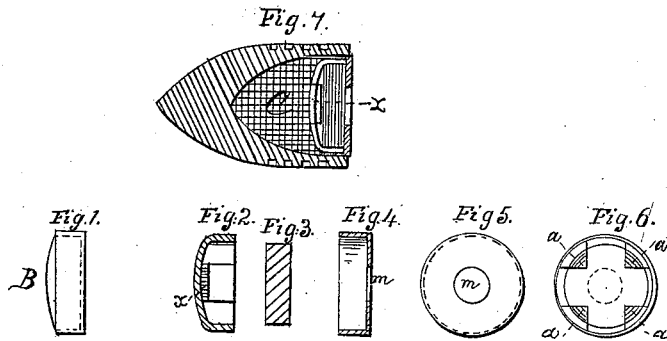


SMITH & WESSON.
Cartridge.

No. 14,147.

Patented Jan. 22, 1856.



UNITED STATES PATENT OFFICE.

HORACE SMITH, OF NORWICH, AND DANIEL B. WESSON, OF NEW HAVEN,
CONN., ASSIGNORS TO THE VOLCANIC REPEATING ARMS COMPANY.

IMPROVED PRIMERS FOR CARTRIDGES OF FIRE-ARMS.

Specification forming part of Letters Patent No. 14,147, dated January 22, 1856.

To all whom it may concern :

Be it known that we, HORACE SMITH, of Norwich, in the county of New London and State of Connecticut, and DANIEL B. WESSON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Primers for Fire-Arm Cartridges, of which the following is a full and exact description, reference being made to the annexed drawing, the same making part of this specification.

Figure 1 shows a side view of the primer, made in a cylindrical form with a convex projection at one end, composed of four materials, combined: First, copper or brass; second, iron or steel; third, cork or its equivalent; and, fourth, fulminating-powder.

Fig. 2 shows a section of the iron or steel disk, made in the form of a cross, with the arms bent upward sufficiently to allow them to bear firmly on the copper case which covers it. (See Fig. 4.) This disk has also an indentation, concave on the inside and in the center, forming a proper cavity for the fulminating-powder *x*, which is placed in it.

Fig. 3 shows a section of the cork, made cylindrical. This cork is placed in the disk upon the fulminating-powder *x*, serving to secure it in its position, and affording for it an elastic protection from any blow the primer may receive on its exterior surface. It also serves as a means for withdrawing the primer from the arm after it has been discharged.

Fig. 4 shows the copper case or covering, made in the form of a cylinder, with one end

closed, except a small circular hole, *m*, Fig. 5, through the center.

Fig. 5 shows rear end of primer and disk. This primer is more particularly designed for a loaded ball, made solid, except a cavity, *C*, Fig. 7, which contains the powder and primer, both pressed into it by power, the primer closing the rear end water-tight and resting firmly on the powder.

Operation: The ball being placed in the arm, a blunt projecting piece is pressed through the cork until it bears on the fulminating-powder and disk. A smart blow from a hammer will then ignite the percussion, and by forcing the fire through the openings *a a a*, Fig. 6, will explode the powder in the ball.

We do not claim the steel disk; nor placing the percussion-powder on it in the rear of the powder; nor the method of exploding the same, as a patent has already been granted to us for that; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

The combination of a copper or brass case, an iron or steel disk, with cork or its equivalent, and fulminating-powder, substantially as here-in set forth and specified.

HORACE SMITH.

DANIEL B. WESSON.

Witnesses for Horace Smith:

WM. C. HICKS,
HENRY B. HARRISON.

Witnesses for Daniel B. Wesson:

HENRY B. HARRISON,
WM. C. HICKS.