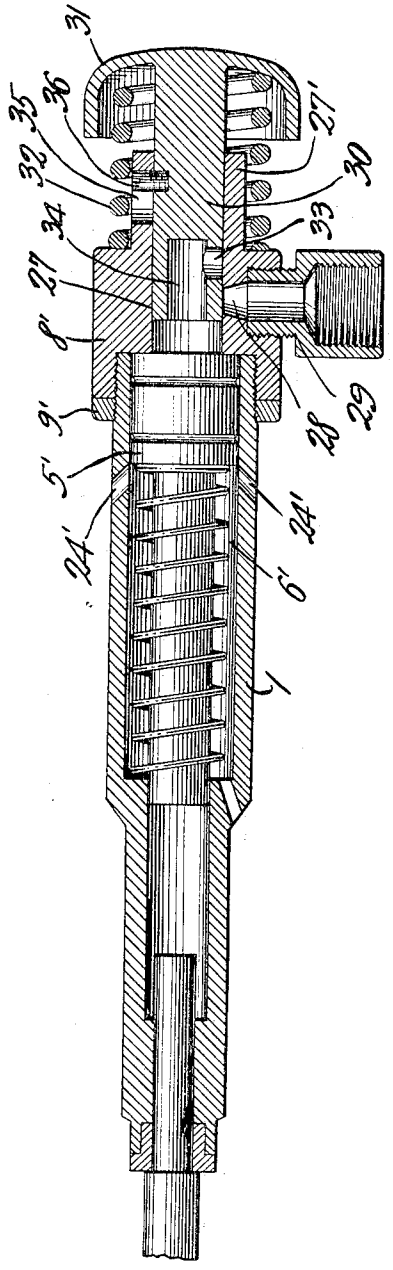
F. J. LEWIS.

PNEUMATIC TOOL.

APPLICATION FILED SEPT. 22, 1913.

1,117,679. Patented Nov. 17, 1914.



Witnesses

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UNITED STATES PATENT OFFICE.

FITZ JAMES LEWIS, OF EMPIRE, CANAL ZONE.

PNEUMATIC TOOL.

1,117,679. Specification of Letters Patent. Patented Nov. 17, 1914.

Application filed September 22, 1913. Serial No. 791,147.

To all whom it may concern:

Be it known that I, FITZ J. LEWIS, a citizen of the United States, residing at Empire, in the Canal Zone, Panama, have invented a new and useful Pneumatic Tool, of which the following is a specification.

The present invention relates to improvements in pneumatic tools, one object of the present invention, being the provision of a head block provided with means for controlling the admission of the pressure fluid, preferably compressed air, for manipulating the piston of the tool, the same being durable, compact and inexpensive, and under practical tests easily operated.

A further object of the present invention is the construction of a pneumatic tool, in which the valve control for admitting the compressed air to operate the plunger is placed in the most natural position possible, whereby the natural gripping of the hand for manipulating the tool will cause the opening of the valve and consequently the direction or admission of the compressed air to the cylinder of the tool, the release of the hand permitting the closure of the valve and consequently the stoppage of the plunger.

A still further object of the invention is the production of a simple and inexpensive pneumatic tool, which by reason of the small number of parts and accessibility, is an exceedingly durable and practical device.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings, is shown a longitudinal sectional view through the pneumatic tool, showing the head block detail and the adjacent portion of the pneumatic tool.

Referring to the drawings, the casing 1 carries the usual reciprocatory plunger 5′, while detachably connected to the open end of the casing 1 is the head block 8′, the same being held in the desired relation thereto by means of the locking nut 9′. This head block 8′ is provided with the concentric cylindrical bore 27 and the reduced cylindrical boss 27′. A port 28 is formed through one side of the block 8′ and leads into the bore 27, said port being in communication with the nipple 29 which is adapted to be connected to a conduit leading the compressed air to the present hammer. A cylindrical valve 30 is disposed for limited sliding movement within the bore 27 and is provided with the hollow knob 31 upon its outer end which constitutes a hand receiving portion so that when the present tool is gripped with the forefinger against and around the nipple 29, the palm of the hand will abut the outer face of the knob 31 so that when the gripping pressure is exerted thereupon, the valve 30 will be moved inwardly against the tension of the spring 32. This spring 32, as illustrated, is disposed to surround the reduced end 27′ and abut the head block 8′ adjacent thereto and also to fit within the knob 31 and be housed therein, such spring exerting an outward tension, so as to normally hold the parts in the position as shown. The port 33 is formed in the valve 30 and the same leads into the concentric chamber 34 which is opened into the bore 27 of the head block 8′. The port 33 is so disposed that when the valve 30 is depressed against the action of the spring 32, it is placed in registration with the port 28, so that the compressed air will be directed to the port 33 and chamber 34 into the chamber 6′ so as to propel the plunger 5′, as previously described, the exhausting ports 24′ being provided in the chamber 6′.

In order to limit the outward movement of the sliding valve 30 and also to hold the same against rotation, thus insuring the proper registration of the port 33 with the port 28, a longitudinal slot 35 is provided in the reduced end 27′ of the head block 8′, and a pin or other guiding means 36 is carried by the valve 30 and slides within the slot 35.

What is claimed is:

1. In a device of the character named, a head block having a longitudinal bore of the same diameter throughout its length extending therethrough and a port leading to the bore, a handle carried cylindrical valve snugly fitting and mounted for reciprocation within the longitudinal bore, the inner end of said valve being provided with a port for registration with the port of the head block, a spring surrounding the valve and abutting the handle and block for mov-

ing the valve outwardly, and coöperable means carried by the block and valve for limiting the distance of reciprocation of the valve and for holding the same from rotation relatively to the bore.

2. In a device of the character named, a head block having a longitudinal bore of the same diameter throughout its length extending therethrough and a port leading to the bore, a handle carried cylindrical valve snugly fitting and mounted for reciprocation within the longitudinal bore, the inner end of the said valve being provided with a port for registration with the port of the head block, a spring surrounding the valve and abutting the handle and block for moving the valve outwardly, coöperable means for limiting the distance of reciprocation of the valve and for holding the same from rotation relatively to the bore, and a pressure fluid directing member connected to the head block and in communication with the port, the same forming a gripping member with the handle of the valve for operating the valve against the action of the spring to place the two ports in registration.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FITZ JAMES LEWIS.

Witnesses:
WILLIAM A. ROSS,
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