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J. N. COOK.

WRENCH.

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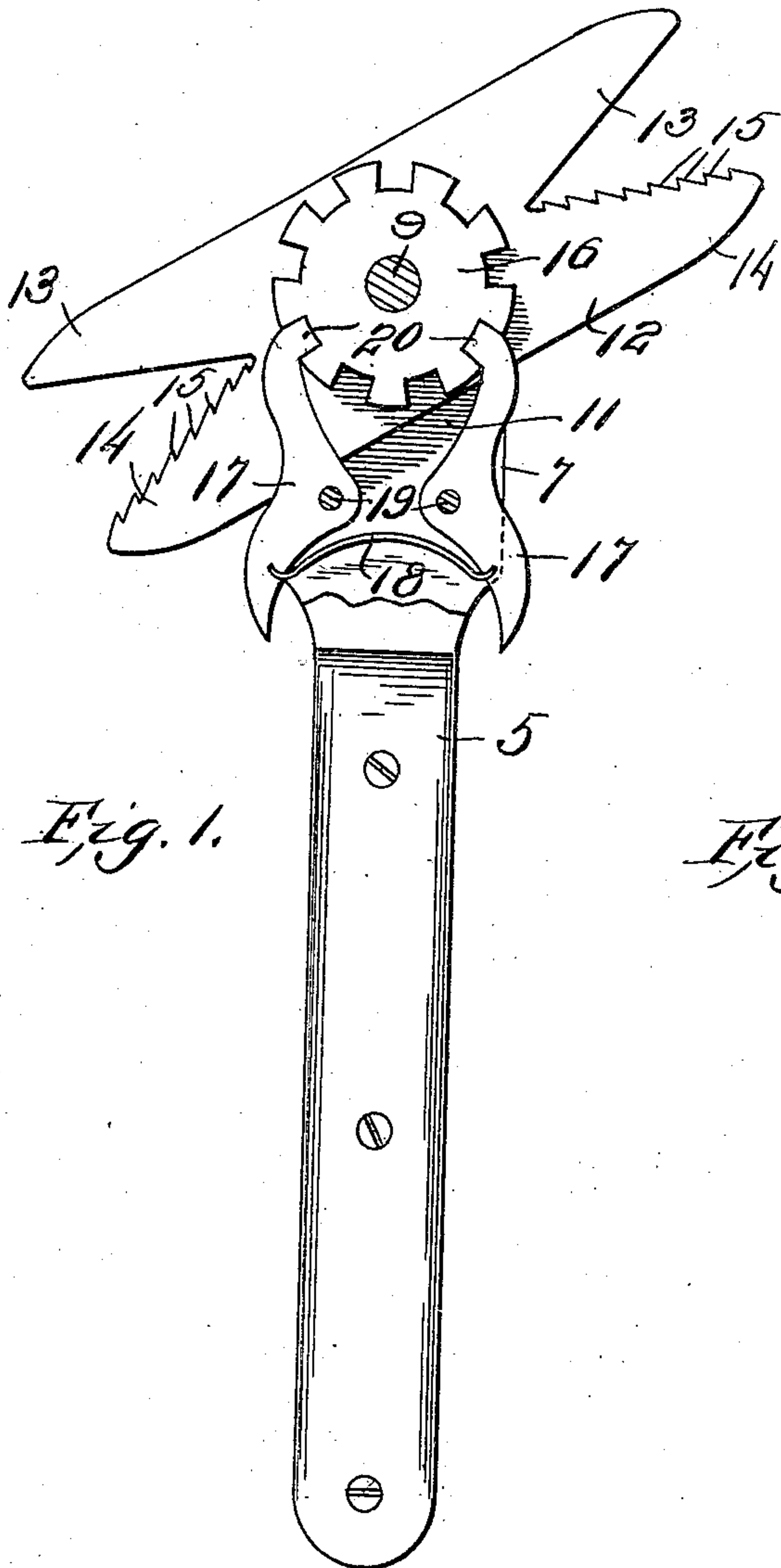


Fig. 1.

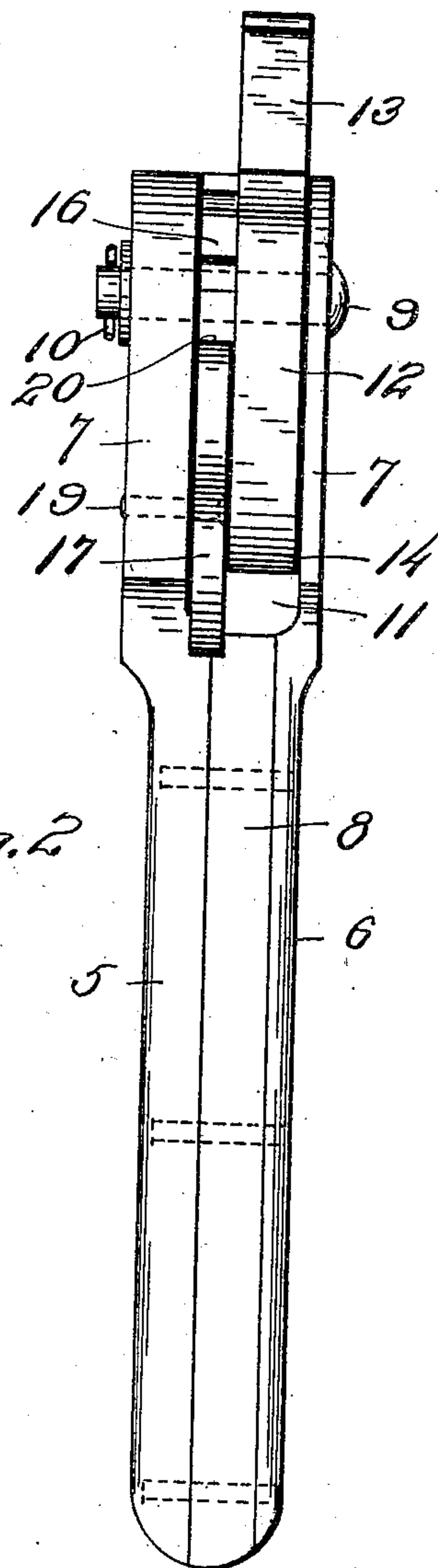


Fig. 2.

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JOSEPH N. COOK, OF WESTOVER, MISSOURI.

WRENCH.

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To all whom it may concern:

Be it known that I, JOSEPH N. COOK, a citizen of the United States, residing at Westover, in the county of Crawford and State of Missouri, 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.

The present invention has reference to improvements in wrenches, and it aims to provide an exceedingly simple, economic, and effective device of that class having a laterally adjustable head.

To this end the invention consists in the particular construction of parts and in their combination and arrangement all as herein- after fully described, specifically claimed, and illustrated in the accompanying drawings in the views of which like parts are designated by corresponding reference numerals.

Of the said drawings, Figure 1 is a front elevation of the improved wrench, part of the top plate being broken away to illustrate the position of the spring-actuated dogs. Fig. 2 is a side elevation of Fig. 1.

Referring more particularly to the drawings, the numerals 5 and 6 designate the top and bottom plates of the wrench each of which plates is provided with an enlarged upper end 7, which is slightly offset from the body portion thereof. Between these plates, which are formed of cast iron or steel, is interposed a central plate 8 of hard wood, the length of the last-mentioned plate being approximately equal to that of the body portion of the first-mentioned plate. The several plates are secured together in any desired manner and may be regarded as forming the shank or handle of the implement. The enlarged upper ends of the plates 5 and 6 are provided with alining perforations through which a headed bolt 9, extends, the free end of which projects beyond the outer face of the plate 5 and carries a washer, the bolt being held against endwise movement by means of a split pin 10 which is passed through an opening formed in the bolt end at such point. Disposed within the chamber 11 between said plate ends is a wrench head 12 provided at each end with a pair of outwardly diverging jaws 13 and 14, the latter of which, in each instance is provided with teeth 15.

Formed upon the face of the wrench head

adjacent the end plate 5, or secured thereto in any desired manner is a ratchet 16 whose teeth are engaged by a pair of oppositely-disposed dogs 17 the lower ends or stems of which are forced apart by a bowed leaf spring 18 having its opposite ends bent outwardly, so as to fit in openings formed in said dogs. The head and ratchet are each provided with an axial opening through which the bolt 9 passes, the arrangement being such that they are capable of rotation thereon, when the dogs are released from engagement with the ratchet teeth, to dispose the head at any desired angle with respect to the handle, the head being held in such position by the dogs which reengage the ratchet when the pressure upon them is released. Each dog is pivoted upon a pin 19 which is set into the head of plate 5 and extends into the chamber 11. The rectangular teeth with which the ratchet is provided, are formed by notching the periphery of the latter at regular intervals, the upper or operative portion of each dog being likewise provided with a laterally-projecting rectangular tooth 20.

From the foregoing it will be apparent that when the stems of the dogs are pressed towards each other, to disengage their teeth 20 from the notches in the ratchet, the wrench head may be rotated upon the bolt 9 until it is disposed at the desired angle to the handle portion of the tool, in which position it will be held by the dogs when the pressure is relieved therefrom.

What is claimed, is,

1. The combination, in a wrench, of a handle comprising a top plate and a bottom plate each having an enlarged upper end provided with an opening, said ends being offset from each other to form a chamber therebetween; a bolt extending through the openings in said ends; a wrench head disposed within said chamber and rotatably mounted upon said bolt, said head being provided with a pair of outwardly diverging jaws; a ratchet formed upon one side face of said head and provided with an axial opening through which said bolt passes; a pair of dogs located within the chamber upon opposite sides of the ratchet, and pivoted to the adjacent wall of said chamber; and a resilient member interposed between the dogs and having its opposite ends engaged therewith to normally force the same into engagement with the ratchet.

2. The combination, in a wrench, of a han-

dle comprising a top plate and a bottom plate each having an enlarged upper end provided with an opening, said ends being offset from each other to form a chamber therebetween; a bolt extending through the openings in said ends; a wrench head disposed within said chamber and rotatably mounted upon said bolt, said head being provided at each end with a pair of outwardly-diverging jaws; a ratchet formed upon one side face of the wrench head, and provided with an axial opening through which the bolt passes; a pair of dogs disposed within said chamber, each dog having a laterally-projecting tooth

at its upper end; and a bowed spring interposed between the lower ends of the dogs and having its opposite ends fitted in openings formed therein, to force the toothed upper ends of the dogs into simultaneous engagement with the ratchet, to hold the wrench head in adjusted position with respect to the handle.

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

JOSEPH N. COOK.

Witnesses:

WM. R. LAY,

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