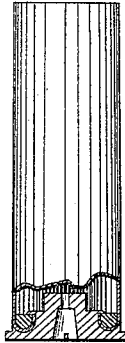


G. E. HART.  
CARTRIDGE.

No. 169,807.

Patented Nov. 9, 1875.

*Fig. 1.*



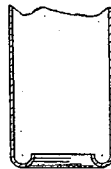
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



WITNESSES  
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# UNITED STATES PATENT OFFICE.

GEORGE E. HART, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 169,807, dated November 9, 1875; application filed May 5, 1875.

### CASE B.

*To all whom it may concern:*

Be it known that I, GEORGE E. HART, of the city of Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Cartridge-Shells; and I do hereby declare that the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

The first part of my improvement consists in forming the base or breech piece of a cartridge-shell with a rounded or an ogee seat, into which the curved inverted flange (formed upon the cylindrical part) is held, the same being embraced between the latter and a ring, which forms a counterpart to said seat, the whole being formed into a unit by riveting, as shown in Fig. 1 of the drawings. The chief advantage in said formation and arrangement of parts is the great gain in strength at the points of union over the old or ordinary methods of construction.

The second part of my improvement consists in the employment of nickel or other similar non-corrosive metals for the nipple or anvil.

Referring to the drawings, in which Figure 1 represents a section of a shell exhibiting cylinder breech-piece, with ogee seat and ring in position; Fig. 2, the breech-piece (section); Fig. 3, section of inner ring; Fig. 4, section of shell with curved flange; Fig. 5, section, showing ogee seat and parts joined together in a modified form.

To enable others skilled in the art to make my said improvement, I would first refer them more particularly to Figs. 2, 3, and 4 of the drawings for details; and for the arrangement of parts together as a unit to Figs. 1 and 5 of the drawings, which are such as to enable one skilled in the art to readily understand their construction.

It may be well to remark, however, that the cylindrical part is made by any of the known processes by which cartridge-shells are or may be made. The breech-piece may be formed by dies or by other suitable machinery. The important feature is the formation of the parts for the purpose of more perfectly securing the same together.

The anvil or nipple is constructed in the same manner as the ordinary nipple for such purposes.

I would remark that it is a well-known fact that steel and iron nipples for such purposes corrode and rust, which require much care and attention to prevent, particularly noticeable in damp weather, caused to a great extent by the action of the composition of which the fulminate is composed, and it is for the purpose of obviating these defects that I have adopted nickel and other non-corrosive metals.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. A cartridge-shell, provided with a curved flange, substantially as shown and described, and a thickened breech-piece, having a corresponding or an ogee seat, into which the said flange is compressed and held by an inner ring, substantially as and for the purposes described.

2. A cartridge-shell, provided with a nickel or other non-corrosive metallic anvil, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto signed my name before two subscribing witnesses.

GEO. E. HART.

Witnesses:

JOHN DANE, Jr.,  
S. E. HART.