F. R. ALLEN.

WRENCH.

APPLICATION FILED DEC. 6, 1912.

1,110,980. Patented Sept. 15, 1914.

Fig. 1.

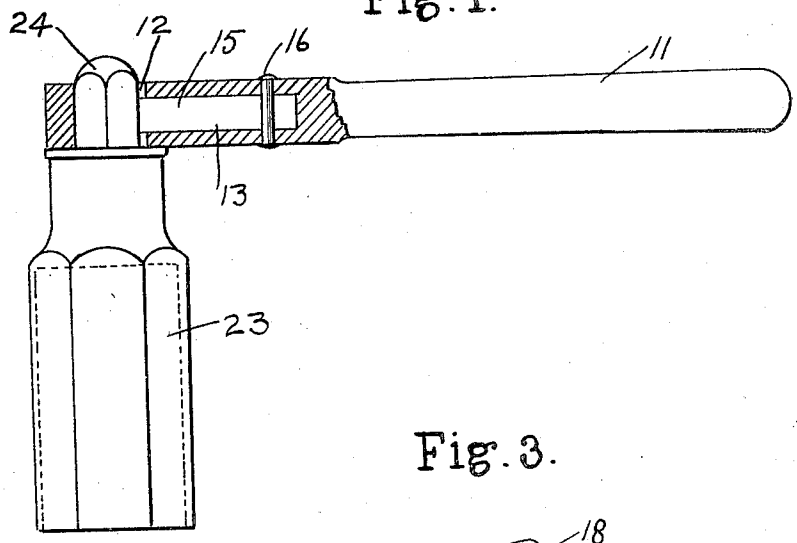
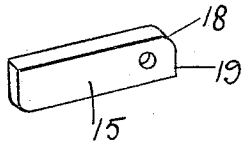


Fig. 3.



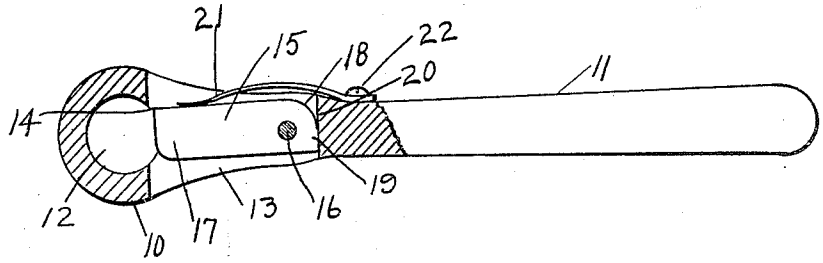


Fig. 2.

Inventor

Fred R. Allen

Witnesses

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UNITED STATES PATENT OFFICE.

FRED R. ALLEN, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ALLEN WRENCH & TOOL COMPANY, OF PROVIDENCE, RHODE ISLAND, A CORPORATION OF RHODE ISLAND.

WRENCH.

1,110,980. Specification of Letters Patent. **Patented Sept. 15, 1914.**

Application filed December 6, 1912. Serial No. 735,206.

To all whom it may concern:

Be it known that I, FRED R. ALLEN, a citizen of the United States, and resident of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches, and has for its object to provide a wrench adapted to be applied to a bolt-head, nut, spark plug socket, or other polygonal shaped member and to rotate the same step by step by a reciprocating action of the wrench handle as the wrench successively engages the flat sides of the member.

The invention further relates to the provision of a spring pressed tongue in the body of the wrench and to also provide a coöperating socket or other work engaging member having a rounding, dome-shaped or beveled head, whereby when the wrench is applied to said head the tapering shape thereof will readily enter the bore of the wrench body and automatically press back said tongue to permit the wrench to be readily positioned thereon.

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

Of the accompanying drawings: Figure 1 is a side elevation of the wrench, partly in section, Fig. 2 is a top view of the wrench, partially in section, showing the spring pressed tongue mounted therein, Fig. 3 is a detail perspective view of the tongue.

Referring to the drawings, the body portion of the wrench may be made in any suitable form, and provided with an actuating handle 11. This body portion is provided with a bore 12 preferably substantially circular in form and adapted to fit over and turn free upon the work or flat sided member to be rotated. The body is also provided with a recessed portion 13 which is in the form of a slot made through the body from edge to edge thereof. One end of this slot communicates with the bore at the point 14. In this slot is mounted a tongue member 15 pivoted at one end on the pin 16. The opposite or free end 17 of this tongue extends into the bore of the body a short distance beyond the inner wall thereof. One of the corners 18 of the tongue at its pivoted end is rounded off so as to permit the tongue to swing outward in one direction, while the opposite corner 19 in this same end is left square and adapted to abut against the end wall 20 of the recess, to form a stop and limit the swing of the tongue in the opposite direction substantially in line with the longitudinal axis of the body portion. A flat spring 21 is secured at one end by the screw 22 to the body of the wrench, while its opposite or free end presses against the edge of the tongue to normally hold it in operative position.

The invention further relates to the provision of a socket, or other work engaging member 23 which is provided at one end with a rounded dome-shaped, tapering or beveled head 24 whereby when the wrench is applied to said head this beveled portion engages and automatically presses back the tongue 15, thereby greatly facilitating the positioning of the wrench on this member. My improved wrench, however, may be applied to any nut, bolt-head, spark plug socket, or other polygonal shaped device or member, the bore in its body portion being of a size to loosely receive the member and the tongue which is pivotally mounted in the body is adapted to yield and be pressed slightly outward against the pressure of its spring to pass over the corners of the nut when the handle is moved in one direction, and to positively engage and grip the flattened side and cause the member to be rotated as the handle of the wrench is oscillated in the opposite direction, thus a quick step by step rotating action is imparted to the nut or member by a reciprocating action of the wrench handle, and that without removing the wrench from the member acted upon.

Another feature of my improved device is that the action of the wrench may be readily reversed by simply reversing the wrench side for side when a continuance of its reciprocating or oscillating action rotates the member intermittently in the opposite direction.

I claim:

1. A wrench comprising a body portion having an operating handle, and a substantially circular bore, an approximately rec-

tangular tongue pivotally mounted at one end in said body with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being square, and an abutment coöperating with the squared corner of said tongue to limit its motion in one direction, and a spring holding said tongue normally in engagement with said abutment.

2. A wrench comprising a body portion having an operating handle, said body portion being provided with a substantially circular bore, and a recess communicating therewith, an approximately rectangular tongue pivotally mounted at one end in said recess with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being squared, the end of said recess forming an abutment coöperating with the squared corner of said tongue to limit pivotal movement in one direction, and a spring holding said tongue normally in engagement with the end wall of said recess.

3. A wrench comprising a body portion having an operating handle, and a substantially circular bore, an approximately rectangular tongue pivotally mounted at one end in said body with its free end extending into said bore, one corner of the pivoted end of said tongue being rounded, the other corner being square, and an abutment coöperating with the squared corner of said tongue to limit its motion in one direction, and a spring holding said tongue normally in engagement with said abutment, and a removable socket having a reduced portion to enter said recess.

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

FRED R. ALLEN.

Witnesses:
HOWARD E. BARLOW,
E. I. OGDEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."