

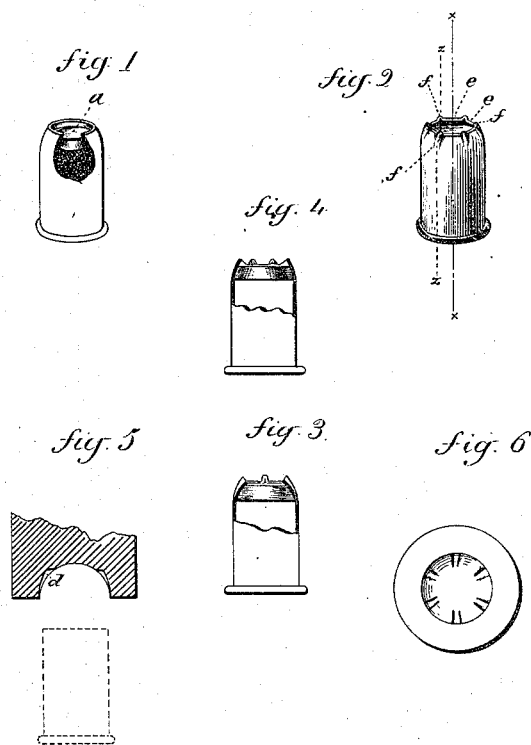
(Model.)

G. P. SALISBURY.

METHOD OF CLOSING BLANK CARTRIDGES.

No. 260,326.

Patented June 27, 1882.



Witnesses:

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UNITED STATES PATENT OFFICE.

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METHOD OF CLOSING BLANK CARTRIDGES.

SPECIFICATION forming part of Letters Patent No. 260,326, dated June 27, 1882.

Application filed March 13, 1882. (Model.)

To all whom it may concern:

Be it known that I, GEORGE P. SALISBURY, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in the Method of Closing Blank Cartridges; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view showing previous constructions; Fig. 2, a perspective view showing my improvement; Fig. 3, a vertical section of the same on line *x x*; Fig. 4, a vertical section on line *z z*; Fig. 5, a vertical section, and Fig. 6 a face view, of the die.

This invention relates to an improvement in the manufacture of cartridges, with special reference to blank cartridges, or such as are provided with powder only.

Fig. 1 illustrates the usual method of making these cartridges. The shell is drawn of the usual cylindrical shape throughout, and into it the proper quantity of powder is introduced. Then onto that powder a wad, *a*, is placed. Then, by a cup-shaped or concave die, the mouth of the shell is contracted over the wad.

In the use of this concave die, which draws the edge of the shell inward equally around the circumference of the shell, great force is required in order to properly contract the metal. The fulminate being in the shell, and the dies working rapidly, the force produces a blow-like effect upon the cartridge-head, sufficient to often produce explosion, so that great care is required to be exercised in the manufacture of these cartridges.

The object of my invention is to overcome this difficulty; and it consists in first turning the edge of the shell inward at different points, and later turning in the parts intermediate between the said points, whereby so little force is required that the liability to explosion is avoided. The shells are of the same construction, primed and loaded, and fitted with the wad in the usual manner.

Instead of the usual concave die, I construct a die as seen in Figs. 5 and 6, which has the same usual concave shape, but in the surface of the die I cut radial cavities *d*. This die is brought down upon the open end of the

shell in the usual manner. That part of the die between the cavities *d* strikes the edge and without contact at the cavities. Hence the part of the cartridge-shell turned in is only that between the cavities—that is to say, the first force of the die is at different points *e* around the mouth of the shell, and bends the shell inward at those points, the cavities permitting the part of the shell between the turned-in points *e* to bend into rib-like shape *f*, and thus take up the surplus metal, which in the old method was required to be contracted into the edge of the shell.

The bottom of the cavities should be made slightly concave, so as to also turn the ribs inward, as seen in Fig. 2; but the action of the die upon the parts between the ribs will naturally tend to turn those ribs inward. Hence it is not essential that the bottom of the cavity in the dies should take a bearing upon the outer edge of the ribs. Because of the die taking its bearing at different points and permitting the ribs to form between those points, the effect upon the shell is very much the same as if the shell were slit longitudinally on the line of the ribs. There is no contraction of the metal, as in the previous method. Hence very little force is required to close the mouth of the shell over the wad, so little that explosion by the force of such closing is avoided.

I do not wish to be understood as limiting my invention to performing the closing of shells by dies such as I have described, neither to the forming of narrow ribs with broad spaces between, as this order may be reversed, the first effect being to turn in narrow spaces and leave broad spaces between—that is to say, such, for instance, as producing ribs upon the inside instead of upon the outside—it only being essential to my invention that the edge of the shell shall be first turned inward at different points, and later the parts intermediate between said points.

I claim—

The method herein described of closing the mouth of cartridge-shells, consisting in first turning the shell inward at different points of its circumference, and later turning in the parts intermediate between said points, substantially as described.

Witnesses:

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