(No Model.)

R. S. SAMPLE.

WRENCH.

No. 583,217. Patented May 25, 1897.

Fig. 1.

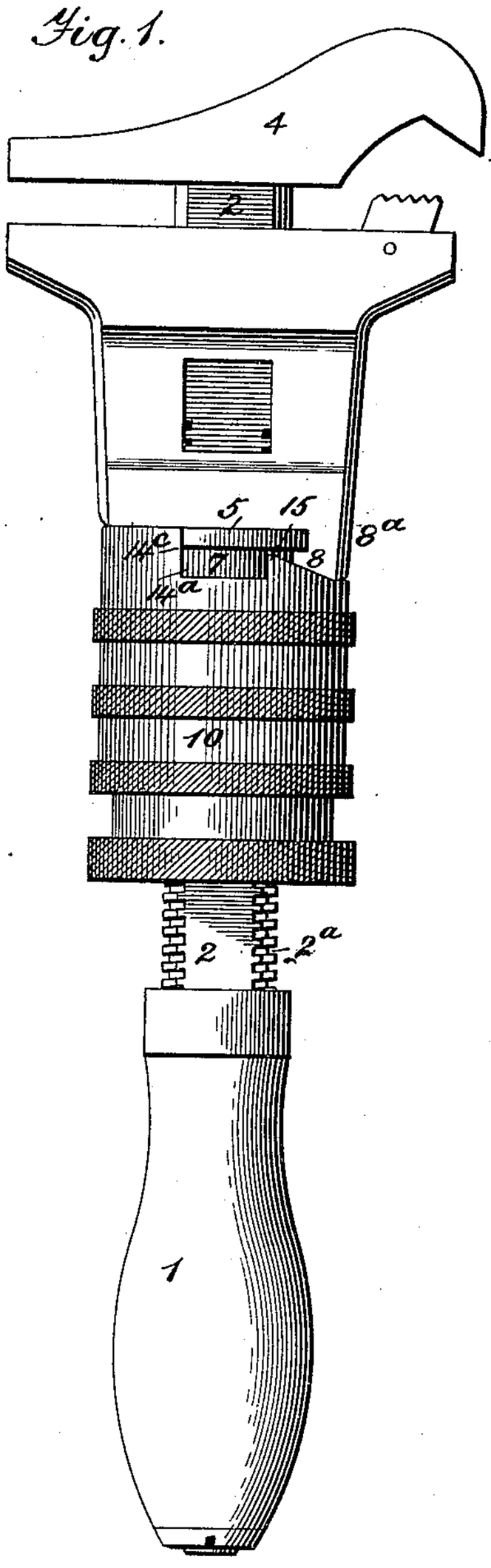


Fig. 2.

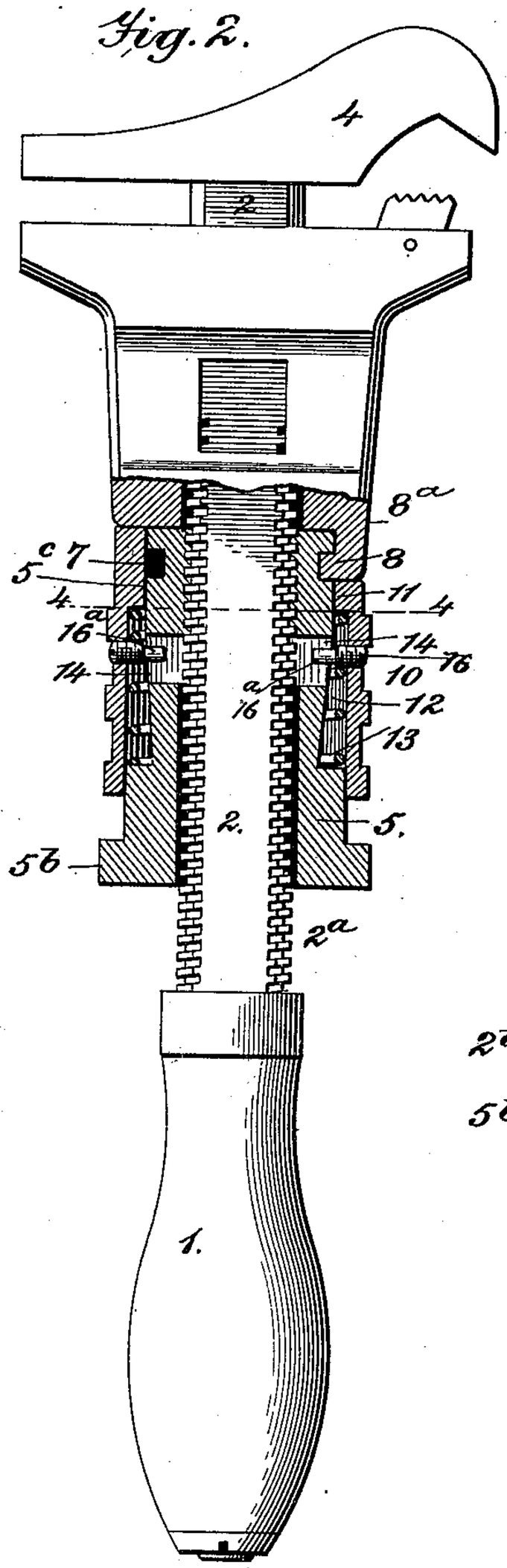


Fig. 5.

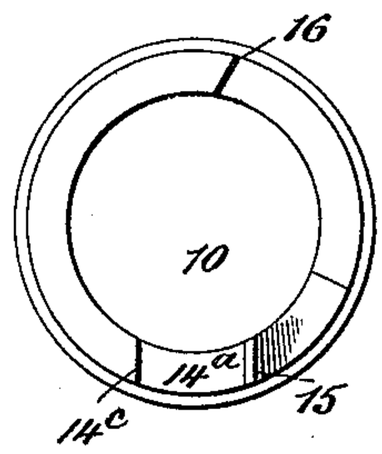


Fig. 7.

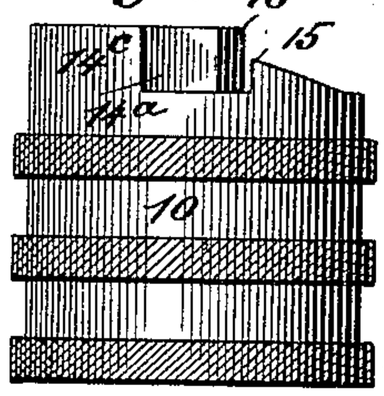


Fig. 4.

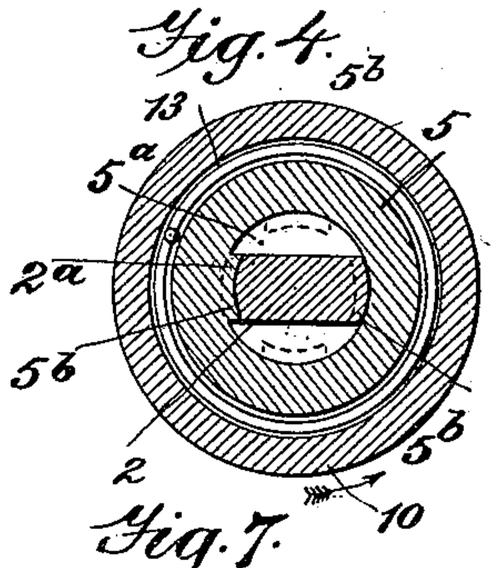


Fig. 7.

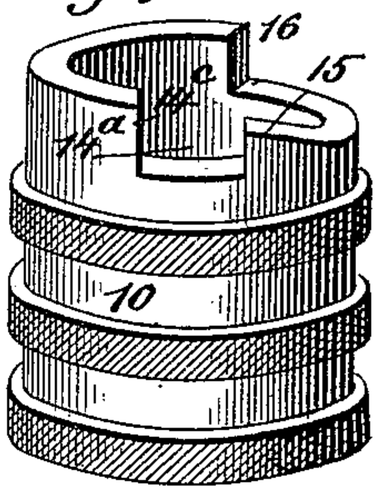
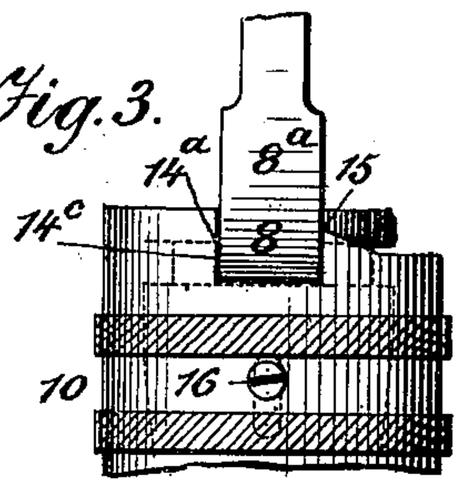


Fig. 3.



WITNESSES.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 583,217, dated May 25, 1897.

Application filed March 12, 1897. Serial No. 627,196. (No model.)

To all whom it may concern:

Be it known that I, RICHARD S. SAMPLE, a citizen of the United States, residing at Huntington, in the county of Cabell and State of West Virginia, have invented certain new and useful Improvements in 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 improvements in wrenches, and more particularly refers to that class of wrenches which have the sliding jaw moved by screw action; and such invention seeks more especially to provide a simple and inexpensive attachment adapted to be secured to this class of wrenches, which is capable of adjustment thereon in such a manner that when moved in one direction the screw-sleeve will be held out of a locked engagement with the wrench-shank, whereby to admit of the said sleeve and jaw being freely moved up and down on the shank, and, when adjusted in another position, to hold the sleeve and sliding jaw locked from movement.

My invention also seeks to provide an attachment for wrenches for the purposes stated so constructed and arranged as to admit of its being connected to the class of wrenches of the kind stated without changing the structure thereof.

With other objects in view, which will hereinafter appear, the invention consists in the peculiar combination and novel arrangement of parts, such as will be first described in detail, and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a wrench equipped with my improved attachment, the parts being in position to admit of a free movement of the sleeve and sliding jaw. Fig. 2 is a vertical section, partly in elevation, of the same, the parts being in a like position as in Fig. 1. Fig. 3 is a detail edge view illustrating the jaw held locked from vertical movement. Fig. 4 is a transverse section taken on the line 4 4 of Fig. 2. Fig. 5 is a top plan view of the attachment. Fig. 6 is a side view, and Fig. 7 a perspective view, of the attachment.

Referring now to the accompanying drawings, in which like numerals indicate like parts in all the figures, 1 indicates the wrench-handle; 2, the flat shank, having screw-notches 2^a in the opposite edges, and 4 the fixed jaw.

5 indicates the rotary sleeve, which has a central circular bore 5^a, extending its entire length, and at opposite sides a row of segmental cog-teeth 5^b, as most clearly shown in Fig. 4, which when the sleeve is turned in one direction are held in mesh with the screw-notches 2^a of the shank and when turned at right angles are held free of such screw-notches 2^a, as shown in dotted lines in Fig. 4.

The upper end of the sleeve has the usual annular groove 7, which extends entirely around and which receives the inturned tongue 8 on the pendent members 8^a of the sliding jaw, as clearly shown in Fig. 2. The several parts and their combination may be of the ordinary form, and, *per se*, form no part of this invention.

My improvement comprises, essentially, a rotary sleeve or cuff member 10, which is adapted to snugly fit the sleeve 5, its upper end having an inturned flange 11 to bear on the upper reduced straight face 5^c of the sleeve 5, while its lower end is held to encircle and slide vertically on the large circular base portion of the sleeve 5, which has an annular base-flange 5^d to limit the downward movement of the cuff member 10. This member 10 is normally held forced toward its uppermost position, and for such purpose the inner sleeve 5 has a portion of its body made of a reduced diameter to provide an annular space 12 to receive a coil-spring 13, which seats on the lower annular bearing-face 5^d of the sleeve and presses up against the inturned flange of the member 10.

To cause the inner and outer sleeves to turn in unison, the inner sleeve 5 has preferably at diametrically opposite sides vertical slots 14 to receive the shanks 16^a of the set-screws 16, secured to the outer sleeve or cuff 10.

The upper end of the outer sleeve or cuff member 10 has three vertical projections 14^c, 15, and 16, two of which, 14^c and 16, are arranged at approximately diametrically opposite points, while the other, 15, which is of less height than either the members 14^c and 16, is at a point intermediate of but nearest

the members 14c whereby to form a recess 14a, the upper end of such portion 15 inclining to a plane in line with the base of the recess 14a, as shown.

The relation of the outer sleeve or cuff 10 and its recesses 14a and projections 14c and 16, the inner sleeve, and the sliding jaw is such relatively that when the inner sleeve 5 is held in mesh with the shank the recess 14a will be in position to receive the pendent portion of the sliding jaw, as shown most clearly in Fig. 3, and thereby hold the parts to lock in position, and in consequence the movable jaw in a fixed relation to the fixed one.

So far as described it will be readily seen that by pressing the outer sleeve 10 down, so that the upper edge 15 will be at a point below the bottom of the pendent or hook portion of the sliding jaw, and turning such sleeve in the direction indicated in Fig. 4, such sleeve and the inner sleeve will be rotated to such a point as to bring the internal rows of teeth into the dotted position shown in Fig. 4, the rotation of the sleeves in such direction being limited by the projecting end 16, which the sliding jaw will engage. When in this position, the sliding jaw and the sleeves can be moved freely upon the shank. After the sliding jaw has been adjusted to the position desired the same is moved to a grip position, the sleeves are held firmly in one hand as the wrench shank or body is rotated toward the left, the pendent members of the sliding jaw forcing the outer sleeve slightly downward as it engages the incline until it engages the projection 14c, when further movement thereof will be arrested and the spring serve to force the recess 14a of the sleeve over the pendent end of the sliding jaw.

From the foregoing description, taken in connection with the drawings, the complete operation and the advantages of my invention will be readily understood.

It will be observed the attachment is of such a nature that it can be readily fitted upon any wrench of ordinary construction of the class described. It is of a very simple and economical nature and will positively serve for its intended purposes.

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

1. In a wrench of the kind described, an attachment therefor, consisting of a rotary body connected with the shank-engaging sleeve, adapted, when rotated, to move the said sleeve into a locked position with the shank, or free from engagement therewith, and arranged to hold such sleeve in such positions, as set forth.

2. In a wrench of the kind described, the combination with the shank, the sleeve connected therewith and the sliding jaw connected with the sleeve, of a rotary member connected to the sleeve and having a vertical movement thereon, said rotary member having lock portions adapted to engage the sliding jaw and hold it to its adjusted positions, substantially as shown and described.

3. In a wrench, the combination with the shank, the sleeve and the sliding jaw connected with the sleeve, of the outer rotary sleeve secured to turn with the inner sleeve, said rotary sleeve having vertical movement on the inner sleeve, and provided on its upper edge with lock and stop portions to limit the rotary movement of the wrench-body and lock the sliding jaw to its adjusted positions.

4. In a wrench as described, the combination with the shank, the inner sleeve having segment cogs or teeth to engage the toothshank and an annular groove in its upper end, and provided with vertical slots, and the sliding jaw having a pendent member having a flange to engage the annular groove in the inner sleeve, of the outer rotary sleeve, said sleeve having projections 14 15 and 16 at the top, a recess 14a and an inclined portion connected with such projections, the screws secured to the rotary member and projected into the slots in the inner sleeve, and the spring for holding the said outer sleeve forced normally upward, all being arranged substantially as shown and described.

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

RICHARD S. SAMPLE.

Witnesses:
R. A. GRIMES,
T. S. WALLACE.