

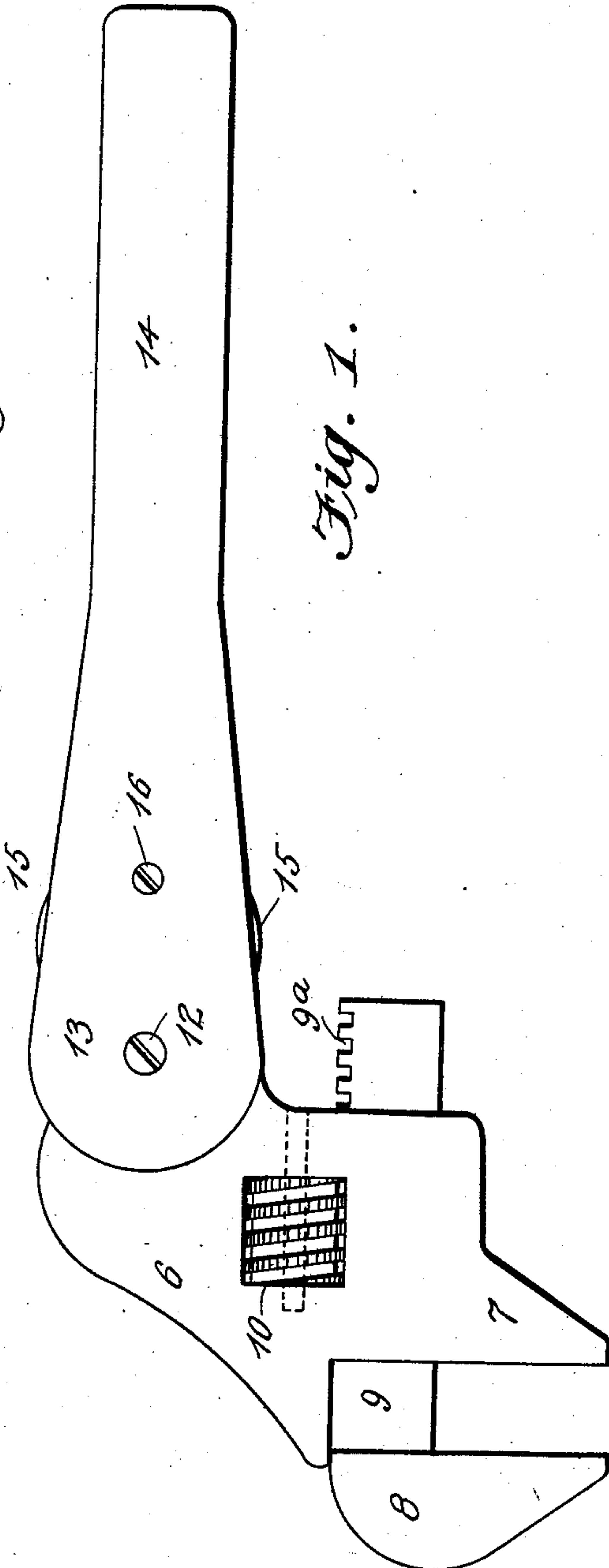
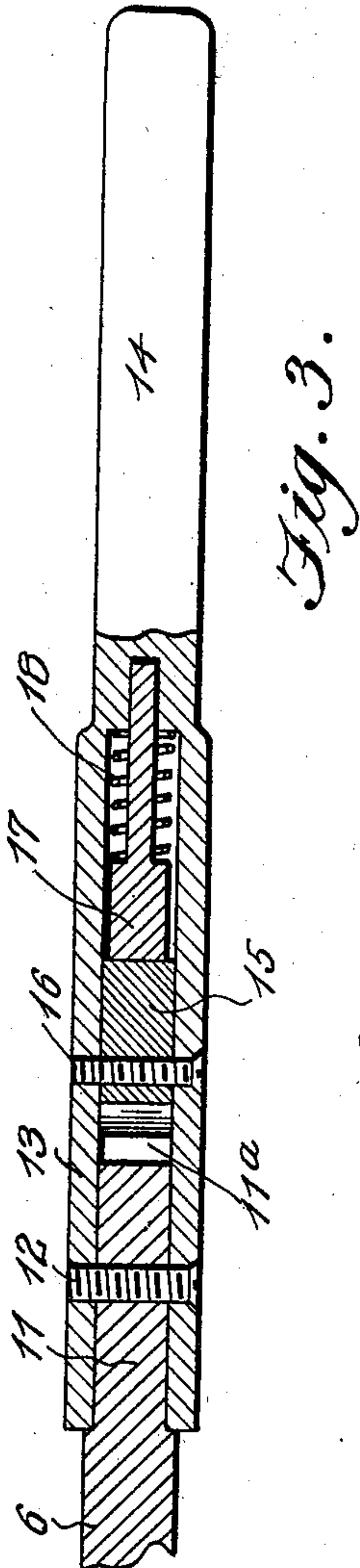
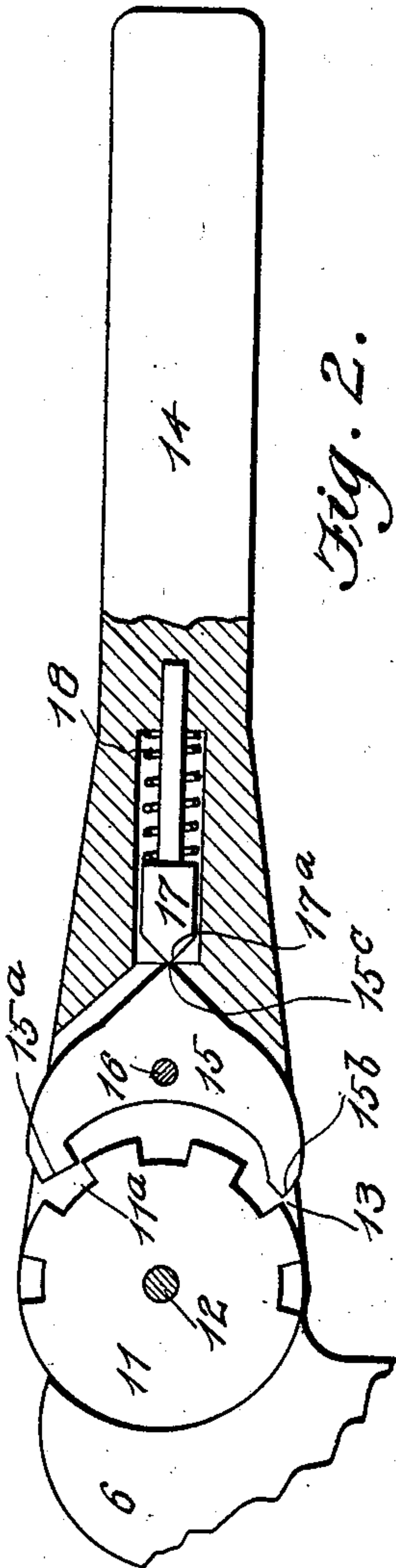
No. 762,941.

PATENTED JUNE 21, 1904.

E. B. RANDALL.
WRENCH.

APPLICATION FILED NOV. 9, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ELMER B. RANDALL, OF PHENIX, RHODE ISLAND.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 762,941, dated June 21, 1904.

Application filed November 9, 1903. Serial No. 180,349. (No model.)

To all whom it may concern:

Be it known that I, ELMER B. RANDALL, a citizen of the United States, residing at Phenix, in the county of Kent and State of Rhode Island, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates particularly to ratchet-wrenches capable of movement in either direction, and has for its object to provide an improved wrench of that kind having in addition to its ratchet action means to lock the handle, so as to form a rigid wrench.

A further object is to produce an improved construction in which the head may be operated at any angle to the handle.

The tool is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a horizontal section, and Fig. 3 is a vertical section.

The head of the wrench comprises a plate or casting 6, having projecting therefrom the fixed jaw 7, opposite which is the movable jaw 8, the shank 9 of which is slidable through a recess formed in the casting, and said shank has screw-threads 9^a, adapted to be engaged by a thumb-screw or worm 10, which is let into and journaled in a transverse opening through the casting. The shank or inner end of the casting terminates in a circular plate 11, which is embraced and fixed by pivot 12 between the cheeks 13, which are forked from the handle 14. The rim of the circular plate 11 is notched, as at 11^a, to receive the right- and-left pawl 15, which is pivoted at 16 between the cheeks of the handle. One point of the pawl is squared, as at 15^a; the other is beveled, as at 15^b. The squared point locks in both directions when it is engaged in a notch; but the beveled point acts as a free pawl to slip in one direction and engage in the other when the handle is vibrated.

The respective engagement of one or the other of the points of the pawl is controlled by a spring-latch 17, which works lengthwise with respect to the handle in a bore produced therein at the fork or junction of the cheek-plates and is tapered to a point 17^a, which may be engaged on one side or the other of the tapered point 15^c on the back side of the pawl. The latch is held in yielding engagement by the pressure of a spring 18, coiled around the stem of the latch in the bore.

From this construction it will be seen, first, that the jaws 7 and 8 are adjustable with respect to each other by means of the screw 10; second, that the head of the wrench as a whole is offset laterally from the median line of the handle and is adjustable to various angles with respect thereto upon the pivot 12; third, that when the pawl is set to engage the pointed end a ratchet-joint is formed which will slip in one direction and turn the wrench in the other, and, fourth, that when the squared point of the pawl is engaged in one of the notches the handle is made rigid with the head and a rigid wrench is produced.

What I claim as new, and desire to secure by Letters Patent, is—

In a wrench, in combination, a head having jaws and a curved notched shank, a handle to which the head is pivoted, a double-pointed pawl carried by the head, one point being squared to lock in a notch and the other being beveled to catch and slip as ordinary, and means to set the pawl to engage either point.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELMER B. RANDALL.

Witnesses:

GEORGE D. SMITH.

GEORGE D. CAPWELL.