No. 676,055. Patented June 11, 1901.

J. J. TYNAN.

PNEUMATIC TOOL.

(Application filed Sept. 22, 1900.)

(No Model.)

Fig: 2

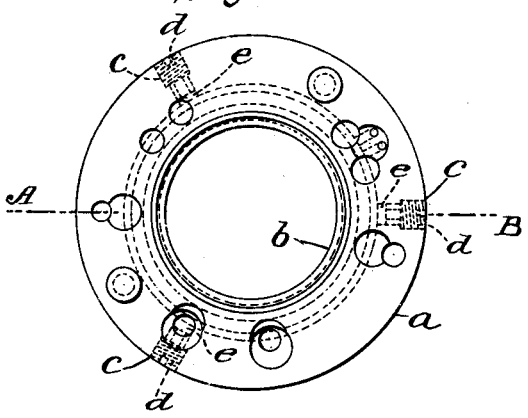


Fig: 7

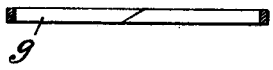


Fig: 6

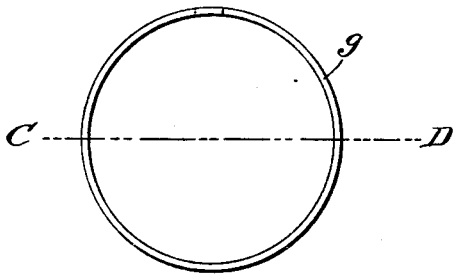


Fig: 3

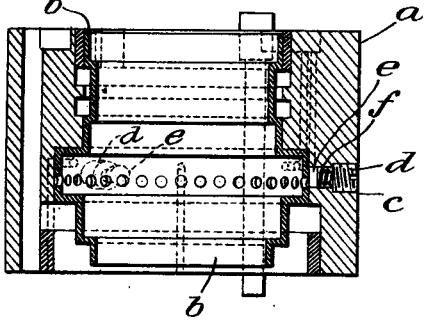


Fig: 5

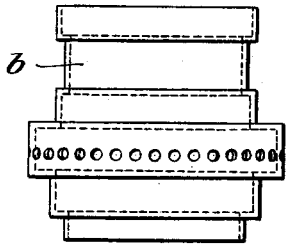


Fig: 8

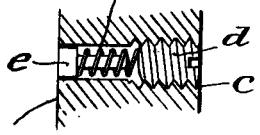


Fig: 4

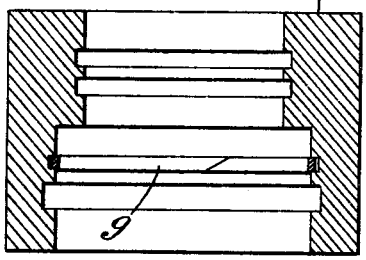
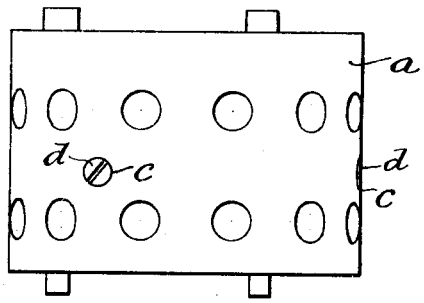


Fig: 1



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH J. TYNAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE PNEUMATIC TOOL IMPROVEMENT COMPANY, OF SAME PLACE AND CAMDEN, NEW JERSEY.

PNEUMATIC TOOL.

SPECIFICATION forming part of Letters Patent No. 676,055, dated June 11, 1901.

Application filed September 22, 1900. Serial No. 30,813. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. TYNAN, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Pneumatic Tools, of which the following is a specification.

My invention relates to improvements in pneumatic tools, and more particularly to improvements in the valves of pneumatic tools, the object of my invention being to furnish means whereby the tension on the reciprocating valve may be adjusted to take up wear and prolong its life and usefulness.

As heretofore constructed the valves in question have been made to fit the casing very closely—in fact, to bind lightly against the casing, but not so tightly as to interfere with their action when the fluid under pressure operated upon them. So long as the valve was tight when new this construction would operate perfectly well; but in a very short time the valve would work loose. Also, if the valve was fitted loosely when new, the tool being held in some positions it would fall too low down and fail to operate, necessitating the refitting or renewal of the valve before the tool could again be used.

It is the purpose of my invention to furnish means whereby the friction against the valve may be regulated from time to time, as may be necessary to prevent it from falling from place.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate similar parts throughout the several views, Figure 1 is a side elevation of a pneumatic-valve casing fitted with my improvements; Fig. 2, a plan of Fig. 1; Fig. 3, a section of Fig. 2 on line A B; Fig. 4, a section of the valve-casing corresponding to that shown in Fig. 3, the valve being omitted and a frictional ring being shown which is adapted to bind against the valve; Fig. 5, a side elevation of the valve; Fig. 6, a plan of the ring shown in Fig. 4; Fig. 7, a section of Fig. 6 on line C D; Fig. 8, an enlarged section through part of the valve-casing, showing the preferred means for adjusting the friction on the valve.

a is the valve-casing, and *b* the reciprocating valve. Both these parts are of the usual construction and will not need detailed description. In Figs. 1, 2, 3, and 8 the valve-casing is bored through in three places at one hundred and twenty degrees apart, preferably as shown at *c c c*. The outer portions of holes *c* are tapped to receive short screws *d*, and the inner ends of these holes carry headed pins *e*, which are normally forced inward by a spring *f*, one end of which bears against the inner end of screw *d* and the other against the outer side of the head or shoulder on pin *e*. By setting screws *d* in or out the tension of springs *f* may be regulated so as to cause pins *f* to bear with any desired pressure against the valve *b*.

Instead of the arrangement shown and described in connection with Figs. 1, 2, 3, and 8 a split ring *g*, carried in a groove in the casing *a*, may be used to bind against the valve in order to furnish the friction necessary to keep this latter in place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with the reciprocating valve and the valve-casing of a pneumatic tool, of means carried by the casing whereby the friction between the valve and the casing may be adjusted for the purposes set forth.

2. The combination with the reciprocating valve and the valve-casing of a pneumatic tool, of pins carried by the casing adapted to engage the sides of the valve, springs normally forcing said pins inward, and screws carried by the casing by means of which the tension of said springs may be adjusted.

JOSEPH J. TYNAN.

Witnesses:
F. J. TUCKER,
JOHN H. SEIFERT.