

C. KERR.
WRENCH.

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993,837.

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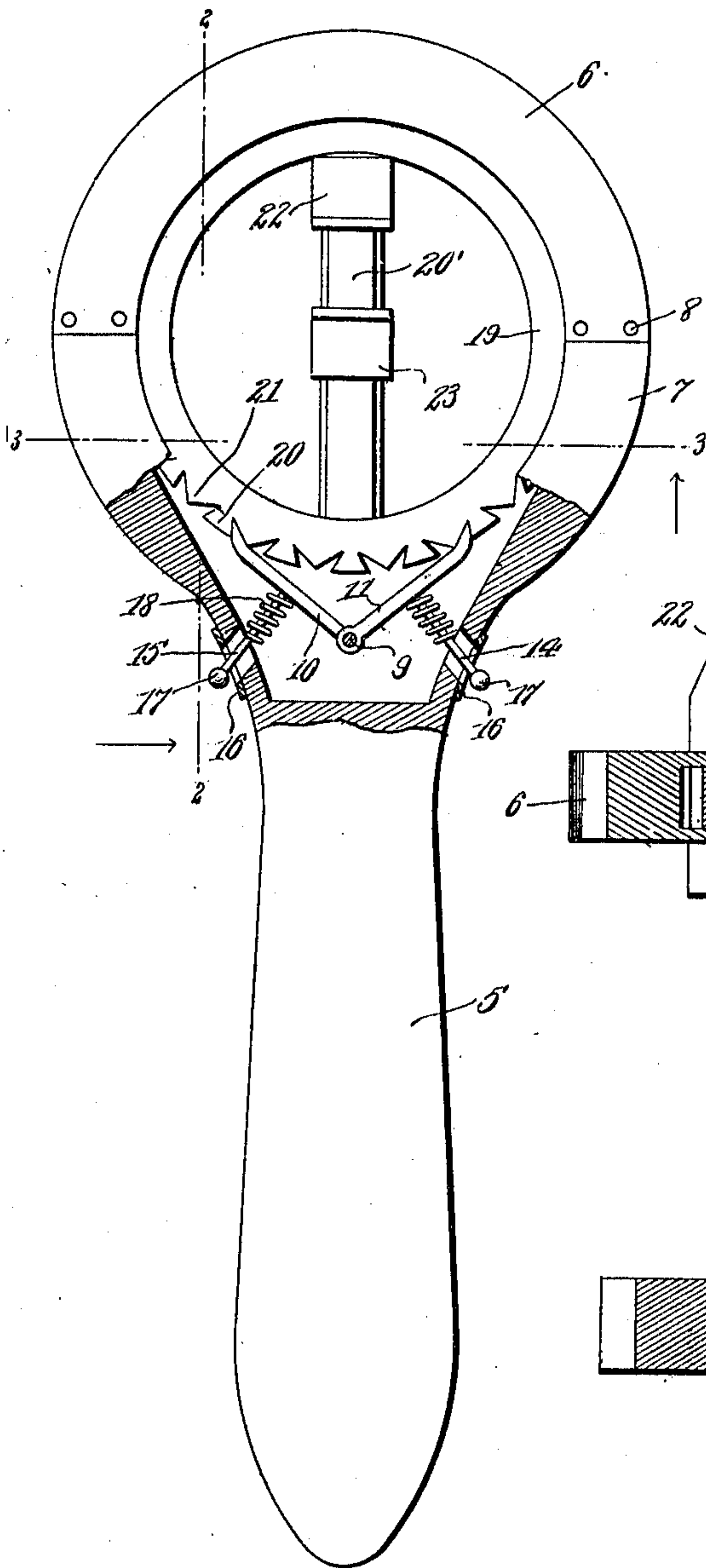


Fig. 1.

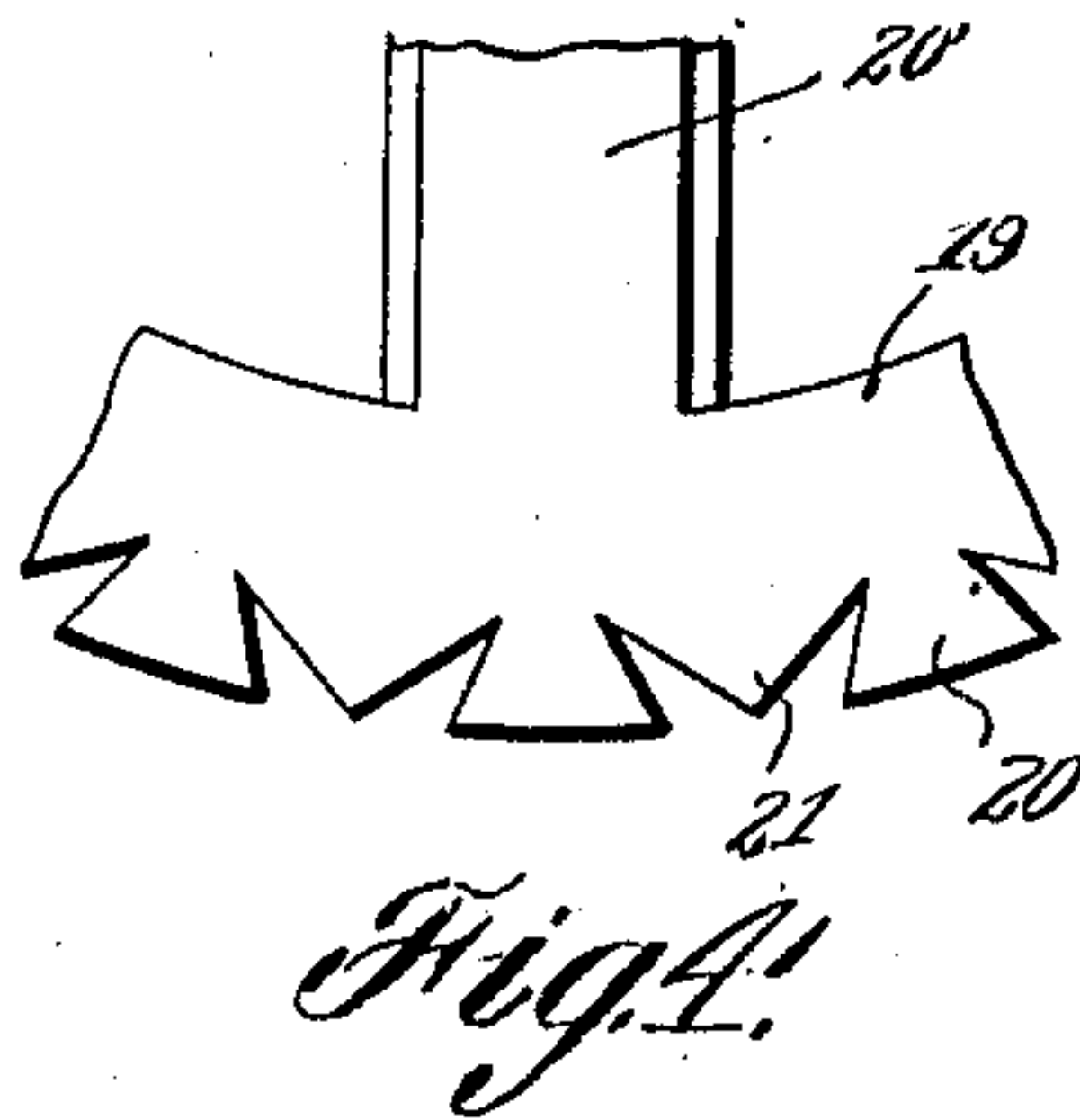


Fig. 4.

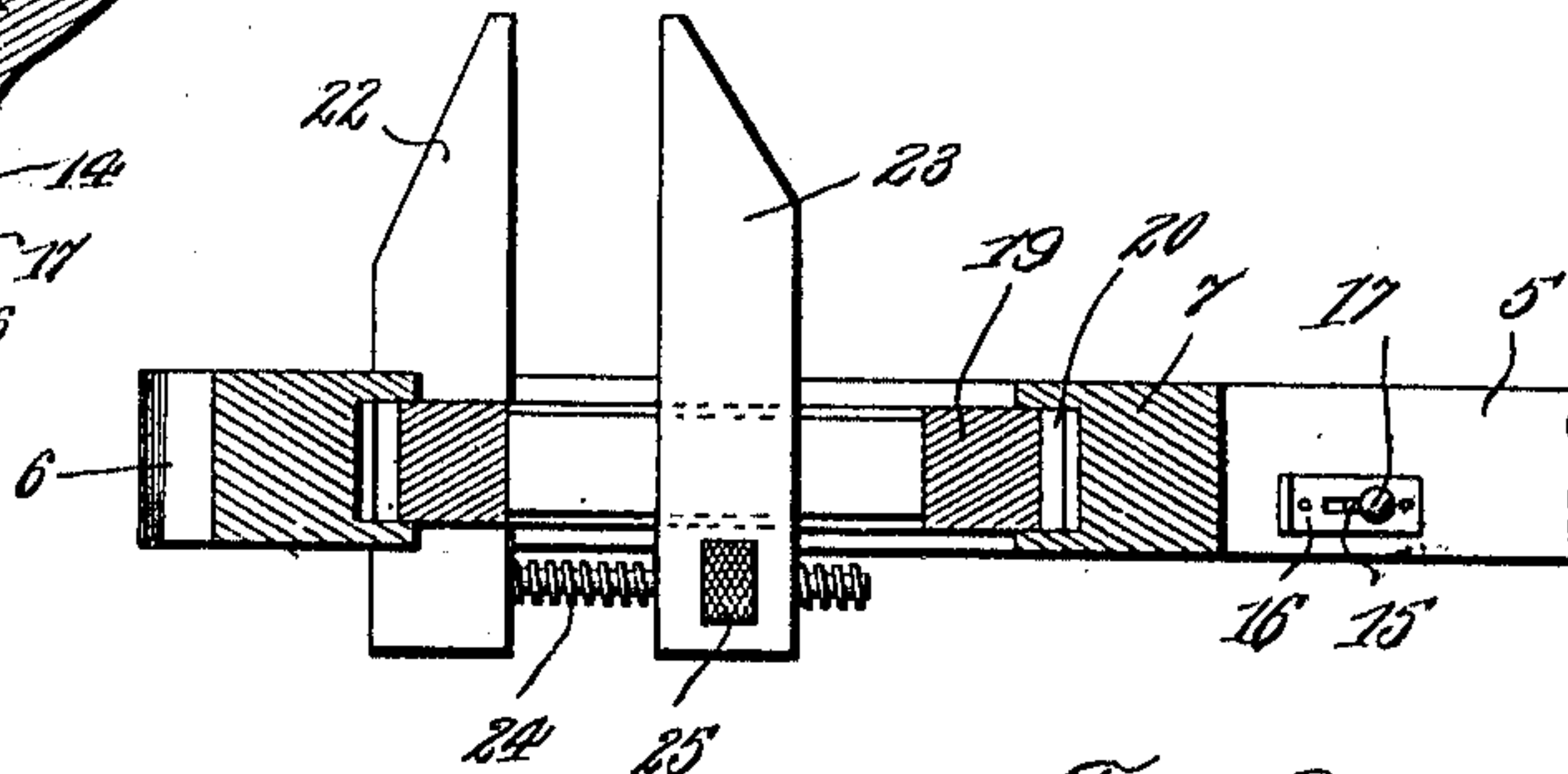


Fig. 2.

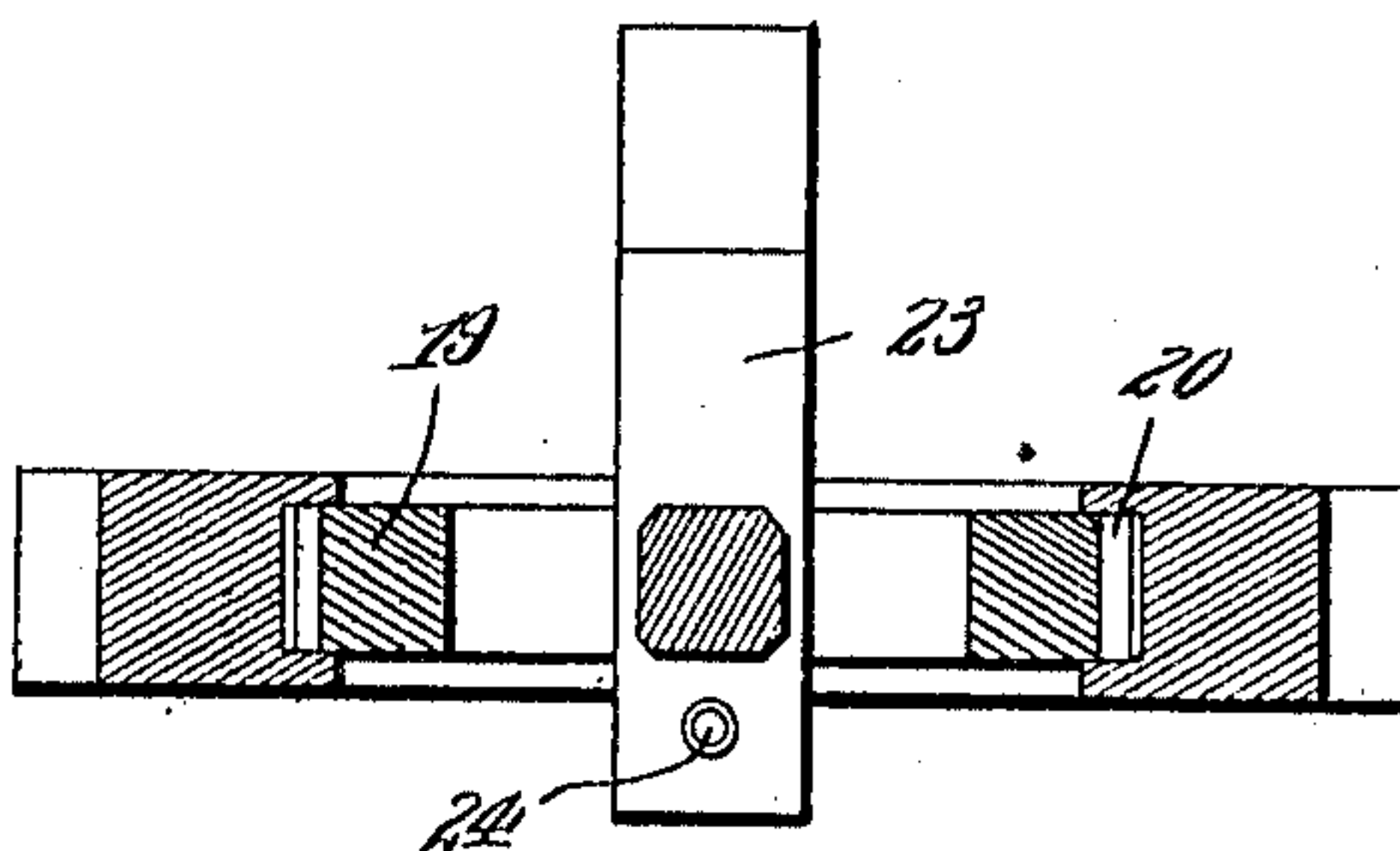


Fig. 3.

Witnesses
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CLIFFORD KERR, OF AURORA, INDIANA.

WRENCH.

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To all whom it may concern:

Be it known that I, CLIFFORD KERR, a citizen of the United States, residing at Aurora, in the county of Dearborn and State of Indiana, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches and more particularly to the type wherein the gripping portion is actuated to turn in opposite directions by a pawl and ratchet mechanism.

One object of the invention is the provision of a wrench of the above-stated type having a circular head and a ratchet member rotatably mounted in said head and provided with a stationary and movable jaw, the parts being so positioned with relation to each other that the tool will occupy a minimum of space in engagement with objects located in comparatively small or irregular shaped places and actuated to turn in a comparatively easy manner.

With these and other objects in view, which will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size, and minor details of the device may be made, within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, forming part of the specification;—Figure 1 is a front elevation of the device partly in section and disclosing the pawls and a portion of the ratchet ring. Fig. 2 is a section taken approximately on the line 2—2 of Fig. 1 and looking in the direction of the arrow. Fig. 3 is a transverse section taken approximately on the line 3—3 of Fig. 1 and looking in the direction of the arrow. Fig. 4 is a fragmentary plan view of the ratchet wheel.

Similar numerals of reference are employed to designate corresponding parts throughout.

The device includes a handle designated by the numeral 5, the said handle being provided at one end with an annular-shaped head made up of two sections and designated by the numerals 6 and 7. The section

7 is preferably formed integral with the handle 5, its medial portion bearing on the inner end of the handle and its opposite end portions rabbeted and provided with threaded openings. The section 6 has its opposite end portions undercut, said undercut portions being received by the rabbets in the opposite end portions of the section 7 and having openings to align with the openings in the rabbeted portions of the section 7, these openings receiving screws or other suitable fastening means as shown at 8. That portion of the section 7 bearing on the handle 5 is provided with a recess extending well into the inner end portion of the handle and extending to the opposite sides of the recess and located at the medial portion of the section 7 is a pivot pin 9. Pawl members are designated by the numerals 10 and 11, the said pawl members having openings adjacent to one end for the loose reception of the pivot pin 9, the said pawl members extending in opposite directions through the recess in the section 7. The pawl members are medially provided on their outer sides with pins 14 and 15, the said pins extending through slots 16 formed in the opposite sides and adjacent to the inner end portion of the handle. The outer ends of the pins are provided with heads 17, the heads 17 being greater in diameter than the width of the slots 16 so as to limit the inward movement of the pins. Surrounding the pins 14 and 15 are helical compression springs 18, the opposite terminals of which bear on the outer sides of the pawl and inner end portion of the handle 5, the function of these springs being to yieldingly hold the free end portions of the pawls adjacent to the inner end of the recess.

An annular-shaped ratchet member is designated by the numeral 19, and is medially provided with a cross bar 20'. The outer periphery of the ratchet member is provided with a plurality of spaced teeth 20 and 21, formed by a plurality of V-shaped notches arranged in pairs spaced from each other, the notches of each pair being oblique to each other. The inner peripheries of the sections 6 and 7 of the head are channeled to receive the ratchet ring 19, the free ends of the pawls 10 and 11 engaging with the teeth 20 and 21.

Formed integral with one face of the cross bar 20' is what will subsequently be termed a stationary jaw member 22 extend-

ing perpendicular to the cross bar 20' and located at one end portion of the latter. The side portions of the cross bar 20' extending beyond the stationary jaw member 5 22 are beveled.

A sliding jaw member is designated by the numeral 23, and at one end is provided with a recess to receive the cross bar 20', the opposite sides of said recess being beveled 10 to conform to the beveled sides of the cross bar 20'.

A screw is designated by the numeral 24 and has one end fixed to the inner surface of the inner jaw member 22 15 and adjacent to the inner end of the latter, the opposite end of said screw extending through an opening in the inner end portion of the sliding jaw member 23. Formed in the inner end portion of the sliding jaw 20 member 23 is a recess formed at right angles to the recess for the reception of the cross bar 20', the opposite ends of said recess opening through the opposite sides of the sliding jaw member 23. Arranged in this 25 recess with portions of its periphery extending beyond the opposite ends thereof is an adjusting nut 25, screwed onto the screw 24. With this construction it will be manifest by turning the adjusting nut the sliding jaw 30 member 23 will move under the cross bar 20'.

From the foregoing, it is evident that I have provided a device which is comparatively simple in structure and inexpensive to manufacture, embodying few parts and these 35 so arranged that the danger of derangement will be reduced to a minimum.

I claim:—

1. A ratchet tool comprising a handle member provided at one end with an annu- 40 lar head, the inner circumference of which is channeled and provided with a recess, spring-actuated pawl member arranged in the recess and extending into the channel, an annular ratchet member arranged in the 45 channel and having peripheral teeth to engage said pawls, a cross bar extending medially to said annular ratchet member, a stationary jaw member extending laterally from the cross bar, a sliding jaw member

arranged on the cross bar, and adjusting de- 50 vices associated with the said jaw members, for the purpose described.

2. A ratchet tool comprising a handle member provided at one end with an annular head, the inner circumference of which is 55 channeled and provided with a recess, spring-actuated pawl members arranged in the recess and extending into the channel, an annular ratchet member arranged in the channel and having peripheral teeth to en- 60 gage said pawls, and a medially extending cross bar, a stationary jaw member extending laterally from one end portion of the cross bar, a second jaw member slidably fitted on the cross bar, and adjusting devices con- 65 nected with said jaw members, for the purpose described.

3. A ratchet tool comprising a handle member provided at one end with an annular head composed of semi-circular sections, 70 means for connecting the said sections together, the inner circumference of said head being channeled and provided with a recess, a pair of oppositely arranged spring actuated pawl members positioned in the recess 75 and extending into the channel, an annular ratchet member arranged in the channel and having peripheral teeth to engage with said pawls, and a cross bar extending medially of said rigid member, a stationary jaw member 80 extending at right angles from one end portion of the cross bar, a second jaw member slidably mounted upon the cross bar, a threaded shank connected to the lower end of the stationary jaw member and extend- 85 ing through the movable jaw member, said movable jaw member being provided with a recess in which is arranged a nut adapted to engage the threaded shank, whereby the movable jaw member may be adjusted with 90 respect to the stationary jaw member.

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

CLIFFORD KERR.

Witnesses:

PHILIP O. KERRIGAN,
AUGUST MEYER.