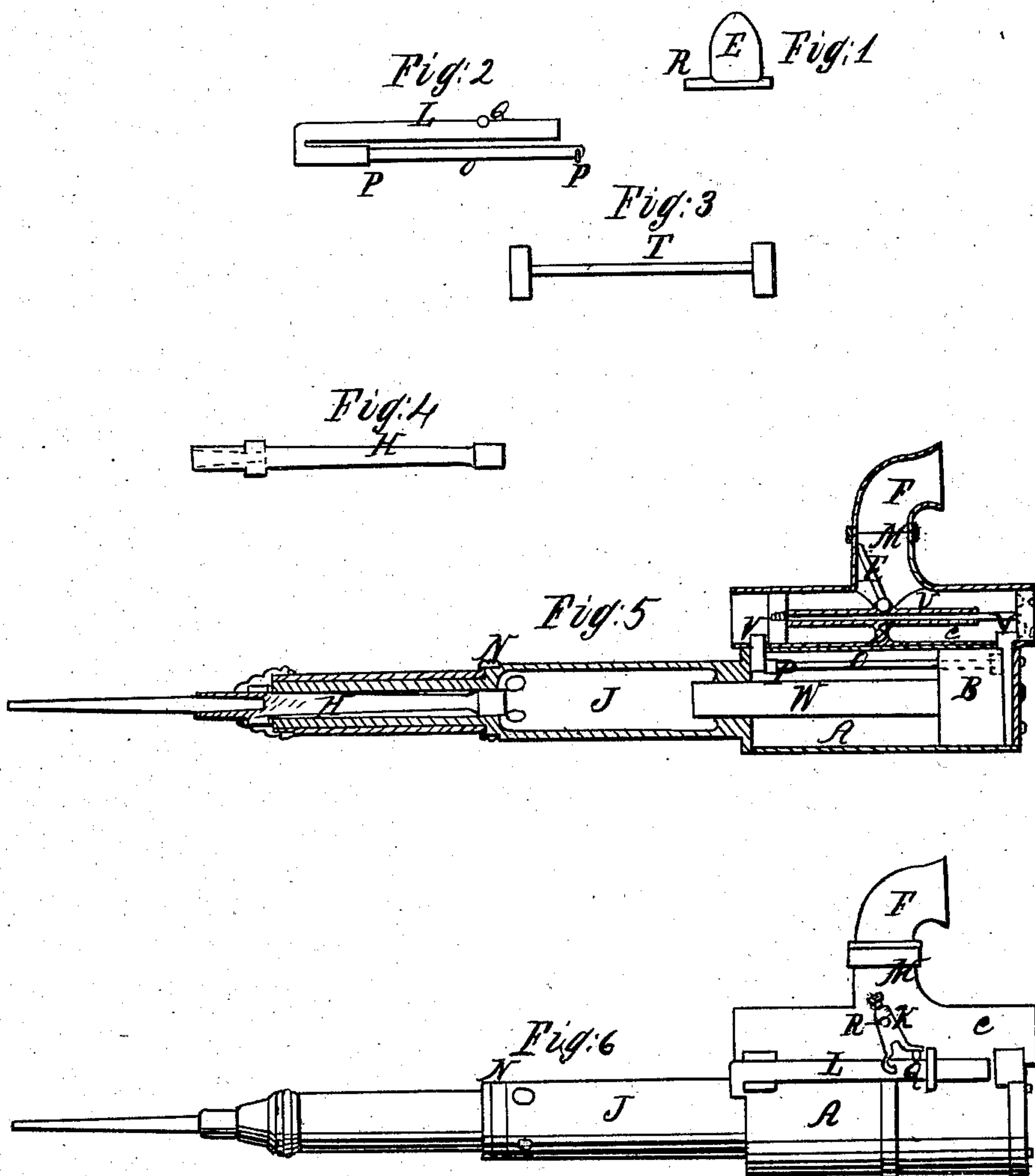


G. F. Green,

Tooth Plugger.

No. 88,290.

Patented Mar. 30. 1869.



Witnesses

*James F. Gordon,
P. Anderson*

Inventor

George F. Green

United States Patent Office.

GEORGE F. GREEN, OF KALAMAZOO, MICHIGAN.

Letters Patent No. 88,290, dated March 30, 1869.

IMPROVED PNEUMATIC TOOTH-MALLET.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE F. GREEN, of Kalamazoo, in the county of Kalamazoo, and State of Michigan, have invented certain new and useful Improvements in Automatic Tooth-Pluggers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a detached view of the reversing-valve.

Figure 2 is a detached view of the parts that operate the reversing-valve.

Figure 3 is a double-headed valve, which admits the air alternately to either end of the cylinder.

Figure 4 is a point-holder, receiving the point at one end, and the blows from the piston-rod at the other.

Figure 5 is a sectional view, cutting the cylinder and case through the centre.

Figure 6 is a side view, showing the slide and forked lever, which operates the reversing-valve.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in the novel style of valves used, and in the novel manner of operating them directly from the piston-head, thus obviating the employment of a cross-head in connection with the piston-rod. Also, in the swivel elbow-joint, connecting side-pipe to the bellows.

The object of the invention is to obtain a valve that will be caused to shift and carried by the dead-point, by the pressure of air, without the aid of springs or lock.

To enable others skilled in the art to understand and construct my invention, I will proceed to describe it.

A represents the cylinder of an engine, to one end of which the case, J, is firmly attached.

In the out end of the case J, the point-holder H, (see figs. 4 and 5,) is fitted, the object of which will presently be explained.

The case J is jointed at N, so as to allow the out end, or point to be revolved, independent of the engine, at the will of the operator.

The slide L is fitted in ways, between and on the outside of the side-pipe O and cylinder A.

To one end of the slide L, which is bent downward,

and at right angles, there is made fast a rod, O, running parallel with the slide, (see fig. 2,) which plays through a hole in the head of cylinder A, and also through the piston-head B, as shown in dotted lines in fig. 5.

The rod O is provided with shoulders P P, at either end, and as the piston-head is driven forward, it comes in contact with one of the shoulders P, on rod O, thus causing the slide L to move, and bring the stud Q in contact with the opposite side of the forked lever K, which is made fast to the end of shaft R, on reversing-valve E, thus throwing the current of air on the opposite side of the partition S, in side-pipe C.

The air acting on the double-headed valve T as a piston, it is driven by the ports V V, thus allowing the air to pass in at one end, and exhaust at the other.

The double-headed valve-rod T plays through a pipe, U, placed longitudinally, in the centre of side pipe C, and made fast to the partition S.

There is a joint in the pipe M, just below the elbow F, which allows the instrument to be held at any angle, without kinking the pipe.

As the piston-rod W is driven forward in the case J, it comes in contact with the end of point-holder H.

The point-holder H is fitted, in the out end of the case J, with a slot and feather, the object of which is to cause the point to revolve with the case, and also to allow it a longitudinal movement.

Having thus described the nature and object of my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The reversing-valve E, arranged and operated as described, in combination with the independent double-headed valve T, and partition S, substantially as and for the purpose set forth.

2. The point-holder H and jointed case J, in combination with the cylinder A, for the purpose described.

3. The swivel-elbow pipe F, for the purpose set forth.

GEORGE F. GREEN.

Witnesses:

JAMES F. GORDON,
PHILANDER ANDERSON.