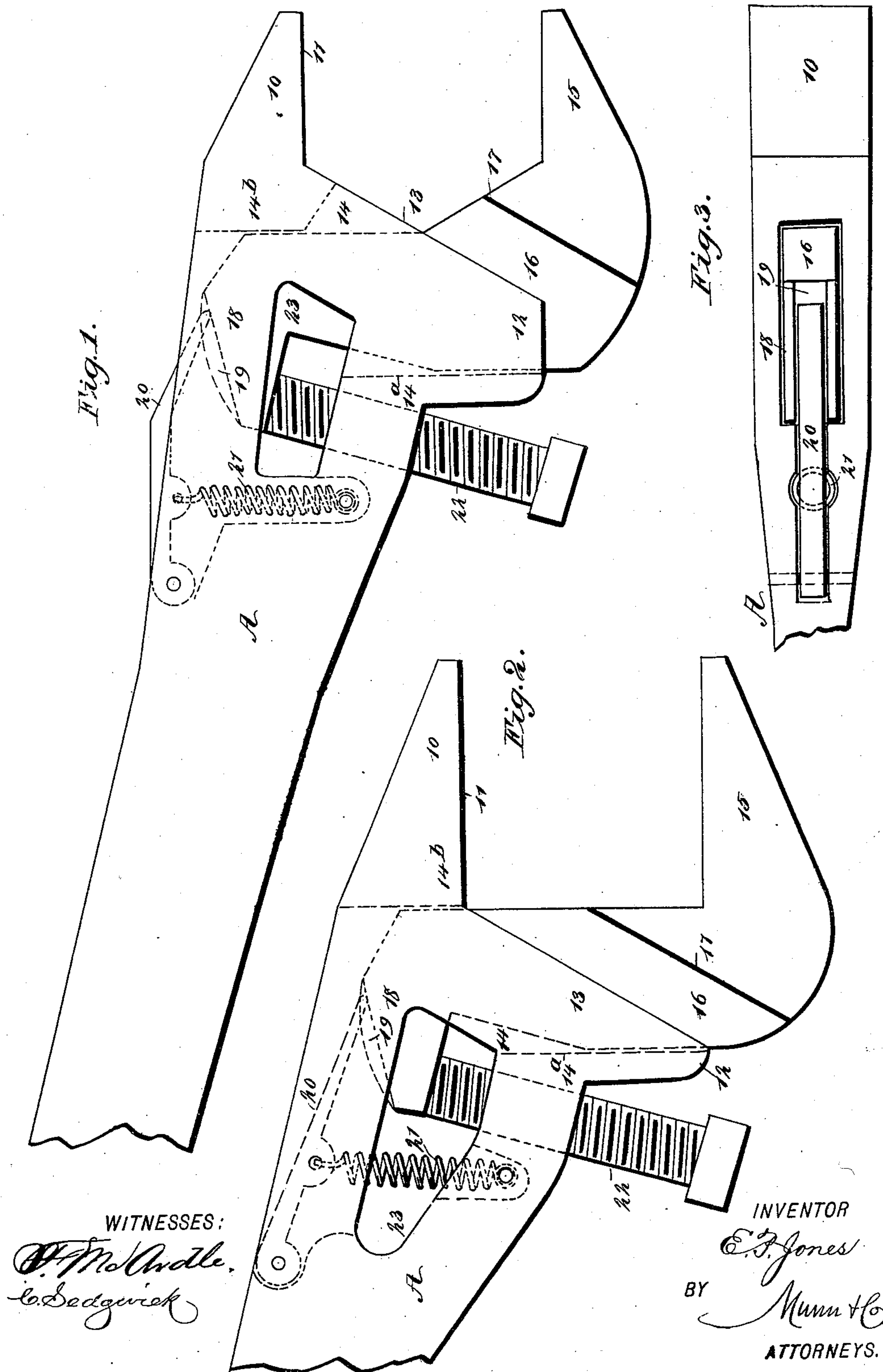


(No Model.)

E. P. JONES.
WRENCH.

No. 510,263.

Patented Dec. 5, 1893.



UNITED STATES PATENT OFFICE.

EDWARD P. JONES, OF PHILADELPHIA, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 510,263, dated December 5, 1893.

Application filed April 24, 1893. Serial No. 471,655. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. JONES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and it has for its object to provide a wrench of exceedingly simple and durable construction, capable of being conveniently and effectively used in places where monkey wrenches could not be employed; and a further object of the invention is to provide a wrench which is capable of being manipulated wherever an ordinary monkey wrench may be applied.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved wrench, the jaws being constructed to take a polygonal nut. Fig. 2 is a similar view of the wrench, the jaws being shaped to receive a square nut, and Fig. 3 is a partial plan or edge view of the wrench shown in Fig. 1.

In carrying out the invention the handle A of the wrench is formed integral with what I term its upper outer end and jaw 10, the underface 11 of which jaw is preferably made straight. The lower forward portion of the handle is provided with a downwardly-extending lip 12, and the forward surface of the handle between the forward end of the lip 11, is inclined, as shown at 13 in both Figs. 1 and 2, the inclination of the surface 13 being from the jaw downward in direction of the lip end of the handle. The lip 12 of the handle, or that portion adjacent thereto, is provided with a chamber 14, the chamber being more or less of angular construction, and said chamber in its lower or vertical portion is provided with two opposing straight or parallel walls 14^a and 14^b, while the other member of the opening extends somewhat diagonally from the upper end of the vertical mem-

ber or section through the upper portion of the handle. The lower jaw 15 is parallel with the upper jaw 11, and is formed integral with a shank 16, the shank being of less thickness than the jaw, and the jaw extends beyond both sides of the shank, whereby two opposing shoulders 17, are formed. The shank extends upward, and is adapted to slide in the vertical section of the handle chamber 14; and the upper or inner end of the shank is provided with a head 18, extending in direction of the grip end of the handle, the under face of the said head being ordinarily made straight. The upper surface of the head is preferably provided with a channel 19, and upon the base wall of said channel a lever 20 has constant bearing, which lever is fulcrumed at its inner end within the extreme inner portion of the handle chamber 14; and a spring 21, is attached at one end to the lever, and the other end of the spring extends downward in a depression in the handle chamber and is attached to the handle. The lever 20, exerts constant pressure downwardly upon the under jaw 15, or exerts its pressure upon said under jaw in the direction in which the nut, when turned by the wrench, would pull upon said jaw. The lower jaw is vertically adjusted by means of a screw 22, which is passed through a threaded aperture in the under surface of the handle back of the lip 12, the upper edge of the screw engaging with the under face of the head section of the lower jaw shank.

In Fig. 1, I have illustrated the jaws as being formed to receive a polygonal nut, while in Fig. 2 the jaws are shaped to receive a square nut. When the jaws are shaped to receive a polygonal nut the handle is placed at an angle of fifteen degrees to the jaw; and when the jaws are formed to receive a square nut the handle is placed at an angle of about twenty-two and a half degrees to the jaws.

The relation above set forth as sustained between the jaws and the handle, has been found in practice to be most advantageous in manipulating the wrench in the smallest possible amount of space.

The handle is provided with an opening 23, extending through from side to side, which opening exposes the lower portion of the adjustable shank head and the upper portion of

the adjusting screw, thereby enabling the operator to readily perceive whether the adjusting screw is acting properly upon the adjustable jaw.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A wrench, the same consisting of a handle having a jaw formed integral therewith
10 and a transverse slot extending through the said handle, a movable jaw having a shank adapted to slide in the said transverse slot, an adjusting screw carried by the handle and projecting on one side thereof, said screw en-
15 gaging with the shank head of the movable jaw, and a spring pressed lever adapted to project on the opposite side of the handle and engaging with the shank head of the movable jaw to keep the same in contact with the ad-
20 justing screw, as and for the purpose set forth.

2. In a wrench, a handle having an inclined outer face and a jaw projected therefrom, the handle being at an obtuse angle to the jaw, a movable jaw parallel to the jaw fixed to the
25 handle, the movable jaw being provided with a shank having sliding movement in the handle, the shank terminating at its inner end

in a head, a spring-pressed lever bearing against the head of the movable jaw shank, and an adjusting screw carried by the handle 30 and engaging with the said head, as and for the purpose set forth.

3. In a wrench, the combination, with a handle having an opening near its outer end and being wider at its outer end than at any other 35 point, the outer face of the outer end being provided with an inclined face, and a jaw extending from the upper portion of the handle, the jaw and the handle being located one at an obtuse angle to the other, of a movable 40 jaw parallel with the fixed jaw, a shank attached to the movable jaw and extending upward within the handle, having transverse movement therein, a head formed at the inner end of the shank, a spring-pressed lever 45 engaging with the head of the shank at one side, and an adjusting screw carried by the handle and engaging with the opposite side of the shank head, as and for the purpose set forth.

EDWARD P. JONES.

Witnesses:

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