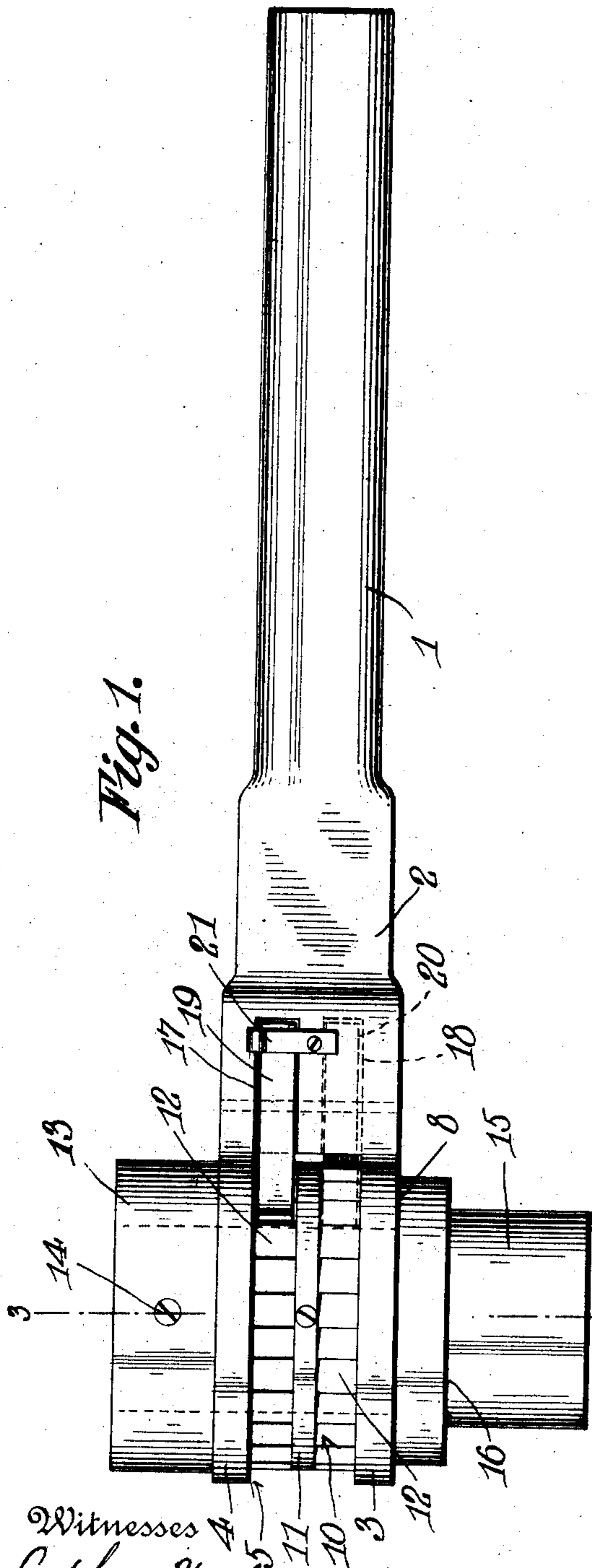


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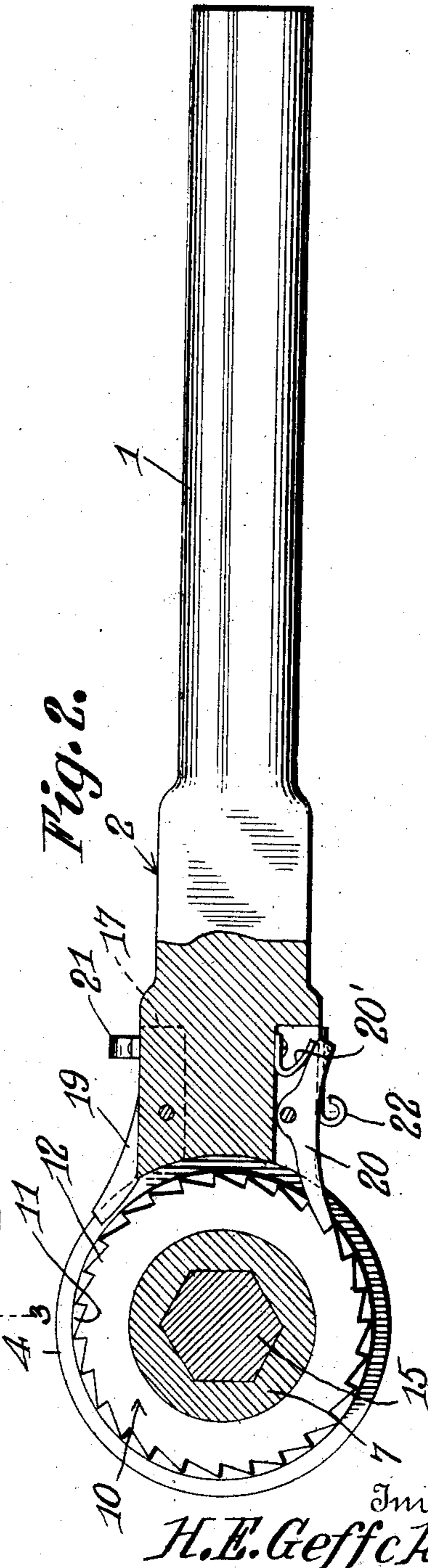
PATENTED MAR. 31, 1908.

H. E. GEFFCKEN.
RATCHET WRENCH.
APPLICATION FILED MAY 17, 1907.

2 SHEETS—SHEET 1.



Witnesses
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C. H. Griesbauer



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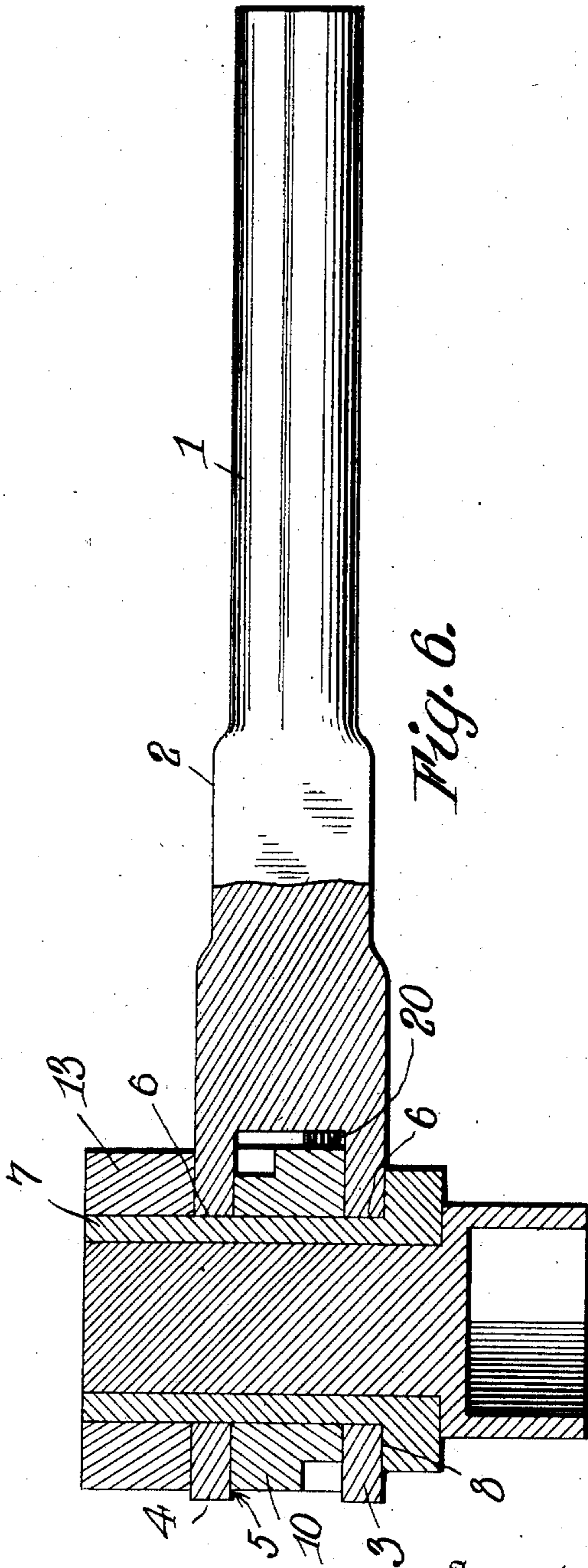
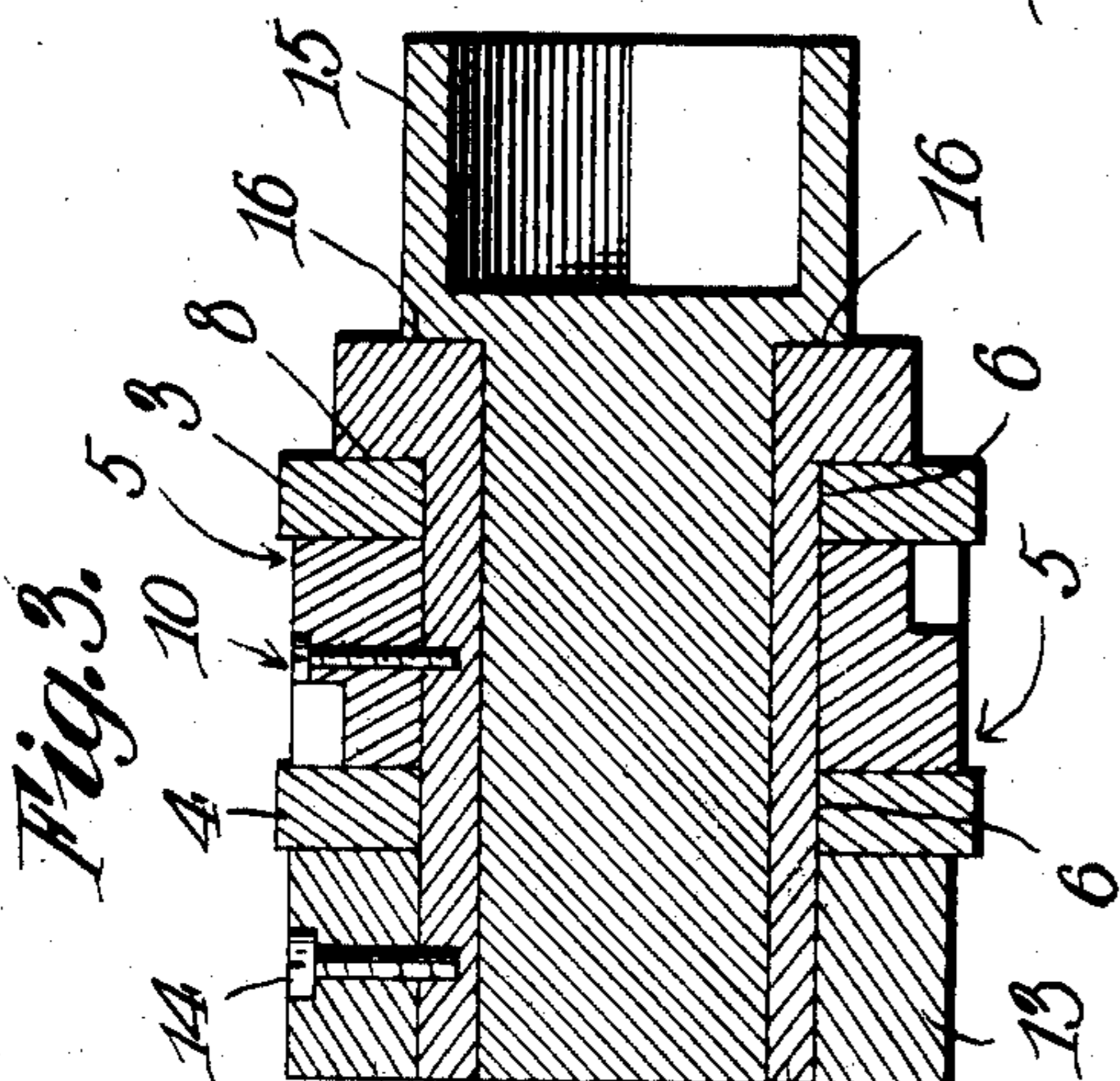
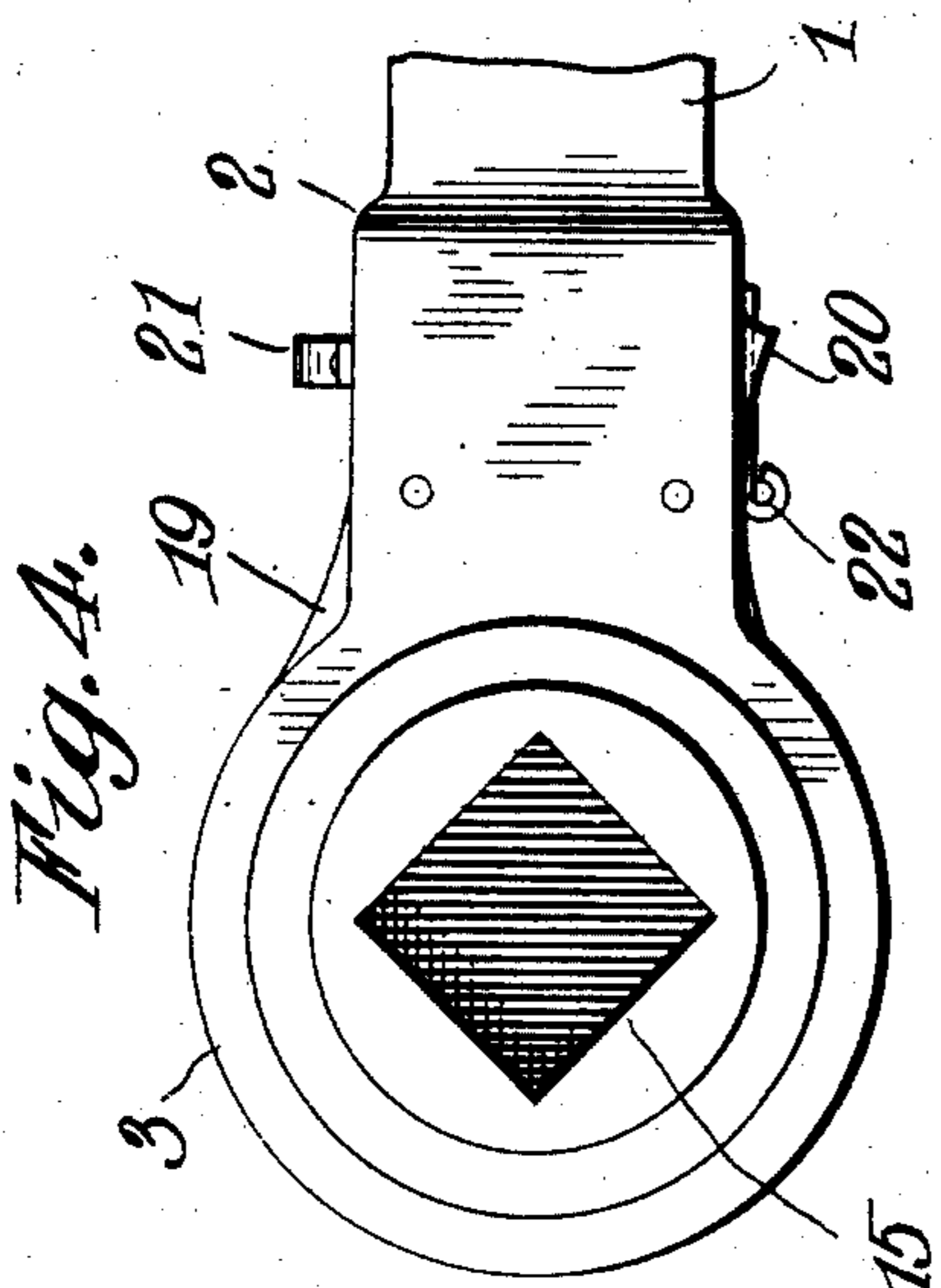
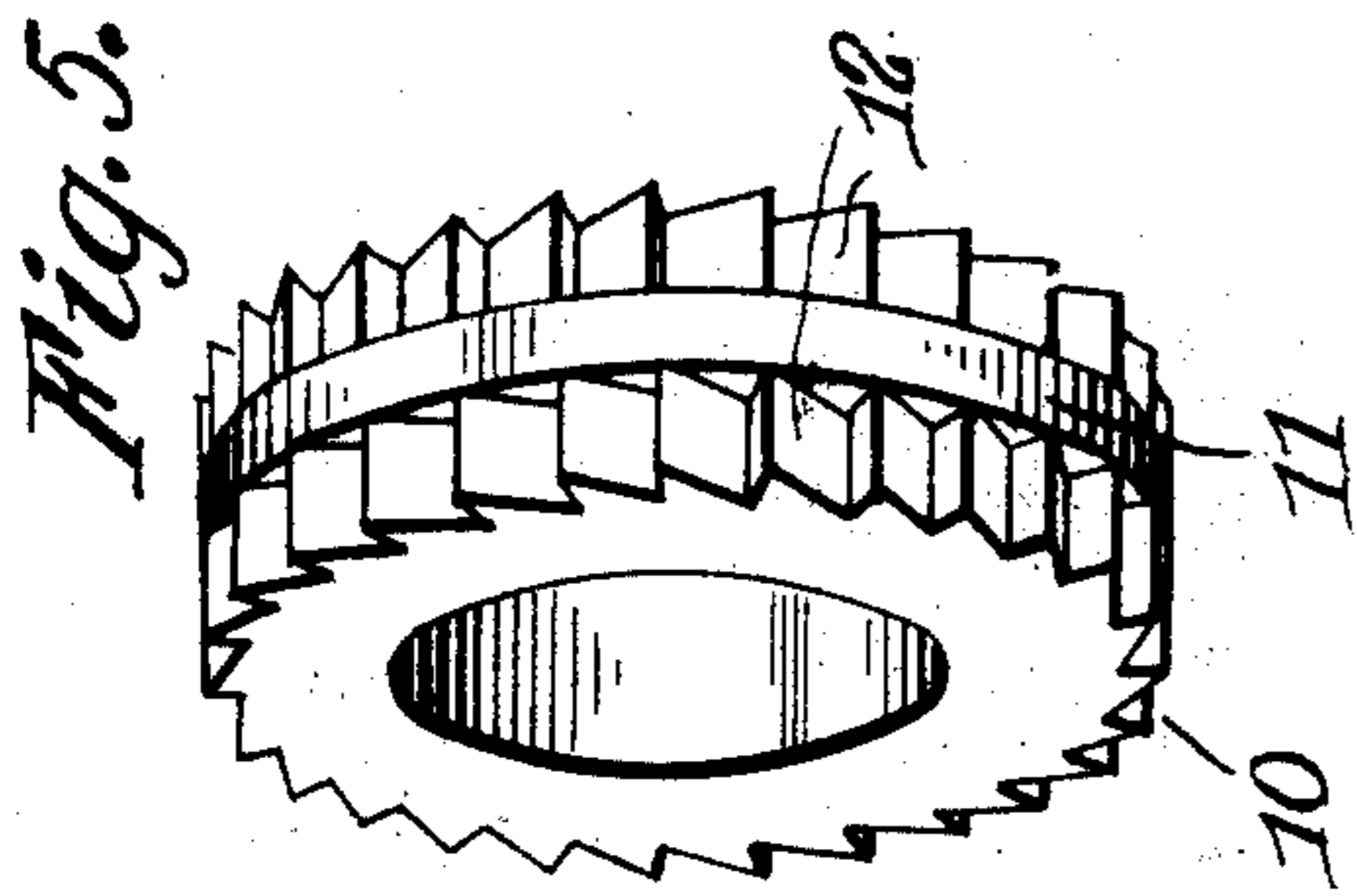
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HORACE E. GEFFCKEN, OF DUBLIN, GEORGIA.

RATCHET-WRENCH.

No. 883,309.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed May 17, 1907. Serial No. 374,113.

To all whom it may concern:

Be it known that I, HORACE E. GEFFCKEN, a citizen of the United States, residing at Dublin, in the county of Laurens and State of Georgia, have invented certain new and useful Improvements in Ratchet-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.

This invention relates to an improved wrench.

The object of the invention is to provide a wrench having a plurality of interchangeable nut caps and adapted for use either as a ratchet or solid wrench.

In the accompanying drawings, Figure 1 represents a side elevation of this improved wrench; Fig. 2 represents a longitudinal section thereof; Fig. 3 represents a transverse section through the head taken on line 3—3 of Fig. 1; Fig. 4 represents an end view of the wrench head; Fig. 5 represents a perspective view of the ratchet wheel detached; and Fig. 6 represents a longitudinal section taken at right angles to the section shown in Fig. 2.

In the embodiment illustrated, a wrench stock 1 is shown having a head 2 with spaced longitudinally-extending arms 3 and 4 forming a ratchet wheel receiving recess 5, said arms having alined openings as 6 extending transversely therethrough and adapted to receive the ratchet barrel 7. This ratchet barrel 7 is of sufficient length to extend on opposite sides through the openings in the arms 3 and 4 and has a shoulder 8 which abuts against the outer face of the arm 3 and limits its longitudinal movement in one direction.

A ratchet wheel 10 is arranged on the barrel 7 in the recess 5 between the arms 3 and 4. This wheel 10 has a plane portion or rib 11 extending around its periphery with two series of teeth as 12 on opposite sides thereof pitched in opposite directions. A collar 13 fits on the projecting smaller end of the barrel 7 and is secured thereto preferably by a set screw 14 which holds the barrel 7 against slipping out of the head 2. This barrel 7 has a hexagonal or other angular opening extending therethrough in which is fitted the corresponding angular shank of a nut engaging member or cap 15. This member 15 has a shoulder 16 at the outer end thereof which abuts against the outer face of

the ratchet barrel 7 and limits its inward movement in said barrel. Opening from the recess 5 at opposite sides of the wrench are two slots or recesses 17 and 18 in which are pivoted pawls 19 and 20 for engaging the oppositely pitched teeth of the two ratchet sections. Pivoted on the head 2 adjacent the slots are two locking members or latches 21 and 22 for holding the pawls out of engagement with the teeth of the ratchet wheel when desired. Springs as 20' are disposed under the outer ends of the pawls 19 and 20 to hold their other ends normally in engagement with the ratchet teeth.

In the operation of this wrench, the nut engaging member or cap 15 having a socket of the desired size and shape to fit the nut to be turned, is placed in the angular barrel opening and when engaged with the nut, the handle or stock is turned in either direction as desired to tighten or loosen the nut. When it is desired to use the wrench as a ratchet wrench, one of the latches as 21 or 22 is swung around over the rear end of the pawl adjacent thereto and depresses it against the tension of its spring, thus holding it out of engagement with the ratchet wheel and permitting the other pawl to operate as is common in ordinary ratchet wrenches, it being understood that when both pawls are in engagement respectively with their separate sets of teeth, the ratchet head will be held against movement and devices transformed into a rigid wrench.

Having thus described my invention, what I claim as new is:—

In a wrench, the combination with a stock provided with a head having spaced longitudinally extending arms integral therewith, said arms having alined openings passing transversely therethrough, a barrel mounted to rotate in the openings in said arms and having an angular opening extending longitudinally therethrough, said barrel projecting on opposite sides of the arms and having a shoulder at one end to limit its longitudinal movement in one direction, a collar detachably keyed to its other end to prevent movement thereof in the opposite direction, a nut engaging member having an angular shank to removably engage the opening in said barrel, a ratchet wheel mounted between said arms and detachably keyed to the barrel, said wheel having two peripheral rows of teeth fixed in reverse direction and separated by a smooth peripheral ridge, a pair of pawls

mounted to lie between said arms in position to engage the respective rows of teeth, and a pair of latches pivoted on either side of the stock and adapted to swing transversely across the same to engage the rear end of and lock the pawls out of engagement with the ratchet wheel.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HORACE E. GEFFCKEN.

Witnesses:

E. C. ONEAL,

R. P. HICKS.