

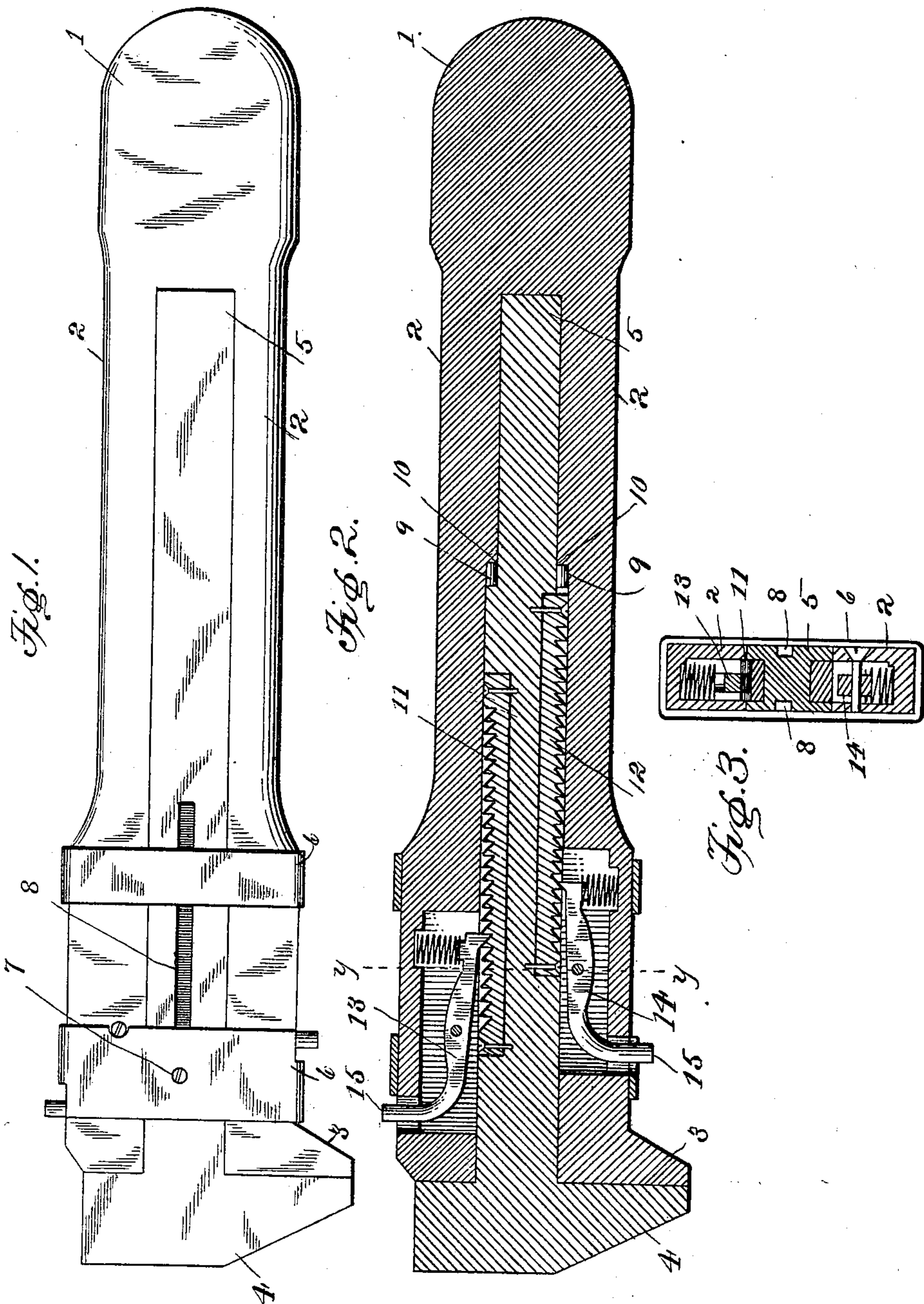
No. 658,470.

Patented Sept. 25. 1900.

C. D. SCOTT & B. M. EAMICH.  
WRENCH.

(Application filed Dec. 28, 1899.)

(No Model.)



Inventor

Chas. D. Scott & B. M. Eamich

by A. B. Wilson & Co.

Attorneys

Witnesses

E. A. Ryan.

A. B. Wilson



# UNITED STATES PATENT OFFICE.

CHARLES D. SCOTT AND BRUCE M. EAMICH, OF MORRISONVILLE, VIRGINIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 658,470, dated September 25, 1900.

Application filed December 28, 1899. Serial No. 741,831. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES D. SCOTT and BRUCE M. EAMICH, citizens of the United States, residing at Morrisonville, in the county of Loudoun and State of Virginia, have invented certain new and useful Improvements in Wrenches; and we 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.

The invention relates to wrenches, and more particularly to that class of wrenches known as the "rapid-adjustment" type.

The object of the invention is to provide a wrench of this character by means of which a finer adjustment may be attained without decreasing the spaces between the rack-teeth, which would very materially weaken the wrench in its holding capacity when applied.

In the accompanying drawings, Figure 1 is a side elevation of our improved wrench. Fig. 2 is a longitudinal vertical sectional view, and Fig. 3 is a cross-sectional view.

Referring to the drawings, 1 denotes the handle of the wrench, terminating in guide extensions 2, provided with a fixed jaw 3.

4 denotes a sliding jaw, the shank 5 of which slides between the guide extensions and is held in place by straps 6 and is prevented from being withdrawn by the stop-pin 7, which engages grooves 8, formed in the sides of the shank 5. Upon the upper and lower edges of the shank, near the rear end, are formed grooves 9, which are adapted to coact with ribs 10, formed on the adjacent faces of the handle extensions.

11 and 12 denote rack-bars set into the upper and lower edges of the shank to be flush with the surfaces thereof. The teeth of one rack-bar alternate with those of the other rack-bar and are engaged alternately by two spring-actuated dogs 13 and 14, provided with push-pins 15, that extend through apertures in the outer end of the handle extensions and by means of which the dogs are freed from the rack-bars. Assuming the teeth of each rack-bar to be one-eighth of an inch apart, by alternating these teeth it will

be observed that the sliding jaw may be adjusted the distance of one-sixteenth of an inch; whereas if the teeth did not alternate to secure this one-sixteenth of an inch adjustment it would be necessary to have the teeth but one-sixteenth of an inch apart, and this would materially weaken them. By alternating them we can employ much larger teeth, and thereby secure additional strength and at the same time get the same adjustment as if the teeth were much smaller than one-sixteenth of an inch apart. By referring to Fig. 2 it will be noticed that at no one time do both dogs engage the teeth. When one dog is in engagement with its set of teeth, the other is out of engagement with the other set of teeth.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of our improved wrench will be readily apparent without requiring an extended explanation.

It will be seen that the device is simple of construction, that said construction permits of its manufacture at small cost, and that it is exceedingly well adapted for the purpose for which it is designed.

It will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

The combination with the handle of a wrench terminating in guide extensions 2 provided with a fixed jaw 3, said extensions near their rear ends having formed upon their adjacent faces, ribs 10, and the adjacent faces of the extensions at their forward end being formed with dog-chambers, of a shank 5, provided with a fixed jaw 4 and having a groove 8 in its side, straps 6 surrounding said handle extensions and the shank, a stop-pin 7 extending through said strap into said groove, said shank having in its sides near

its rear end, grooves 9 to be engaged by the  
ribs 10, rack-bars 11 12, secured to said shank,  
the teeth of one rack-bar alternating with  
the teeth of the other rack, and spring-ac-  
5 tuated dogs pivoted in said dog-chambers  
and adapted to alternately engage the teeth  
of said racks, substantially as specified.

In testimony whereof we have hereunto set

our hands in presence of two subscribing  
witnesses.

CHARLES D. SCOTT.  
B. M. EAMICH.

Witnesses:

JOHN M. DINGES,  
C. L. WILEY.