

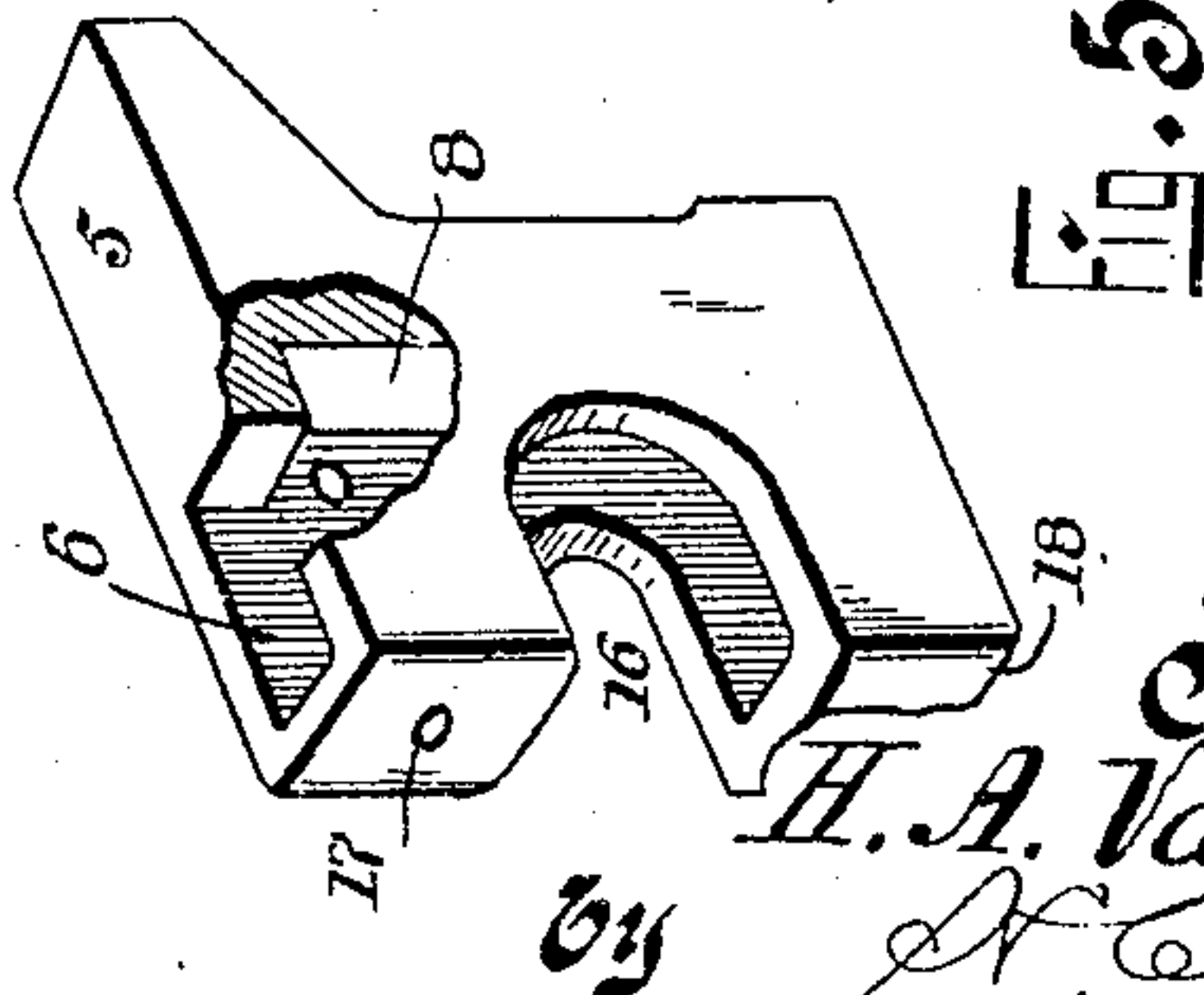
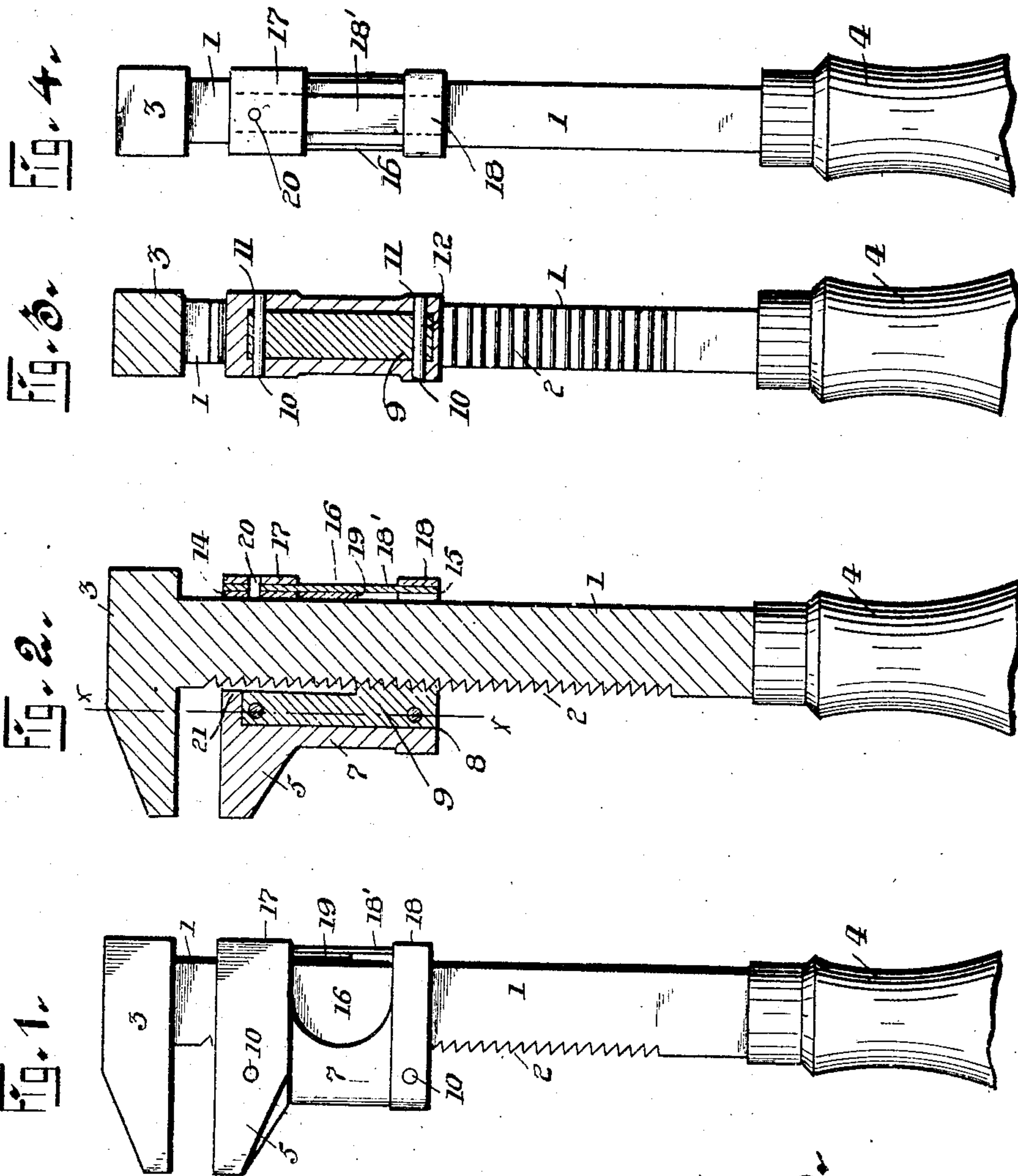
No. 777,984.

PATENTED DEC. 20, 1904.

H. A. VANCE.  
WRENCH.

APPLICATION FILED APR. 30, 1904.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

HARRY A. VANCE, OF EMPIRE, OHIO.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 777,984, dated December 20, 1904.

Application filed April 30, 1904. Serial No. 205,707.

*To all whom it may concern:*

Be it known that I, HARRY A. VANCE, a citizen of the United States of America, residing at Empire, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to wrenches, and more particularly that class commonly known as "monkey-wrenches" wherein a sliding jaw is adjustably mounted upon a shank of a wrench; and it is the object of my invention to construct a wrench of this character which may be easily and quickly adjusted to any desired position and to so construct my improved wrench whereby the engaging teeth carried by the movable jaw may be removed from time to time as the same become worn or stripped of its teeth.

A further object of my invention is to dispense with the many complicated and small parts of wrenches heretofore used and construct a wrench of this type which will be extremely simple in construction, comparatively inexpensive to manufacture, and at the same time maintaining strength whereby the durability of the wrench will be greatly increased.

With the above and other objects in view reference will be had to the accompanying drawings, forming a part of this application, wherein—

Figure 1 is a side elevation of my improved wrench, a portion of the handle thereof being broken away. Fig. 2 is a vertical sectional view of my improved wrench. Fig. 3 is a vertical transverse sectional view taken on the line *xx* of Fig. 2. Fig. 4 is an edge view of my improved wrench; and Fig. 5 is a perspective view of the adjustable jaw, a portion of said jaw being broken away and its appurtenant parts removed.

Reference will now be had to the accompanying drawings, wherein like numerals of reference indicate like parts throughout the several views, and in carrying my invention into effect I employ the ordinary shank 1, having teeth 2 upon its one edge, and formed integral with this shank is a fixed jaw 3, and to the lower end of said shank is secured a suit-

able handle, as designated by the reference-numeral 4. Upon the shank 1 of the wrench I mount an adjustable jaw 5, in the construction of which reside the particular features of my invention. The shape of this jaw 5 is of the ordinary contour and is provided with a slot 6, which is formed vertically of its length, and adjacent to said slot and in the edge of the body portion 7 of the jaw I form a recess 8, in which I mount a toothed bar 9, this bar being held in the recess by rivets 10, which pass through apertures 11 11, formed in the sides of the jaw and in alinement with the recess 8, these rivets passing through the toothed bar 9, as indicated at 12.

The jaw 5 is cut away upon its upper face, as designated at 14, and upon its lower face, as designated at 15, and intermediate the upper and lower faces of the jaw the same is cut away, as designated at 16, to reduce the weight of the wrench, economize in material, and by so constructing this jaw the yokes 17 and 18 are formed, which, as illustrated in Figs. 1 and 2 of the drawings, are adapted to embrace the shank 1 of the wrench and guide and sustain the jaw 5 upon the shank, the handle 4 of the wrench being removed to place the jaw 5 thereon. By this construction the jaw 5 will be loosely mounted upon the shank 1, and to lock the same thereon in any desired position I secure flat springs 18' and 19 to the rear face of the yoke 17 by a rivet 20, the spring 18' being of a greater length than the spring 19, and the end of said spring is adapted to engage the rear face of the yoke 18.

The toothed bar 9 near its upper end is provided with a plane surface 21, the object of which will be hereinafter brought out.

The operation of my improved wrench is as follows: When it is desired to adjust the jaw 5 upon the shank 1, the yoke 18 is pressed inwardly against the rear edge of the shank, at which time the teeth of the toothed bar are disengaged from the teeth 2 of the shank, this operation tilting the jaw at an angle, this being permitted owing to the plane surface 21 being provided upon the toothed bar 9, which allows a space to exist between the jaw and the shank, this tilting of the jaw being further facilitated by the spring 18' resting against

the spring 19, this spring in turn being in engagement with the rear edge of the shank, and when the jaw is so tilted at an angle the same may be moved along the shank to any  
5 desired position, and upon releasing the yoke 18 the end of the spring 18' will return the jaw to the upright position and force the teeth of the toothed bar 9 into engagement with the teeth lying opposite upon the shank of the  
10 wrench.

It will be apparent from the foregoing description that my improved wrench is constructed upon simple lines, whereby the complicated mechanism of wrenches heretofore  
15 used is entirely dispensed with, and that by my improved construction the movable jaw may be rapidly and securely adjusted upon the shank of the wrench.

Having described my invention, I claim—

20 In a wrench of the type described the combination with a wrench-shank having teeth and provided at its outer end with a fixed jaw,

of a movable jaw mounted to slide on the wrench-shank and having an interior recess in its face adjacent the teeth of the wrench- 25 shank, a bar pinned in said recess and having a portion thereof extending beyond the outer face of the recess, said projecting portion provided with teeth engaging the teeth of the wrench-shank, said movable jaw being formed 30 with rearwardly-projecting yokes embracing the shank, two springs secured within the upper yoke, said springs being of unequal length, the inner spring bearing against the back of the shank and the lower end of the 35 outer spring engaging the lower yoke on the movable jaw.

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

HARRY A. VANCE.

Witnesses:

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