

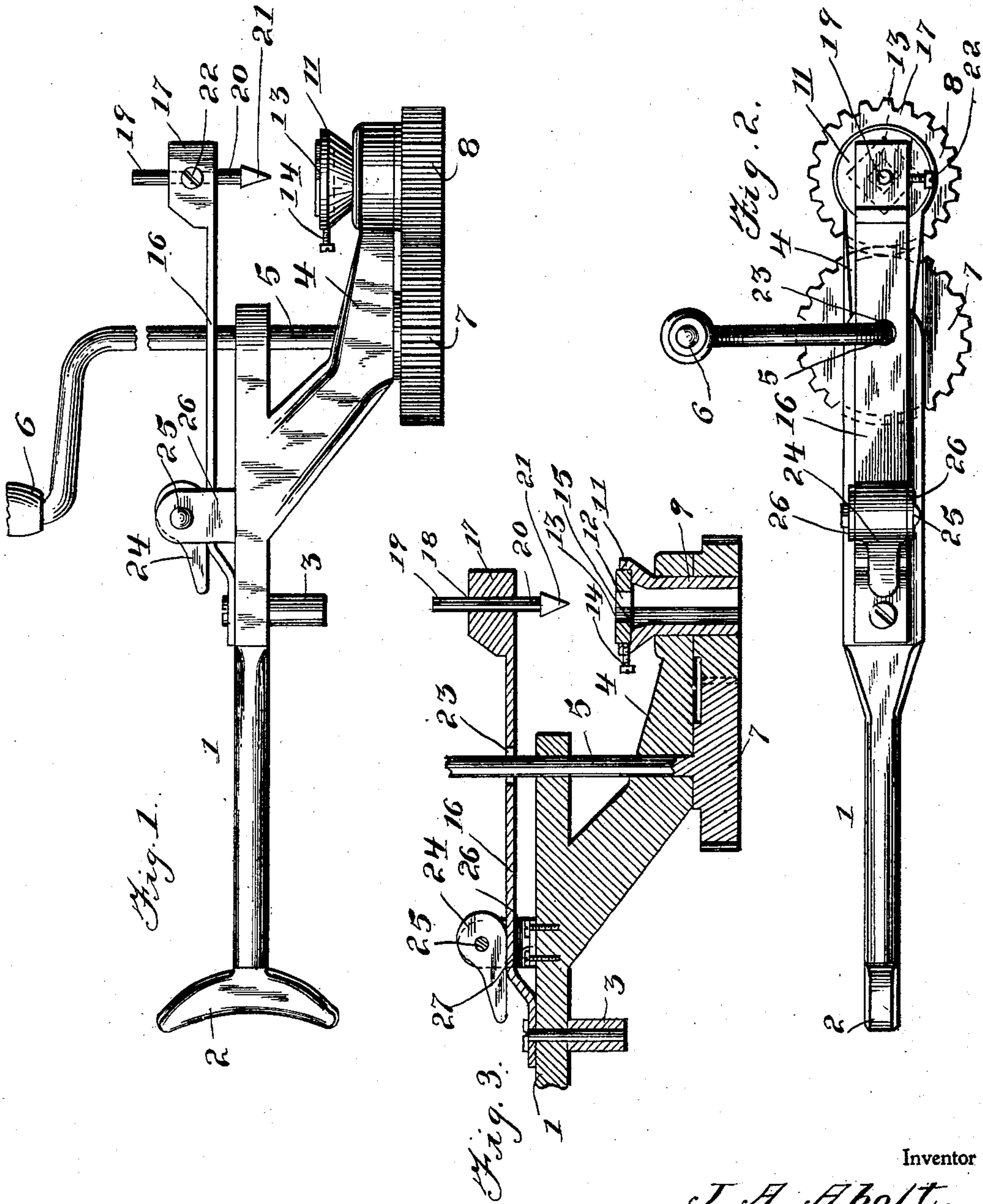
No. 754,831.

PATENTED MAR. 15, 1904.

J. A. ABOLT
WRENCH.

APPLICATION FILED NOV. 30, 1903.

NO MODEL.



Witnesses

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SPECIFICATION forming part of Letters Patent No. 754,831, dated March 15, 1904.

Application filed November 30, 1903. Serial No. 183,229. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. ABOLT, a citizen of the United States, residing at Eldon, in the county of Wapello and State of Iowa, have
5 invented certain new and useful Improvements in 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
10 use the same.

My invention relates to improvements in tools or devices for applying or removing tire-bolts to or from vehicle-wheels and for other purposes.

15 The object of my invention is to provide a simple, durable, and comparatively inexpensive device of this character which is adapted for work of various kinds and which will effectively hold a bolt against rotation and also
20 revolve a nut to apply or remove it to or from the bolt.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of
25 parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved device. Fig. 2 is an end elevation of the same. Fig. 3 is a
30 sectional view through a portion of the device.

Referring to the drawings by numeral, 1 denotes a stock or handle-bar having an arm or shoulder-brace 2 at its inner end and a handle-grip 3 upon one side adjacent to its center.
35 Upon the same side of said stock adjacent to its opposite or outer end is an arm 4, which extends parallel with the said stock and beyond its outer end. A transverse shaft 5 is journaled in suitable bearings in the outer end
40 of said stock and in said arm and has an operating crank-handle 6 formed at one end and a gear 7 secured to its opposite end. Said gear meshes with a pinion 8, secured upon the outer end of a tubular shaft 9, mounted to rotate in bearings formed in the end of
45 said arm 4. The inner end of said tubular shaft 9 is formed with an enlarged head or chuck 11, having a square or polygonal socket 12, in which a nut-engaging device 13 is re-

movably secured by a set-screw or other fastening means 14. The said nut-holder 13 is formed with an opening 15 to receive a nut and is made removable to permit it to be replaced by similar holders having different-size openings, and thus adapt the tool for nuts of
55 different sizes. It will be seen that the head or chuck 11 constitutes a revolving wrench, which when the crank-handle 6 is turned will be rotated to thread or unthread a nut upon a bolt. 60

The bolt is held against rotation while the nut is being revolved by providing a spring-arm 16, having its inner end secured to the stock 1 and its outer end provided with a block 17, formed with an opening 18, adapted to receive the stem or shank 19 of bolt-head-engaging device 20. Said device 20 is formed with a claw 21, which engages the head of a bolt, and it is adjustably and removably held in the block 17 by a set-screw 22 or any other suitable fastening means. The spring-arm extends substantially parallel with the stock 1 and is formed intermediate its ends with an elongated opening 23, through which the shaft 5 extends. Coacting with the spring-arm adjacent to its inner end is a cam-lever 24, which is pivoted upon a bolt 25 between ears 26, bent up from a plate 27, secured to the stock 1. The spring-arm extends between said ears 26 beneath the lever 24, and when the latter is swung down to
70 its released position—that is, with its cam portion out of engagement with the spring-arm—said arm will be permitted to spring away from the stock, and thus move the bolt-engaging claw away from the revolving
75 wrench. When the lever is swung up so that its cam portion will engage the spring-arm, the latter will be forced inwardly toward the stock and will hold the claw 21 in engagement with the head of the bolt to prevent its rotation. 80

The operation and advantages of my invention will be readily understood from the foregoing description taken in connection with the accompanying drawings. It will be seen
85 that when the device is used to apply or remove tire-bolts the stock is held by placing the brace 2 against one shoulder or under one 90

arm, and with one hand upon the grip 3 the nut-holder is engaged with the nut upon the under side of the felly. The operator then uses his other hand to operate the lever 24
5 and clamp the claw 21 upon the head of the bolt. The crank-handle is then turned to revolve the nut to either remove it from the bolt or apply it to the same. Since the arm 16 is made of spring metal, the claw will ad-
10 just itself upon bolts of different lengths within a certain limit. Should, however, the bolt be unusually long or short, the claw is adjusted by means of the set-screw 22, as will be readily understood.

15 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

20 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.

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

30 1. The combination of a suitable stock or handle-bar, a revolving nut-wrench mounted upon the same, a spring-arm upon said stock,

an adjustably-mounted bolt-engaging claw upon said spring-arm, and a cam-lever for adjusting said spring-arm, substantially as described.

2. The combination of a stock having an 35 arm-brace and a hand-grip, a tubular shaft journaled in said stock and forming a chuck, a nut-holding device removably secured in said chuck, means for revolving said shaft, a spring-arm upon said stock, a bolt-engaging 40 claw carried by said spring-arm, and a cam-lever for adjusting said spring-arm, substantially as described.

3. The combination of a stock having an 45 arm-brace, and a hand-grip, a tubular shaft journaled in said stock and having a recessed head at one end, a nut-holder removably secured in said head, a pinion upon the opposite end of said shaft, a crank-shaft, a gear upon said crank-shaft meshing with said pinion, 50 and a bolt-holding means carried by said stock and coacting with said nut-holder, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 55

JOHN A. ABOLT.

Witnesses:

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I. D. ELSTON.