

(No Model.)

R. F. MITCHELL.

PRIMER.

No. 294,657.

Patented Mar. 4, 1884.

Fig. 1.

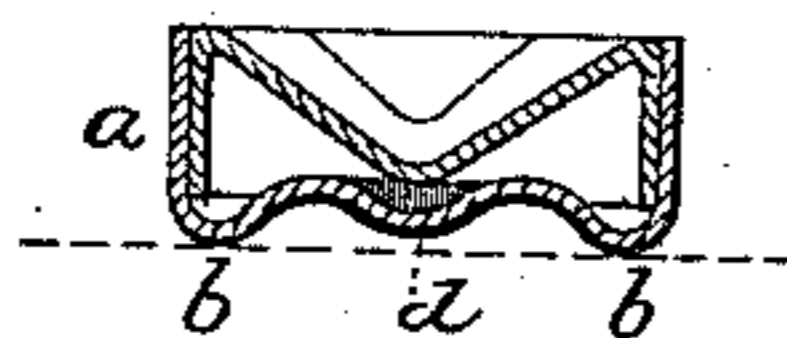
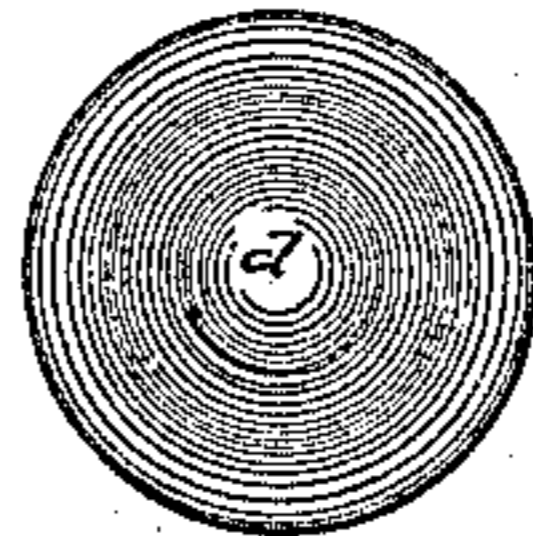


Fig. 2.



Witnesses,

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UNITED STATES PATENT OFFICE.

ROBERT F. MITCHELL, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

PRIMER.

SPECIFICATION forming part of Letters Patent No. 294,657, dated March 4, 1884.

Application filed December 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT F. MITCHELL, of New Haven, in the county of New Haven and State of Connecticut, have invented new
5 Improvements in Primers; 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,
10 and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a vertical central section of the primer complete; Fig. 2, face view of the closed end of the primer.

15 This invention relates to an improvement in primers for cartridges for fire-arms.

In the usual construction of primers the cup which contains the fulminate has the outer surface of its closed end convex.

20 In the application of these primers to cartridges the outer face of the primer-cup is generally or intended to be substantially flush with the face of the head of the cartridge, but many times the face of the primer will project
25 to a greater or less extent outside the face of the cartridge, so that the primer is exposed. In the use of this class of cartridges in magazine fire-arms where several cartridges are introduced in the magazine, the point of one
30 against the head of the next, care is necessary in the use of the arm in order that accidental explosion of the magazine may not take place because of forcible contact between the point of one cartridge and the primer of the next.
35 Accidental explosion is also liable to occur in handling the cartridges because of the projecting primer.

The object of my invention is to avoid such accidental explosion; and it consists in constructing the primer-cup with its closed end
40 recessed, and with a raised central point in that recess within which the fulminate may be placed and upon which the hammer will strike, as more fully hereinafter described.

45 The cup *a* is constructed of the usual form, and so as to fit the seat in the cartridge-head in the usual manner; but instead of making

the closed end or bottom of the cup convex or flat, I recess the end by striking the bottom inward to form a projecting portion 50 around said recess, leaving the center *d* projecting outward into the recess, but inside the plane of the projecting portion *b*. This form gives to the face of the closed end a concentric corrugated appearance, as seen in Fig. 2, the 55 inside of reverse shape. The fulminate is introduced upon the inside of the center *d*, that center forming a cavity for the fulminate. The fulminate may be fixed and the anvil applied in the usual manner, as shown. By this 60 construction, no matter to what extent the primer may project beyond the head of the cartridge, the projecting portion *b* of the primer forms a protection for the center or striking-point, upon which point only a blow 65 must be given to produce explosion. The point of the bullet presents, usually, a surface larger than the diameter of the primer, so that in a magazine the point of the bullet will strike the projecting portion *b* of the primer, 70 but cannot come in contact with the center *d*. The depression upon the inside, whereby the projection *d* is formed, produces such a cavity at the center of the shell that the fulminate introduced therein is concentrated at that 75 point, so that contact with the anvil is insured, thereby possessing an additional advantage over primer-cups having the flat bottom.

I claim— 80

The herein-described improvement in primers, consisting in the cup constructed at its closed end or bottom with a recess upon the outside to form a projecting portion, *b*, around said recess, the center projecting outward into 85 said recess, but within the plane of said surrounding portion *b*, and upon the inside with a recess or depression at the center, to receive the fulminate, substantially as described.

ROBERT F. MITCHELL.

Witnesses:

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