R. H. WALLACE.

PNEUMATIC TOOL.

APPLICATION FILED OCT. 8, 1908.

941,748. Patented Nov. 30, 1909.

FIG. 1

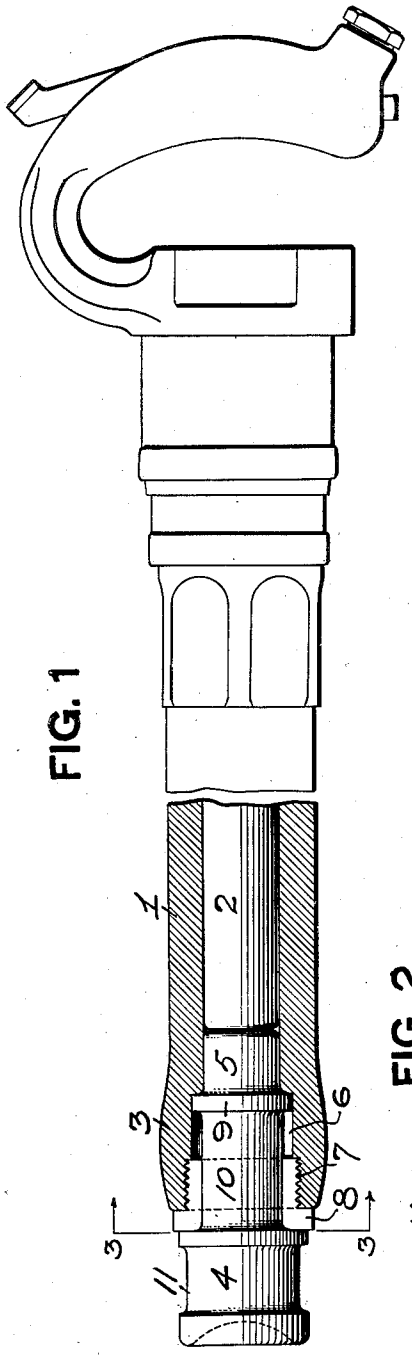


FIG. 2

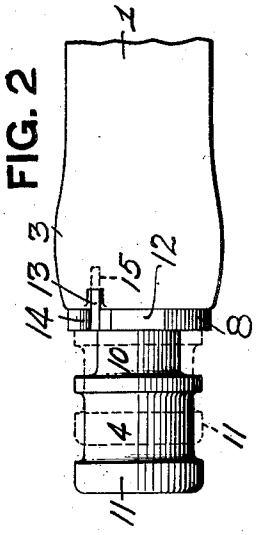


FIG. 3

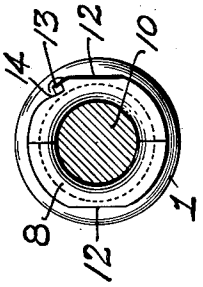


FIG. 4

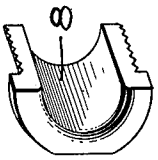
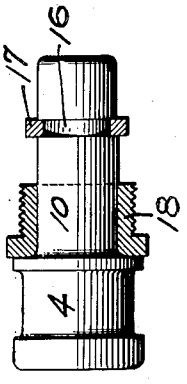


FIG. 6

FIG. 5



WITNESSES.

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ROBERT H. WALLACE, OF NEW BRIGHTON, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO F. J. LUCIUS, OF BELLEVUE, PENNSYLVANIA, AND ONE-THIRD TO WILLIAM F. SEEFELDT, OF BEAVER FALLS, PENNSYLVANIA.

PNEUMATIC TOOL.

941,748. Specification of Letters Patent. **Patented Nov. 30, 1909.**

Application filed October 8, 1908. Serial No. 456,824.

To all whom it may concern:

Be it known that I, ROBERT H. WALLACE, a resident of New Brighton, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Pneumatic Tools; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to pneumatic tools, its object being to provide means for holding the snap or "set" (that is, the riveting or chipping head) within the tool, so preventing the loss of the same either by its dropping from the tool or through accidental blow of the piston thereon. While other means for holding the snap to the tool have been suggested none of these seem to have been sufficiently practicable to have been put into actual every-day use. By the present invention I am enabled to provide such a means which interferes in no way with the operation of the tool and yet positively insures the retention of the snap within the barrel.

The invention consists in combining with the barrel of the tool a snap having a collar portion fitting within the barrel and a bushing secured in the end of the barrel around the snap and acting with the collar to retain the snap within the barrel.

In the accompanying drawings Figure 1 is a side view of the pneumatic hammer involved in the invention, the same being partly broken away to illustrate the piston and snap; Fig. 2 is a side view of the end of the tool with its snap; Fig. 3 is a cross section on the line 3—3 Fig. 1; Fig. 4 is a perspective view of one part of the partible bushing; Fig. 5 is a view of the snap and where the collar is formed separate therefrom; and Fig. 6 is a perspective view of a split collar used in such case.

The pneumatic hammer may be of any construction, that illustrated being a well known type. It has the barrel portion 1 providing the chamber for the piston 2, this barrel portion being preferably enlarged somewhat as at 3 to receive the bushing 8 and to provide space for the collar on the snap and for the bushing without thinning the barrel. The snap 4 fits within the end of the barrel and the inner end 5 of the body 10 corresponds in diameter to the piston 2, fitting within the piston chamber as illustrated. The chamber is enlarged near the end of the barrel as at 6 and beyond such enlargement it is threaded as at 7 to receive the bushing 8. The snap 4 has formed thereon the collar 9 which fits within the enlarged chamber 6, and provides the means for confining the snap within the barrel, the bushing 8 as shown fitting closely around the shank portion 10 of the snap which is preferably made of about the same diameter as the end portion 5. In case the barrel end of the tool is swung downwardly the snap will not drop therefrom, being confined by the collar 9 striking against the bushing 8 and so held within the barrel, and in case the piston is thrown against the snap, such as through accidental operation of the valve, instead of shooting it out therefrom as very often occurs, it will simply force the collar 9 against the bushing 8, the snap in this way being held within the barrel.

In the preferred form of the invention I form the collar 9 integral with the body of the snap, turning up the same by suitable tools. In such case where the head 11 of the snap is of larger diameter than the body portion 10 thereof, the bushing 8 is made partible as illustrated, the bushing being placed around the body portion of the snap and screwed into the end of the barrel as illustrated. To provide for the screwing of the same to place the bushing has the flat faces 12; and it may also be locked therein by a suitable locking device, for example, by the spring 13 fitting in the ratchet seat 14 formed in the edge of the bushing. The spring 13 can be driven into a socket 15 formed therefor in the end of the barrel, and when it is desired to remove the snap from the barrel this spring can be lifted by a suitable tool to permit the unscrewing of the bushing from the end of the barrel. Where it is desired to employ a one-piece bushing, as illustrated in Fig. 5, I may form the retaining collar separate from the snap, providing a groove 16 in the body of the snap and a spring ring 17 which can be enlarged and passed over the same and will spring into place, and on the operation of the tool will be held to place by the bushing 18 in like manner as above described.

The invention thus provides a very simple and effective means for holding the snap in place, preventing the loss thereof from the

barrel, as above stated, and yet providing for easy removal of the snap from the barrel when desired.

What I claim is:

1. The combination with a pneumatic tool having a barrel and a piston mounted therein, of a snap having an enlarged head portion, a shank portion and a collar formed integral thereon and fitting within the barrel, and a partible bushing adapted to screw into the end of the barrel and around the shank portion of the snap to retain the snap therein.

2. The combination of a pneumatic tool having a barrel and a piston mounted therein, and having a spring clip secured at the end of the barrel, of a snap having a collar fitting within the barrel, and a bushing screwing within the end of the barrel and confining the snap therein through said collar, and having a locking seat to receive such spring.

In testimony whereof, I the said ROBERT H. WALLACE, have hereunto set my hand.

ROBERT H. WALLACE.

Witnesses:

JAMES T. WALLACE,

WM. W. WILSON.