

Aug. 24, 1926.

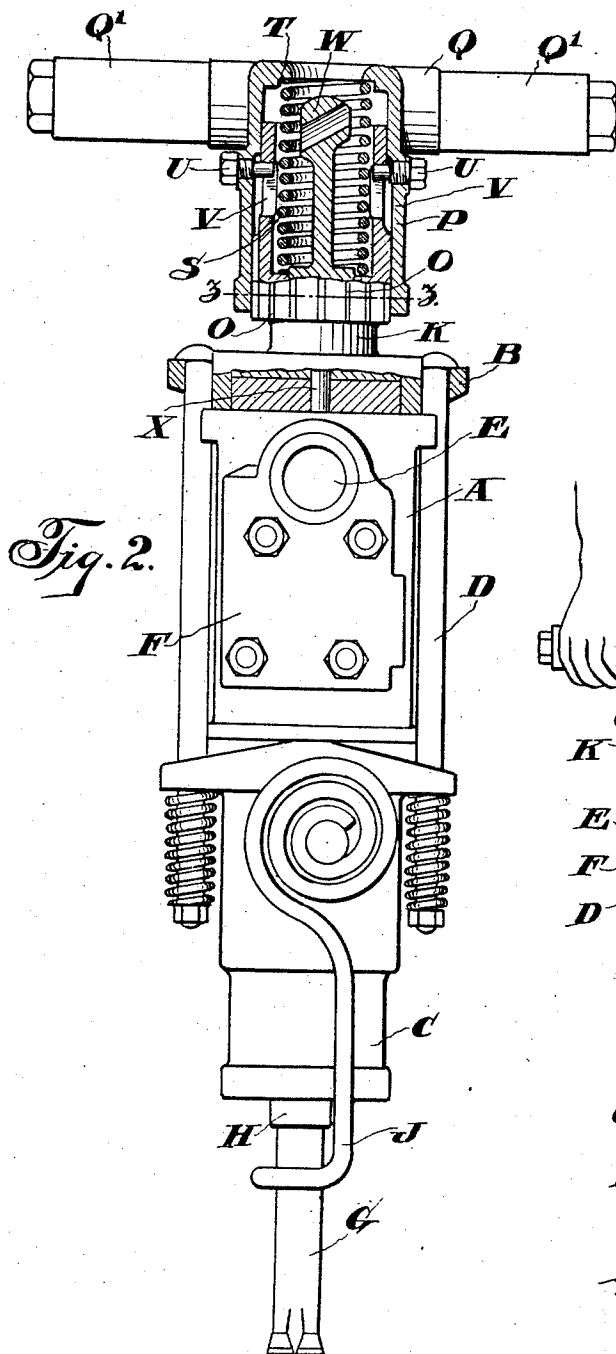
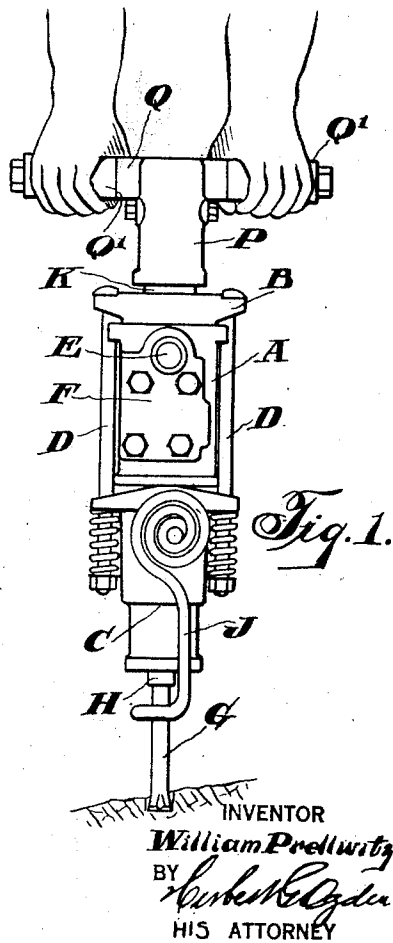
W. PRELLWITZ

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HANDLE FOR PERCUSSIVE TOOLS

Filed Dec. 28, 1923

2 Sheets-Sheet 1



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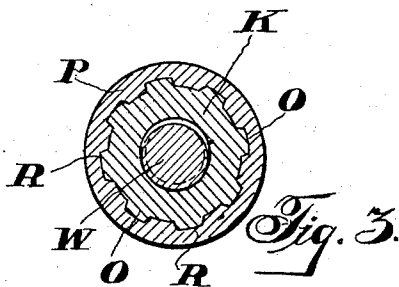
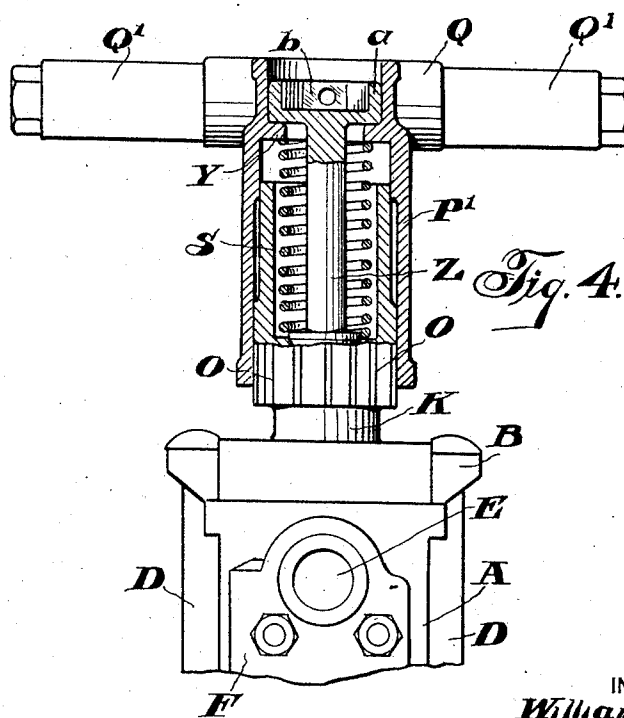
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2 Sheets-Sheet 2



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HANDLE FOR PERCUSSIVE TOOLS.

Application filed December 28, 1923. Serial No. 683,265.

This invention relates to hand held fluid actuated percussive machines but more particularly to cushioned handles for such machines.

5 In the operation of rock drills of the "Jackhammer" type, the machines are held to the work by hand and are transported manually from one place to another. These machines are heavy and it is a great strain
10 upon the operator to continually receive the vibration set up in the running of the machines in his hands. As a result he is unable to keep at work for any extended length of time without resting. It is accord-
15 ingly a desideratum of this invention that the operator be enabled to operate a machine without the annoyance of such vibration.

One object of this invention is to produce a cushioned handle for a fluid actuated percussive machine, which is simple in its construction, is composed of but few parts, and is cheap to manufacture.

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

Figure 1 is a side elevation of a hand held fluid operated percussive machine,

30 Figure 2 is an enlarged side elevation partly in vertical section of the machine shown in Figure 1,

Figure 3 is a transverse section taken on the line 3—3 of Figure 2 and,

35 Figure 4 is an enlarged side elevation partly in vertical section of a modified form of handle for fluid operated percussive machines.

Referring to the drawings, A designates the cylinder of a hand held fluid actuated
40 rock drill of the "Jackhammer" type to which is connected a back head B and front head C by the usual spring pressed side bolts D. Motive fluid is supplied to the machine through the inlet E and a suitable valve is
45 located in the valve chest F for controlling the distribution of motive fluid to the hammer piston (not shown) which is adapted to impart percussive blows to the drill steel G. As is customary with most hand held
50 rock drills the drill steel G is provided with a collar H and the steel retainer J serves to prevent withdrawal of steel when the machine is transported from place to place.

55 In accordance with the present invention, the back head B is preferably formed with

a central longitudinal extension K, which is in this instance provided at its forward end with a plurality of longitudinal ribs O. A sleeve P, which is preferably formed integrally with a handle Q is in this instance
60 provided with grooves R for the reception of the ribs O. The handle Q is offset from the longitudinal axis of the sleeve and is preferably provided with suitable grips Q' which are adapted to be grasped by the operator as
65 indicated in Figure 1. The ribs O and grooves R in this instance cooperate to prevent the handle Q from turning relative to the back head B, although permitting relative sliding movement therebetween, and in
70 order to cushion the relative sliding movement between the sleeve P and the extension K a coil compression spring S is preferably mounted in the extension K and has one end
75 bearing against an inwardly extending flange T on the handle Q and the other end bearing in the bottom of the extension K to constantly tend to force the sleeve to retracted position.

In order to limit the relative movement
80 between the sleeve P, bolts U are in this instance screwed into the sleeve P, on opposite sides thereof and are adapted to extend into slots V formed through the wall of the extension K. In this manner the movement
85 of the handle Q relative to the back head B is limited by the length of the slots V. A stem W in this instance lies in the back head extension K for removing the usual water tube X, but, as this stem forms no part of the present invention, further description thereof is deemed unnecessary.

In the modification shown in Figure 4, the sleeve P' is formed with an annular flange Y
95 against which one end of the coil spring S is adapted to bear. A center bolt Z is formed with an enlarged head a having a socket b for the reception of a suitable tool for unscrewing the usual water tube. The enlarged head a in this instance bears against
100 the upper side of the annular flange Y and thereby limits the movement of the handle Q relative to the back head B in one direction.

I claim:

1. In a cushioning device for rock drills, the combination of a back head, a hollow longitudinal extension on said back head, ribs formed longitudinally on said extension, a sleeve to receive said extension, said
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sleeve having longitudinal grooves to cooperate with the ribs on the extension for preventing rotative movement of the sleeve, a handle on one side of the sleeve for guiding the rock drill, a spring in the extension to absorb vibration and hold the sleeve in a normally retracted position, and means for limiting longitudinal movement of the sleeve with respect to the extension.

10 2. In a cushioning device for rock drills, the combination of a back head, a hollow longitudinal extension on said back head having slots therethrough, longitudinal ribs on the forward end of said extension, a sleeve to

receive said extension, said sleeve having longitudinal grooves to receive the ribs on the extension for holding the sleeve against rotation, a handle on said sleeve for guiding the rock drill, said handle being offset from the longitudinal axis of the sleeve, a spring in the extension to absorb vibration and tend to hold the sleeve in a constantly retracted position, and bolts cooperating with the slots for limiting longitudinal movement of the sleeve in one direction.

In testimony whereof I have signed this specification.

WILLIAM PRELLWITZ.