Aug. 19, 1924. 1,505,727

W. PRELLWITZ

HANDLE FOR PERCUSSIVE TOOLS

Filed June 13, 1921

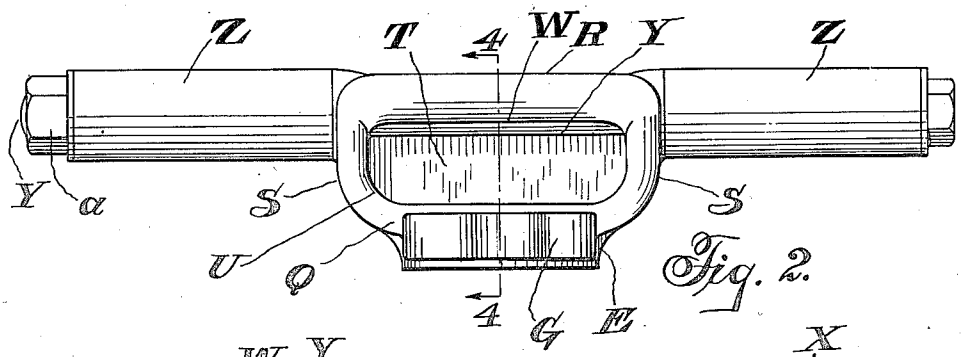


Fig. 2.

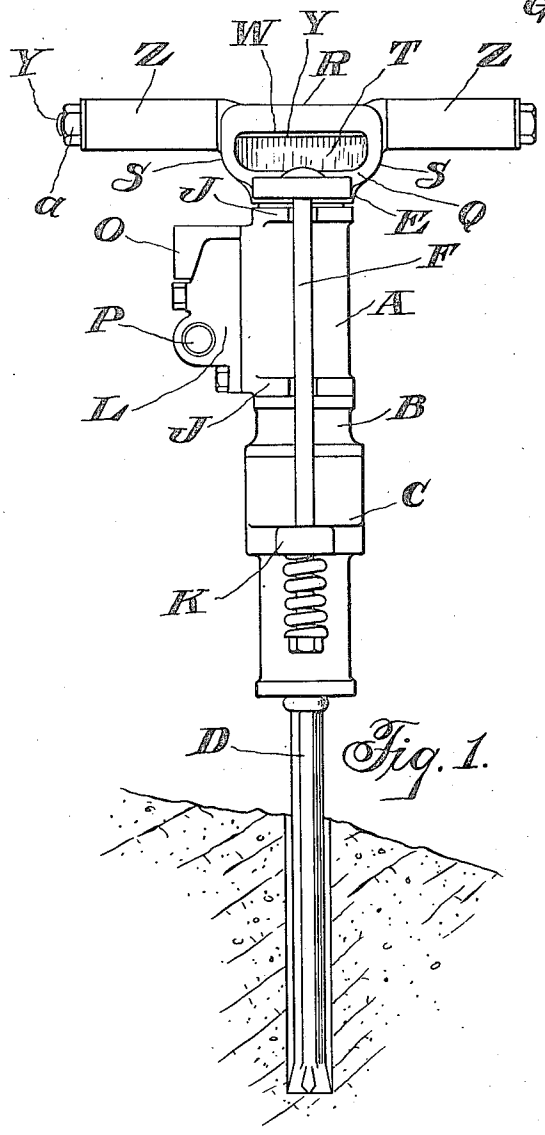


Fig. 1.

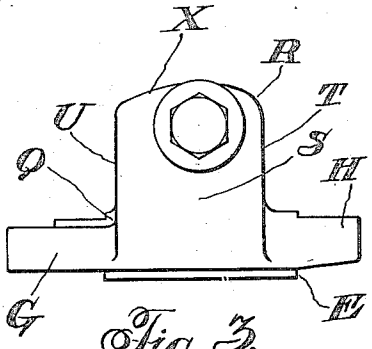


Fig. 3.

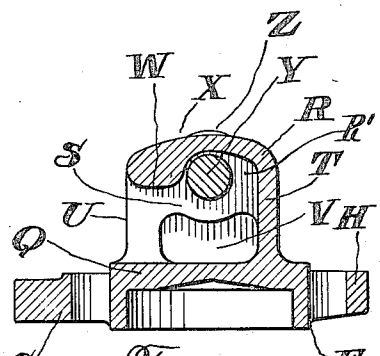


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM PRELLWITZ, OF EASTON, PENNSYLVANIA, ASSIGNOR TO INGERSOLL-RAND COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

HANDLE FOR PERCUSSIVE TOOLS.

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To all whom it may concern:

Be it known that I, WILLIAM PRELLWITZ, a citizen of the United States, a resident of Easton, county of Northampton, and State of Pennsylvania, have invented a certain Handle for Percussive Tools, of which the following is a specification accompanied by drawings.

This invention relates to handles for percussive tools such as rock drills, but more particularly to an improved handle especially adapted for the type of drill known as a "Jackhammer" which may be held by the operator.

Such handles are usually secured to the back end of the cylinder casing of the rock drill and may form the back head, and with the open type of handle, although equipped with handle bars, the operator is apt to thrust a crow-bar through the open grip in order to twist the drill steel loose when it sticks, sometimes breaking the handle.

Other rough usage may also break the handle, and the objects of the present invention are to avoid breakage and produce a simple and strong handle of the closed type so constructed that the operator either cannot, or can only with great difficulty, insert a bar into the handle, and must depend upon the handle bars for manipulating the machine when required, as intended.

Further objects of the invention will hereinafter appear and to all of these ends the invention consists of the device shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a percussive tool in the form of a rock drill of the Jackhammer type, having my handle bar applied thereto, only so much of the details of the rock drill being shown as will serve to illustrate the invention.

Figure 2 is an enlarged detail side view of my improved handle.

Figure 3 is an end view of the handle, and

Figure 4 is a transverse sectional view through the handle on the line 4—4 of Figure 2.

Referring to the drawings, which illustrates a preferred form of the invention, the cylinder casing A of the rock drill is provided with the front cylinder extension B and the front head C into which the drill steel extends in position to receive the impact blows of a hammer adapted to reciprocate in the cylinder.

The handle E, constructed in accordance with my invention, forms the back head of the machine and the parts so far described are held together by means of the usual side bolts F passing through the lugs G and H on the handle, the lugs J on the cylinder A and the lugs K on the front head C. The usual valve casing L is shown at the side of the machine adapted to contain a fluid actuated distributing valve and fluid pressure is supplied to the inlet O and exhausted to atmosphere at the exhaust outlet P.

My improved handle comprises a base Q formed with a hollow grip R integral therewith, closed at both ends S and at one side T, the opposite side U being open for the insertion of the fingers of an operator. Recesses or pockets V formed on the closed ends S reduce the walls at these portions so that they are thinner than the remainder of the sides to decrease the weight of the handle and provide increased space for the thickly gloved hand of the operator. A rib W preferably extends longitudinally along the inside of the crown X of the grip from end to end for strengthening purposes and in order to afford convenient gripping means for the fingers. A handle bar Y having the handles Z preferably extends longitudinally through the grip beside the rib W to enable the machine to be manipulated by both hands of the operator. The bar Y also cooperates with the rib W so that the interior of the grip comfortably fits the hand of the operator. The space R′ between the bar Y and the wall T of the handle affords an additional space or pocket for the ends of the fingers of the operator's glove.

My hollow grip may be cast or otherwise formed in one piece with the exception of the handle bar Y which is adapted to be secured to the grip and have the handles Z secured thereon as by means of the nut *a*. The construction is light and strong, withstands rough usage without breakage and prevents the insertion of a crow-bar through the handle for twisting the drill steel loose so that only the handles Z provided for this purpose will be used by the operator, as intended.

I claim:

A handle for percussive tools, comprising in combination a cylinder, a back head and a hollow grip integral with said back head, said grip being completely closed at both ends and at one side by solid walls, the opposite side being open for the insertion of the fingers of an operator, and a strengthening rib extending longitudinally along the inside of the crown of the grip from end to end, said grip being adapted to prevent the insertion of a turning implement through the handle from side to side, a removable handle bar extending longitudinally through the grip, a portion of said handle bar lying beside the said rib within the grip and providing a convenient hand hold for the operator.

In testimony whereof I have signed this specification.

WILLIAM PRELLWITZ.