J. DAVIS.

REVOLVING FIRE ARMS.

No. 182,646. Patented Sept. 26, 1876.

Fig. 1.

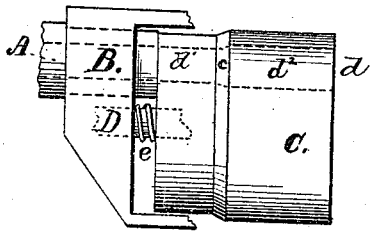
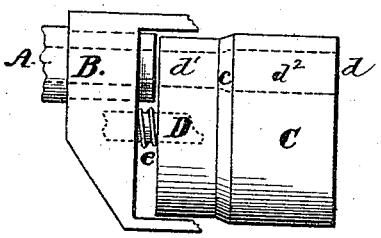


Fig. 2.



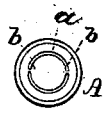


Fig. 3

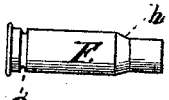


Fig. 4.

Witnesses.

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JOSHUA DAVIS, OF LIMESTONEVILLE, PENNSYLVANIA.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. 182,646, dated September 26, 1876; application filed September 20, 1873.

To all whom it may concern:

Be it known that I, JOSHUA DAVIS, of Limestoneville, in the county of Montour and State of Pennsylvania, have invented a new and valuable Improvement in Gas-Checks for Revolving 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side view of the parts of a fire-arm involving my invention, and showing the position thereof at the moment of discharge. Fig. 2 is a similar view, showing the position of the parts after discharge. Fig. 3 is an end view of the rear of the barrel, and Fig. 4 is a side view of the cartridge-case.

Referring to the accompanying drawings, the letter A represents the rear end of the barrel, having an annular groove, *a*, in its rear face around the rear opening of the bore, as shown in Fig. 3 of the drawings, of sufficient width and depth to retain enough of the gases at the time of discharge to replace the cylinder C in its proper position for revolution, as shown in Fig. 2.

b b indicate notches in the circular flange, between the bore and groove *a*, whereby the gases are admitted into said groove at the time of discharge, when the even surface of the front end of the cylinder C is pressed against the rear end surface of the barrel A.

It is obvious that the groove *a* may be made of irregular width or form; but I prefer a circular groove in the rear end of the barrel. *d* represents one of the chambers of the cylinder C, consisting of a front part, d^1, and a rear part, d^2, the former being of the lesser diameter connected by a beveled inclined internal annular shoulder, *c*, therein. A purchase is in this manner obtained between the cartridge-case and shoulder *c* at the time of discharge, to force the cylinder C against the rear end of the barrel A. During the revolution a spring, *e*, is provided on the cylinder-pin D, as shown in the drawings. The cartridge-case F, Fig. 4 of the drawings, has an indentation surrounding said case at *g* for the purpose of making the case somewhat elastic, so that its shoulder-surface *h* can be forced forward by the gases at the time of discharge against the shoulder *c* of the cylinder-chamber. When the hammer of a fire-arm having these improvements is drawn back the spring *e* prevents the cylinder from pressing against the barrel during its revolution, and, if properly discharged, the result is a sudden conversion of the charge into gases, which force the cylinder C forward against the rear end of the barrel and the end of the cartridge-case against the frame, this effect being due to the slight elongation of the cartridge-case, caused by the partial straightening out of the annular indentation *g* when the powder is exploded. The case being elongated its shoulder *h* will bear forcibly against the shoulder *c* of chamber *d*, and its rear end against the frame, and will thus hold the cylinder against the rear end surface of the barrel. When the ball passes from the chamber into the barrel the gases enter the groove *a* through the notches *b b*.

The jamming of the cylinder against the end of the barrel, caused, as above described, by the elongation of the cartridge-case, and the expansion of the same, are not overcome by the expansive force of the gases in groove *a* until the ball leaves the barrel, when the pressure of the gases ceasing at all points except in the said groove, the cylinder is moved back to its position of revolution against the frame.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The barrel A, having the groove *a* around the opening into its bore, and the notches or passages *b b* leading from the bore into said groove, substantially as specified.

2. The cylinder C, having the chambers *d*, composed of a front part, d^1, and a rear part, d^2, of greater diameter than the front part, connected by the beveled interior annular shoulder *c*, substantially as specified.

3. The cartridge-case F, having its rear end of larger diameter than its front end, the shoulder *h* connecting said ends and the annu-

lar groove or indentation *g* around its larger or rear end, substantially as specified.

4. The replacing-spring *e* in combination with the frame B, cylinder C, and pin D, substantially as specified.

5. The combination with cylinder C, barrel A, spring *e*, and frame B, of the elastic cartridge-case F, substantially as and for the purpose set forth.

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Witnesses:
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W. D. WEIDENHAMER.