L. L. WAGNER.

PNEUMATIC TOOL.

APPLICATION FILED FEB. 19, 1913.

1,091,447. Patented Mar. 24, 1914

Fig. 1.

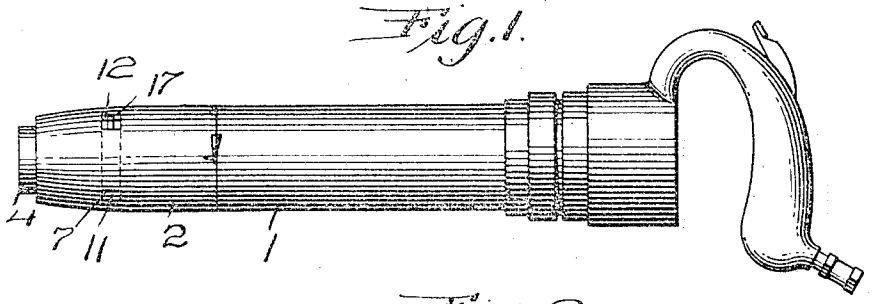


Fig. 2.

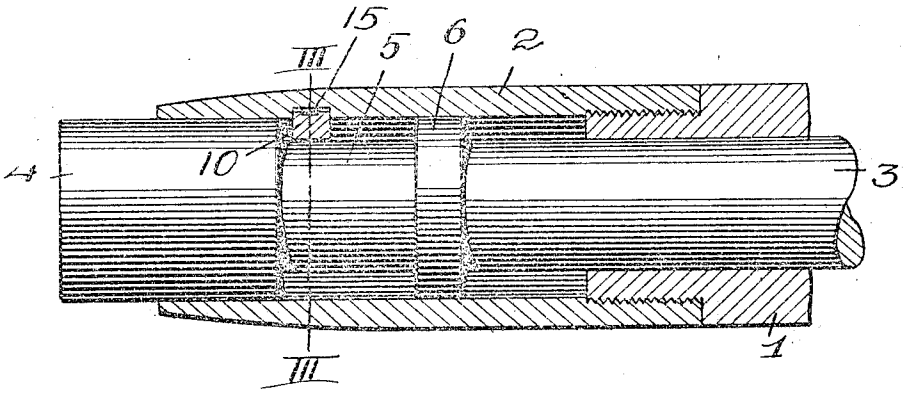


Fig. 3.

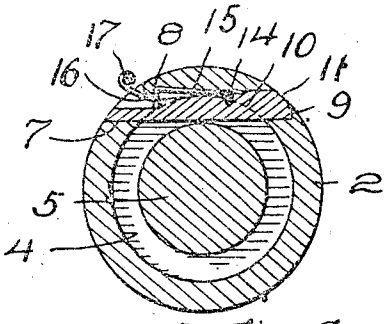
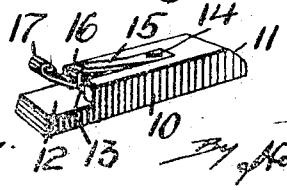


Fig. 4.



WITNESSES

Samuel Payne.

Marcos Butler

INVENTOR

L. L. Wagner.

By Henry C. Evert.

ATTORNEY

UNITED STATES PATENT OFFICE.

LAWRENCE LEE WAGNER, OF LAKEMONT, PENNSYLVANIA.

PNEUMATIC TOOL.

1,091,447. Specification of Letters Patent. Patented Mar. 24, 1914.

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To all whom it may concern:

Be it known that I, LAWRENCE LEE WAGNER, a citizen of the United States of America, residing at Lakemont, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Pneumatic Tools, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to pneumatic tools, and more particularly to a pneumatic hammer for use in railroad shops, shipping yards, bridge work, boiler shops, foundries, and all steel and iron work in structural erection.

The primary object of my invention is to furnish a long stroke riveting hammer with the safety device in the form of a retainer which prevents the hammer or plunger from being blown or shot from the tool, thus avoiding the objectionable feature of danger to workmen and the losing of rivet sets, dies, et cetera.

A further object of this invention is to furnish the body of a pneumatic hammer with a detachable guard that permits of a rivet die, cocking tool or other die being easily and quickly placed in position.

I attain the objects by a mechanical construction, that is simple, durable, inexpensive to manufacture, applicable to various types of hammers and highly efficient for the purposes for which it is intended.

Reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of a pneumatic tool in accordance with this invention, Fig. 2 is an enlarged longitudinal sectional view of a portion of the same, Fig. 3 is a cross sectional view taken on the line III—III of Fig. 2, and Fig. 4 is a perspective view of a detached retainer.

Further describing my invention in detail with reference to the accompanying drawing wherein like numerals denote corresponding parts throughout: 1 denotes the body of a pneumatic hammer which has the outer end thereof provided with a cylindrical hollow head 2 and movable longitudinally of said head and the body 1 is a plunger or piston 3 and a die 4. The inner end of the die 4 has a neck 5 and a collar 6, said collar coöperating with the end of the die 4 in forming an annular groove.

The head 2 adjacent to the outer end thereof has a transverse rectangular opening 7 intersecting the space between the die 4 and the collar 6 and the upper wall of the opening 7, at the entrance end thereof has a notch 8, while the bottom wall of said opening, at the opposite end thereof has a lip or stop 9.

Detachably mounted in the opening 7 is a rectangular retainer 10 that is limited in its movement within the opening 7 by the lip or stop 9. The inner end of the retainer 10 is beveled, as at 11 whereby when it is in position the beveled end will be in a plane of the periphery of the head 2 and not present any obstruction. The outer end of the retainer 10 has the top thereof cut away, as at 12 and provided with a tapering groove 13. Secured in the groove 13 by a screw 14 or other fastening means is a resilient clip 15 presenting a shoulder 16 and a handle 17. The shoulder 16 of the clip 15 is adapted to engage in the notch 8, as shown in Fig. 3 and lock the retainer within the opening 7. The retainer bridges the annular groove between the die 4 and the collar 6 and limits the longitudinal movement of the die within the head 2, consequently should air be accidentally admitted to the hammer, the die 4 is held in engagement with the head 2 and cannot do any damage.

It is thought that the operation and utility of the hammer will be apparent without further description and while in the drawing there is illustrated a preferred embodiment of my invention, it is to be understood that the structural elements are susceptible to such variations and modifications as fall within the scope of the appended claims.

What I claim is:—

1. In a pneumatic tool, the combination with a body portion, of a hollow head secured thereto and projecting therefrom, a plunger mounted in said body and operating within said head, a die arranged within said head and having a neck provided with a collar, said head formed with a transverse opening having one of the walls thereof notched, a retainer mounted in said opening and extending across said neck forwardly of said collar, and a shouldered resilient clip fixed at one end to said retainer and adapted to engage in said notch for maintaining the retainer in position, said clip provided with a handle projecting from said head to facilitate the releasing of the retainer.

2. In a pneumatic tool, the combination

with a body portion, of a hollow head secured thereto and projecting therefrom, a plunger mounted in said body and operating within said head, a die arranged within said head and having a neck provided with a collar, said head formed with a transverse opening having one of the walls thereof notched, a retainer mounted in said opening and extending across said neck forwardly of said collar, and a shouldered resilient clip fixed at one end to said retainer and adapted to engage in said notch for maintaining the retainer in position, said clip provided with a handle projecting from said head to facilitate the releasing of the retainer, said retainer cut away to provide a clearance when the clip is moved to released position.

In testimony whereof I affix my signature in the presence of two witnesses.

LAWRENCE LEE WAGNER.

Witnesses:
RUSSELL M. SEWARD,
IRVIN OTT.