G. W. SCHOFIELD.

REVOLVING FIRE-ARM.

No. 193,620. Patented July 31, 1877.

Fig. 1.

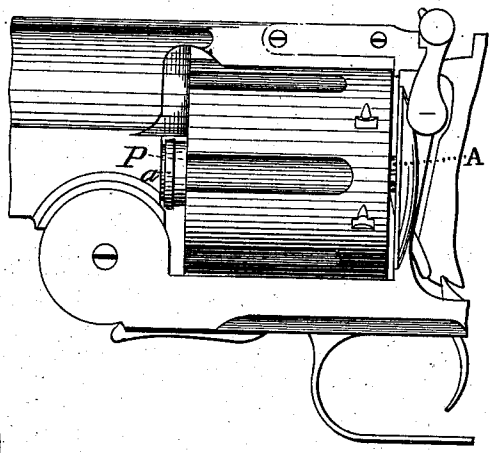


Fig. 4

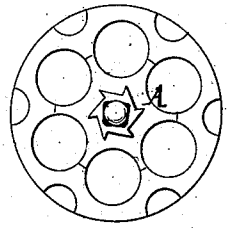


Fig. 2.

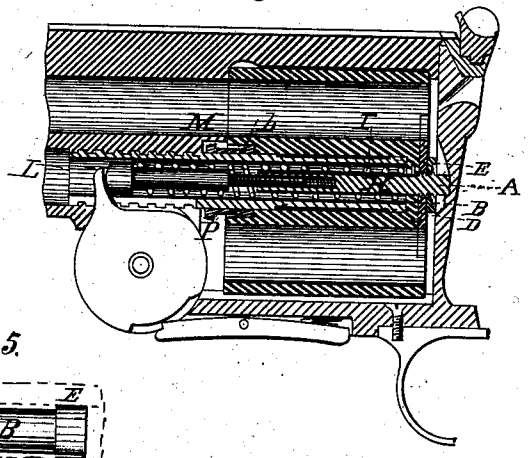


Fig. 5.

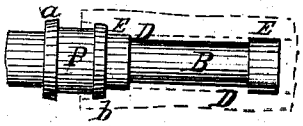
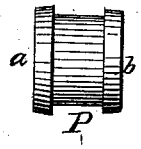


Fig. 3



Witnesses

F. McDowell

Chas. Hill

Inventor

George W. Schofield

by his Attys.

Cox and Cox

UNITED STATES PATENT OFFICE.

GEORGE W. SCHOFIELD, OF UNITED STATES ARMY.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. **193,620**, dated July 31, 1877; application filed March 24, 1877.

To all whom it may concern:

Be it known that I, GEORGE W. SCHOFIELD, of the United States Army, have invented a new and useful Improvement in Revolving Fire-Arms, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to certain improvements in revolving fire-arms, and consists of the devices hereinafter fully described.

The objects of the invention are as follows: First, to provide a gas-collar that will prevent the gas and smoke from the discharge, or other foreign matter, from fouling the base-pin; second, to provide a non-corrosive base-pin, with short bearings and a gas-recess; third, to provide an ejector-stud that will afford a reliable and efficient pivot for the cylinder; fourth, to provide means, through all of the foregoing, in combination, to prevent clogging of the revolving cylinder by fouling, rust, or gas, or by its losing its rear bearing, or by any or all of these agencies.

Figure 1 is a side elevation of a device embodying the elements of the invention. Fig. 2 is a central vertical longitudinal section of same. Fig. 3 is a detached view of the gas-collar. Fig. 4 is a front end view of the cylinder and ejector-stud. Fig. 5 is a detached side elevation of the base-pin, with gas-collar in position.

In the accompanying drawings, A represents the improved ejector-stud, to which is secured, at the rear end, the ejector-head by means of a thread upon the stem of the stud.

This improved form of stud has its head or bearing made very broad, thus affording a large surface, upon which the rear of the cylinder pivots, preventing its getting too much play by jamming the metal of the recoil-shield in which the stud pivots by repeated discharges of the arm, the sides or opposite sides of the stud being cut off square, so that it may be removed by means of a wrench.

The advantages secured by this invention may be stated to be as follows: Preventing the ejector-stud from losing its bearing, which, if lost, (which frequently happens in the methods now in use,) the cylinder yields to the action of the hand when the hammer is retracted, causing the cylinder to tip, and thus bind on the base-pin at both ends.

B represents the base-pin, which is cut away for a portion of its length, providing thus the elongated recess D to retain any fouling matter, and to reduce the surface exposed to friction and rust. This also provides the annular shoulders E, the rear one of which serves as the rear bearing for the cylinder, while the forward one receives the gas-collar hereinafter described, and which, when upon said shoulder, serves as the front, and a movable bearing for the cylinder. As any rusting of the base pin is very apt to bind the cylinder it is made nickel-plated, and thus this invention affords a non-corrosive axis for the cylinder.

The ejector-stem H and spring I are contained within the hollow base-pin, when the pin is in place in the cavity L, which is bored out in the center of the cylinder, and provided at its front end with the annular recess M to receive the rear of the gas-collar P. The annular recess M is reamed to a larger diameter at its front end in order to give more space, in which the gas may eddy, so as to prevent its reaching the base-pin.

The gas-collar is a hollow cylinder of non-corrosive metal, or may be of plated metal, of such construction and dimensions as to fit snugly upon the forward shoulder of the base-pin, the rear shoulder of the collar being of such circumference as to fit snugly in the recess M. It is therefore obvious that, when the collar is in the said recess, the entrance of smoke and gas into the cavity L, and the consequent fouling of the base-pin, will be effectually prevented.

The gas-collar is constructed as aforesaid, and is provided at its front end with the annular shoulder *a*, having a slightly backward bevel, and at its rear end with the annular shoulder *b*, the surface of which is parallel with the axis of the collar, and somewhat less in length than the recess M in the cylinder, thus leaving a space in front of the shoulder *b* even when the gas-collar is thrown forward by the discharge.

The gas-collar, though fitting snugly upon the base-pin, as aforesaid, and also into the recess M, is made so as to slide readily upon

the base-pin, and is rotated by or rotates with the cylinder, and when thrown forward by the discharge of the arm it closes the recess in front of it, entirely covering and protecting the forward shoulder of the base-pin, and yet leaves an annular space in the recess M in front of the shoulder *b*, within which the smoke and gas can eddy, and thus escape. Thus the cylinder is free to revolve, and yet the gas-collar shields its axis—the base-pin—from the corrosive and fouling action of gas and smoke, and should any fouling material enter the cavity L it will be retained in the recess of the base-pin, and cause no obstruction to the revolving of the cylinder.

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

1. The ejector-stud A, having squared shoulders, so that it can be removed by means of a wrench, substantially as set forth.

2. A movable gas-collar, having shoulders at each end, substantially as described and shown.

3. The movable gas-collar P, provided with the shoulders *a* and *b*, substantially as described and shown.

4. A recessed base-pin, in combination with a movable gas-collar and a recess, M, in the cylinder, substantially as set forth.

In testimony that I claim the foregoing improvement in revolving fire-arms, as above described, I have hereunto set my hand this 8th day of March, 1877.

GEORGE W. SCHOFIELD.

Witnesses:
ALBERT TIEPE,
C. J. COOKS.