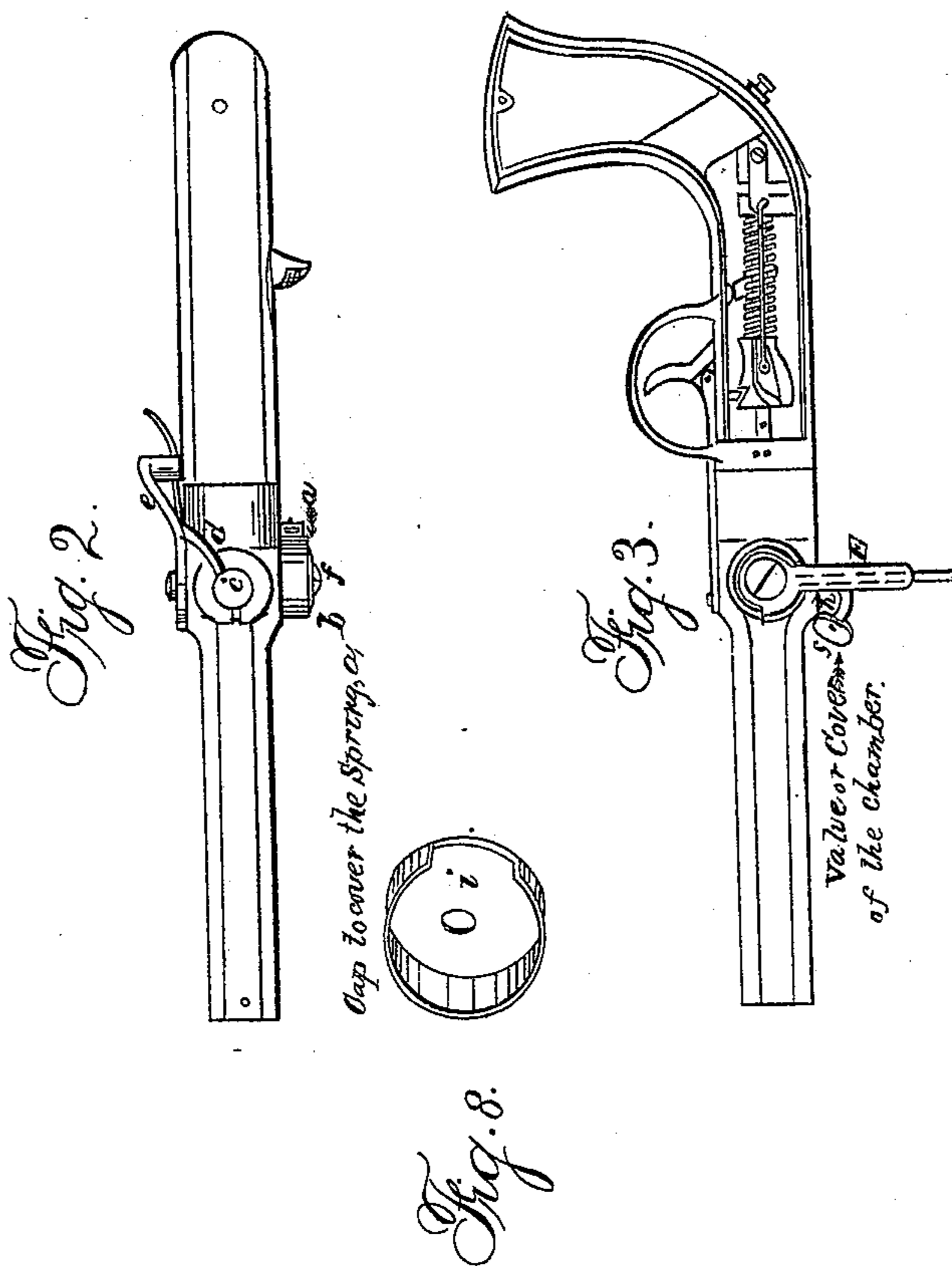


F. KLEIN.  
Breech-Loading Fire-Arm.

No. 12,681.

Patented Apr, 10, 1855.



Witnesses.

*James P. Lean*  
*Adiah Adams*

Inventor.

*Ferdinand Klein*

# UNITED STATES PATENT OFFICE.

FERDINAND KLEIN, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 12,681, dated April 10, 1855.

*To all whom it may concern:*

Be it known that I, FERDINAND KLEIN, of the city of Newark, in the county of Essex and State of New Jersey, have made a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

In Figure 2 letter *b* is a cap or cover of the spring *a*, that turns the faucet or chamber in the back end of the barrel to receive the charge. *c* is a valve. *d* is a flexible spring used to open and close the valve *c*. *e* is the lever. *f* is the screw that holds the cylinder in its place. It also holds the cap *b*.

In Fig. 3 letter *h* is the flexible spring that opens and closes the cover of the chamber by the action of the lever *E*.

In Fig. 8 letter *i* is a view of the cover of the spring that turns the chamber to receive the charge.

My invention consists in the construction and application of a flexible spring which is attached to the lever (that turns the faucet or cylinder) at one end, and to the valve (or cover) of the chamber that receives the charge at the other end. The flexible nature of this spring has a tendency to open and close the valve as the lever is moved up or down by the force or action of the flat-wound spring. (See drawings, Fig. 2, letter *a*.) It also assists in holding the cylinder or faucet on a line with the barrel by preventing it from moving endwise in case the screw which holds the chamber or faucet should become loosened in any way. I have also constructed and applied a cap or cover over the spring *a*, (see drawings, Fig. 2,) which carries the cylinder or faucet on a line with the barrel. This cap will prevent the screw from working loose by the action of the (flat-wound) spring that opens the chamber

to receive the charge, which would be more or less the case if the head of the screw were to come in contact with the spring, as in the old way, and thus the chamber that receives the charge would move out of line with the barrel if the flat spring which is attached to the lever and valve or cover of the chamber should not be sufficiently strong to hold it in its place, whereas the arrangement of my cap not only protects the spring from the injurious effects of the weather and dirt, but acts as a safeguard against anything coming in contact with the spring, or the working loose of the screw that holds the transverse chamber in its place. This screw is always more or less loose, in order to allow the chamber to move as freely as possible when turned by the lever or spring.

I am aware that chambers in fire-arms have been covered in various ways; but I am not aware that any arrangement after the above plan has been adopted—that is, by means of a flexible spring which acts not only to open and close the cover or valve, but assists to keep the chamber in its proper position. Caps have also been applied for many different uses; but I do not know that they have ever been adopted to the construction of breech-loading fire-arms after the above plan. Therefore

What I claim, and desire to secure by Letters Patent of the United States, is—

1. An improvement in the manner of opening and closing the valve or cover of the chamber which receives the charge, in the manner and for the purpose as above set forth.

2. The use of a cap for the purpose of protecting the chamber and the spring that moves it, as set forth in the foregoing specification.

In testimony whereof I hereunto subscribe my name in the presence of two witnesses.

FERDINAND KLEIN.

Witnesses:

FREDERIC L. DUNBAR,  
JAMES P. McLEAN.