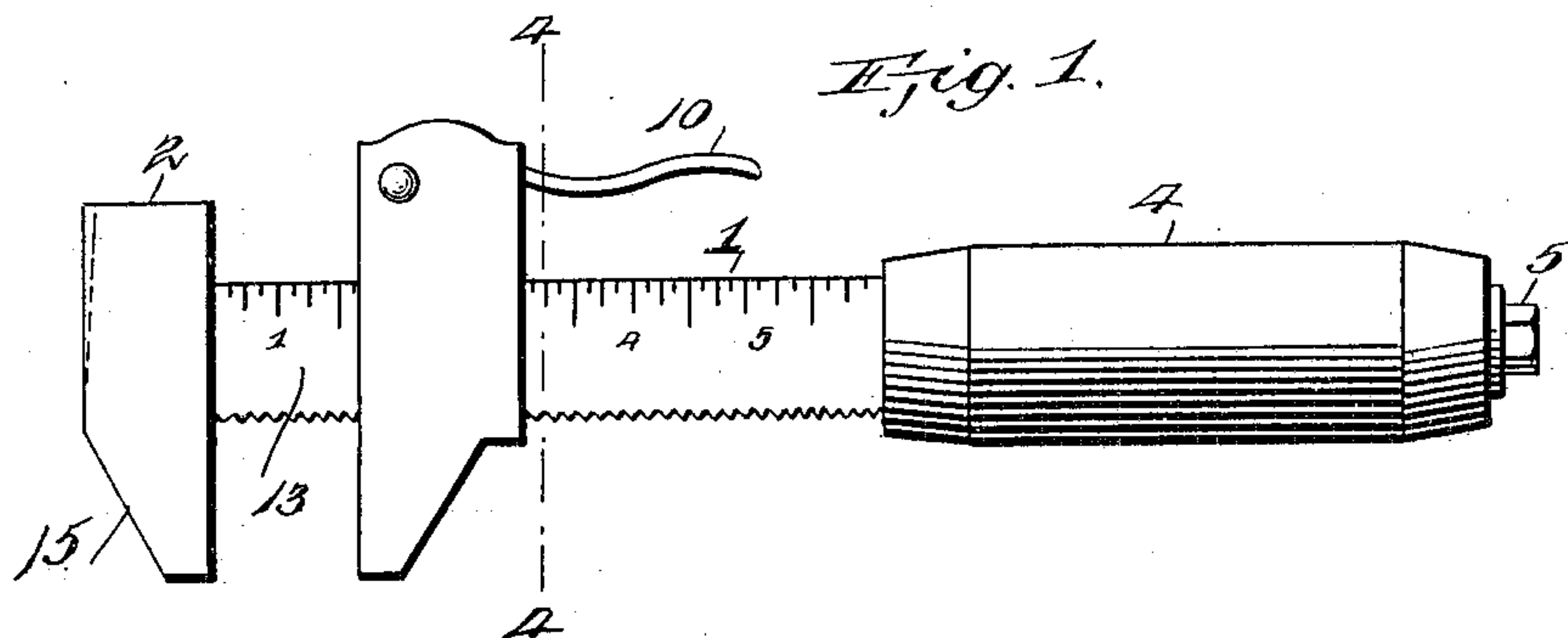
No. 830,999.

PATENTED SEPT. 11, 1906.

J. A. HOLTON.

WRENCH.

APPLICATION FILED FEB. 27, 1906.



Witnesses
Frank Hough,
R. M. Smith,

Inventor
J. A. Holton.

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOHN A. HOLTON, OF WINSOR, MINNESOTA.

WRENCH.

No. 830,999.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed February 27, 1906. Serial No. 303,229.

To all whom it may concern:

Be it known that I, JOHN A. HOLTON, a citizen of the United States of America, residing at Winsor, in the county of Clearwater and State of Minnesota, have invented new and useful Improvements in Wrenches, of which the following is a specification.

The invention relates to an improvement in wrenches of the type including a fixed jaw and a movable jaw adapted for adjustable relation thereto.

The main object of the present invention is the production of means whereby the movable jaw may be readily and conveniently adjusted relative to the fixed jaw.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which—

Figure 1 is a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical central section, the shank being shown in elevation. Fig. 4 is a section on line 4 4 of Fig. 1. Fig. 5 is a perspective view of the fixed jaw.

Referring to the drawings, my improved wrench comprises a shank 1, formed at one end with a fixed jaw 2 and reduced at the opposite end to provide a stem 3, the latter fitting within a cored handle 4, preferably of wood or the like, which is of the desired external configuration and secured in place by a nut 5, fitting the threaded projecting end of the stem 3. The forward end of the handle 4 is adapted to receive a portion of a stem 1, the core of the handle being suitably enlarged at 6 for the purpose, by which construction the handle is held against movement in either direction relative to the shank.

The sliding jaw 7 comprises a block of suitable dimension formed with a longitudinal opening 8 for the reception of the stock 1. The block 7 at one side of the shank-opening is solid for cooperation with the nut-engaging face of the fixture, while on the opposite side of the shank-opening the block is hollow, including spaced end and side walls. Within the hollow portion of this jaw is eccentrically mounted a cam-disk 9, provided with an operating-handle 10 to project beyond the plane of the fixture for manual manipulation. The edge of the solid portion of the sliding jaw adjacent the shank-opening 8 is formed with a series of teeth 11, and the approximate edge

of the shank is formed with a similar series of cooperating teeth 12.

In use the sliding jaw is moved longitudinally of the shank to the position desired, as indicated by the scale 13, formed on the surface of the shank, and the handle 10 of the cam-disk operated to cause said disk to point upon the proximate edge of the shank, thereby forcing the teeth 11 and 12 into cooperative engagement and locking the sliding jaw relative to the fixed jaw. The scale 13 is mainly serviceable as a caliper for measuring the diameter of round bodies—such as bolts, pipes, or the like—scale-indicating marks being relatively positioned for this particular purpose.

By preference the cam-disk 9 is of such dimension as to practically fill the space between the side and end walls of the hollow portion of the sliding jaw, sufficient space being left between the end walls and the periphery of the disk to permit operation of the disk, it being understood that this relative spacing of the end walls is such as to provide a limit for the disk in movement, whereby the handle 10 is capable of manipulation to such an extent only as will disengage the cam-disk and shank. By this construction the handle 10 is always in convenient position to be readily manipulated. Furthermore, as the disk 9 is practically of a thickness to fill the space between the side walls of the opening said disk engages said side walls in set position relative to the shank, so that when the disk has been operated to release the sliding jaw from fixed relation to the shank it will be maintained in this position against accidental movement, whereby the sliding jaw may be adjusted longitudinally of the shank without liability of the movement being interrupted by an accidental movement of the cam-disk and shank.

The end wall of the sliding jaw underlying the handle 10 is cut away at 14 to provide for suitable operation of the handle, it being understood that the lower ends of both end walls of this section of the sliding jaw terminate sufficiently beyond the plane of the shank to permit such movement of the sliding jaw transverse the length of the shank as will be necessary to disengage the teeth 11 and 12.

The forward face of the fixed jaw is preferably inclined at 15, as is usual in wrenches of this character, and the face above this in-

cline is formed with an undercut slot 16, which is of inverted-V shape longitudinally of said face. This construction provides a slot adapted for the convenient extraction of nails or the like, it being understood that the head of the nail is introduced within the undercut slot, the inclined edges bounding the mouth of said slot providing for the operative engagement of nails of various sizes.

10 The wrench described is of simple construction and of few parts, the arrangement permitting the ready adjustment of the sliding jaw relative to the fixed jaw.

15 Having thus described the invention, what is claimed as new is—

20 A wrench comprising a shank having a fixed jaw, one edge of the jaws being formed with a series of teeth, and a sliding jaw movably mounted on the shank and formed with a series of teeth to cooperate with the teeth on the shank, the portion of the sliding jaw adjacent the planed edge of the shank being

hollow and open at the end remote from the shank, a disk eccentrically mounted in said hollow portion and snugly fitting between the side walls thereof to provide frictional engagement for the disk in movement, one of the end walls of said hollow portion being cut away to provide a shoulder to limit the movement of the disk into engaging position, the free end of the opposite side wall limiting the movement of the disk in reverse operation, the operative movement of the disk serving to force the said disk into binding engagement with one of the end walls of the hollow portion and with the shank, whereby to partially relieve the pivot-pin of the disk of the strain of the clamping action. 35

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

JOHN A. HOLTON.

Witnesses:

JOHN C. SHERVA,
LARS K. LARSON.