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W. PRELLWITZ

HANDLE FOR PERCUSSIVE TOOLS

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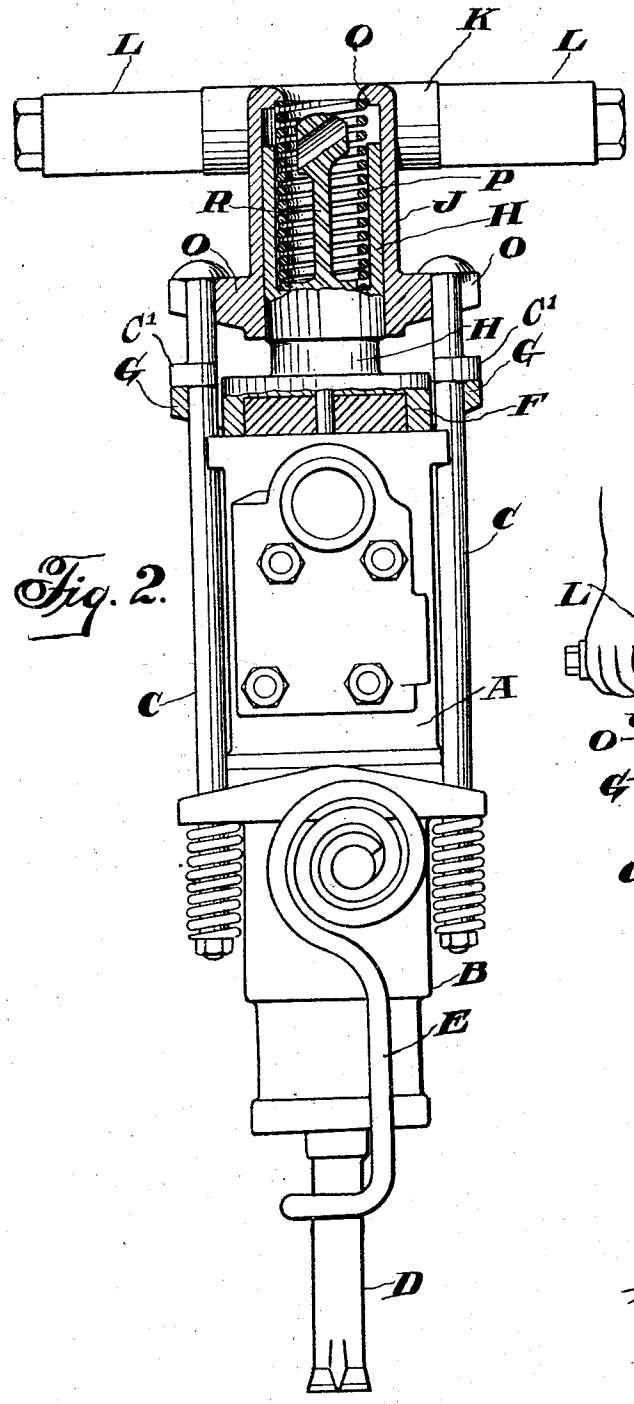


Fig. 2.

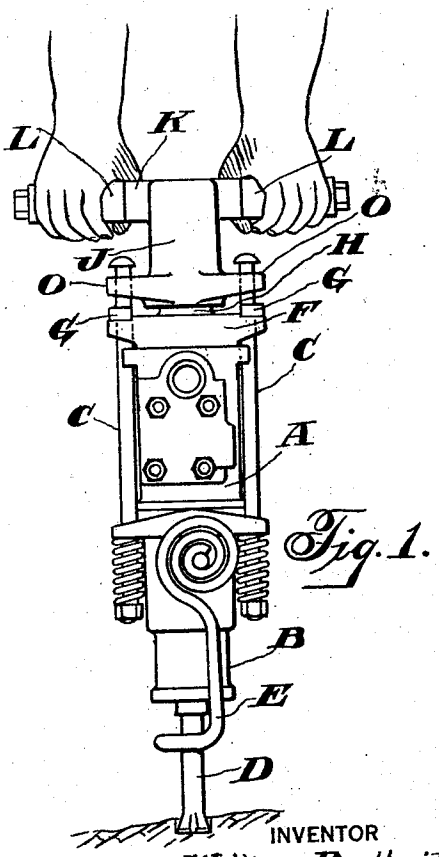


Fig. 1.

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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, and 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 fluid actuated percussive tools, but more particularly to cushioned handles for such tools.

In the operation of rock drills of the "jackhamer" type, which are held and operated by hand, severe jars and shocks are transmitted to the operator, which is not only annoying, but may result in serious injury to him, especially if continued for any prolonged length of time.

The primary object of this invention is to enable a hand operated, fluid actuated percussive tool to be easily held to the work without the transmission of excessive jars and shocks to the operator, by providing a cushioned handle simple in construction having but few parts, and mounted in such manner that it will not turn or rock relative to the tool.

Further objects will hereinafter appear and the invention is shown in one of its preferred forms in the drawings, in which—

Figure 1 is a side elevation of a fluid actuated percussive tool, and

Figure 2 is an enlarged side elevation partly in vertical section of the tool shown in Figure 1.

Referring to the drawings, A designates a main cylinder casing of a fluid actuated percussive tool within which a hammer piston is adapted to reciprocate, actuated by fluid under pressure. The front head B is held to the cylinder casing A by the usual spring pressed side rods C, and is adapted to receive the drill steel D, which is retained within the front head by the steel retainer E. The back head F is also held to the cylinder casing A by the side rods C, which extend through the flanges or lugs G on the back head.

In this instance, the back head F is formed with a central hollow longitudinal extension H upon which a sleeve J forming part of the handle is adapted to slide. The sleeve J is preferably formed integrally with a handle K, which is provided with a pair of grips L, adapted to be grasped by the operator. The sleeve J is provided with lugs or flanges O, through which the rods C extend, so that the handle K is prevented from turning or rocking relative to the back head F, thus relieving strains and reducing breakage. The side rods limit the backward movement of the handle, for which purpose they are preferably provided with end heads to cooperate with the lugs O of the sleeve J, and are also provided with shoulders C′ which bear upon the lugs G of the back head. In this way the cylinder A, the back head F, the front head B, and the sleeve J are held in operative position with respect to each other.

In order to cushion the longitudinal movement between the back head extension H and sleeve J of the handle, a coiled spring P is mounted in the extension H and has one end bearing against an inwardly extending flange Q in the handle K and the other end bearing in the bottom of the extension H. As shown in Figure 1 the operator may conveniently hold the tool to the work and the jars and shocks, set up in the operation of the tool, will be absorbed by the central coiled spring P and the flanges or lugs Q will serve the purpose described.

A stem R lies in the back head extension H for conveniently removing the water tube (not shown) but, as this stem forms no part of the present invention, further description is deemed unnecessary.

I claim:

1. In a cushioning device for rock drills, the combination of a cylinder and a back head, a hollow longitudinal extension on said back head, a handle for guiding the rock drill, a hollow sleeve carried by the handle to receive said extension, side bolts for securing the back head to the cylinder and for limiting the longitudinal movement of the sleeve in one direction with respect to the extension, and a spring to absorb vibration and hold the sleeve in a normally retracted position.

2. In a cushioning device for rock drills, the combination of a cylinder and a back

head, a hollow longitudinal extension on said back head, a handle for guiding the rock drill, a hollow sleeve having lugs and carried by the handle to receive said extension, side bolts for holding the back head to the cylinder provided with heads to limit the longitudinal movement of the sleeve in one direction and prevent rotative movement of the sleeve with respect to the extension, and a spring between said extension and sleeve to absorb vibration and normally hold the sleeve against the bolt heads.

In testimony whereof I have signed this specification.

WILLIAM PRELLWITZ.