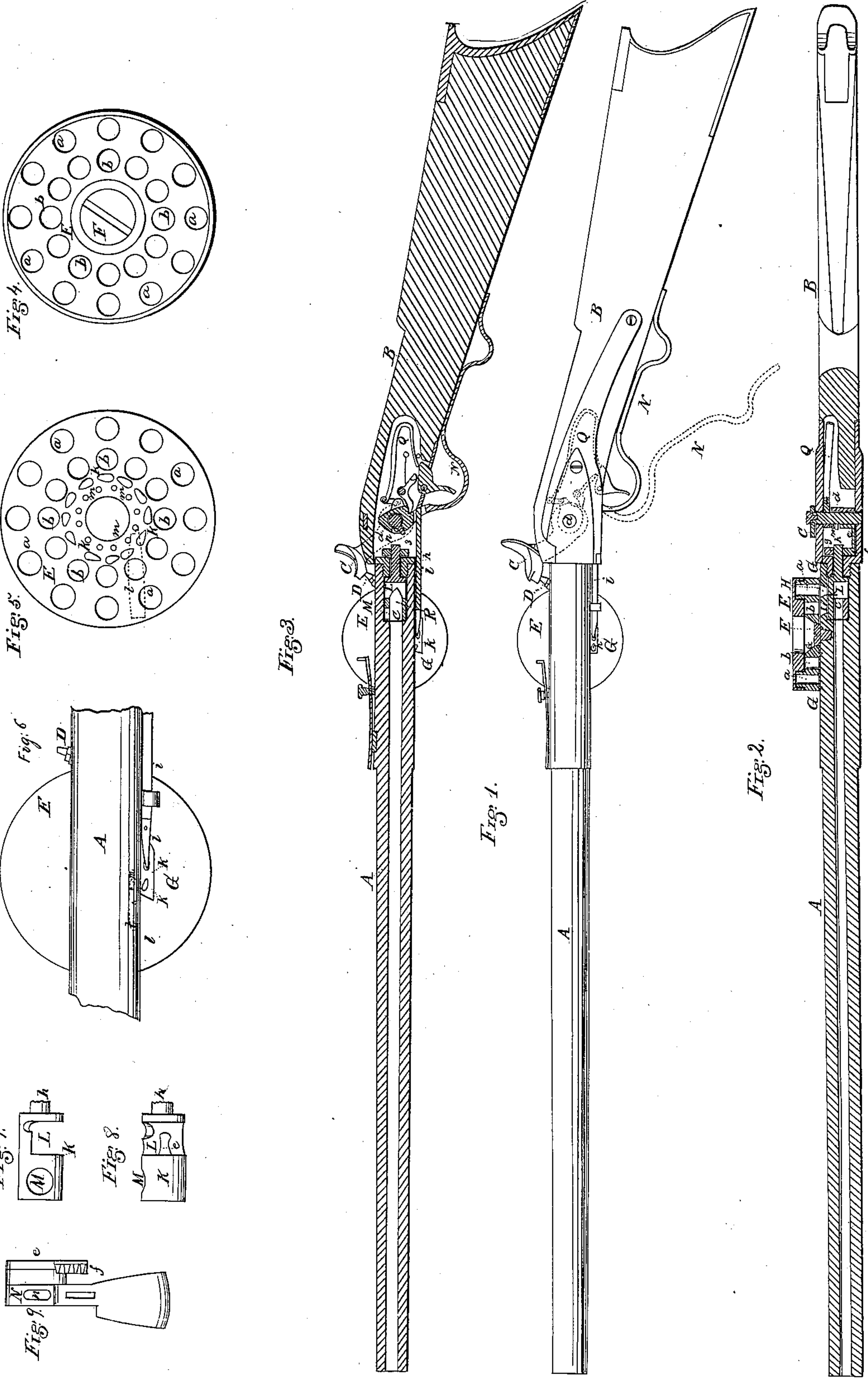


E. H. Graham
Magazine Fire-arm
N^o 10084. *Patented Oct. 4. 1853*



UNITED STATES PATENT OFFICE.

EDMUND H. GRAHAM, OF BIDDEFORD, MAINE.

IMPROVEMENT IN MAGAZINE-GUNS.

Specification forming part of Letters Patent No. **10,084**, dated October 4, 1853.

To all whom it may concern:

Be it known that I, EDMUND H. GRAHAM, of Biddeford, in the county of York and State of Maine, have invented a new or Improved Magazine Gun or Fire-Arm; and I do hereby declare that the same is fully described and represented in the following specification, and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a side view of my improved fire-arm; Fig. 2, a horizontal and longitudinal section of it. Fig. 3 is a vertical and central section of it. Fig. 4 is a front-side view of the rotary magazine as it appears with its cover-plate removed. Fig. 5 is a rear-side view of such magazine. Fig. 6 is a rear-side view of it and that part of the gun to which it is applied. Figs. 7 and 8 are side views of the rotary charge-receiver.

In the said drawings, A denotes the barrel of the gun; B, the stock; C, the percussion hammer or cock; and D, the percussion-cap, nipple, or cone, the latter being arranged on the top or upper part of the barrel.

The rotary magazine is seen at E. It is arranged on the side of the barrel, and is circular in shape, and made to rotate or turn on a screw-pin or journal, F, that projects from the barrel. This magazine is provided with a series of cylindrical cavities, *a a a*, &c., disposed at equal distances apart, and in a circle. These cavities are to contain the charges of powder. There is also formed in the magazine a corresponding number of cavities, *b b*, &c., which are likewise arranged in a circle which is concentric with and within that of the cavities *a a a*, &c. Each of these cavities *b* is made of a depth sufficient to contain the ball or charge of shot, sufficient for the charge in its corresponding powder-cavity.

The magazine rests against a circular plate, G, that is fastened or applied to the side of the gun-barrel. Through this plate and the barrel two passages, H I, Fig. 2, are formed, so as to respectively communicate with a powder-cavity, *a*, and its corresponding ball-cavity *b* of the magazine, and receive the charges therefrom when the axes of the several passages or cavities are vertical or at an inclination to the horizon, such as will cause the

said charges to pass by the force of gravity from these cavities into the said passages.

Within the rear part of the barrel is the secondary short barrel or rotary charge-receiver K, which is made cylindrical and to fit and turn within the main barrel. It has passages L M made through one side of it, and adapted to receive the charges of powder and ball and convey them into its interior or bore *c*, that opens into and is placed in line with the bore of the main barrel. Such charge-receiver turns or rotates transversely far enough to carry its receiving-passages entirely by the passages H I.

The movement of the charge-receiver K, which is a reciprocating one, is effected by mechanism connected with the trigger-guard N. This guard turns freely at its front end on the tumbler-axe *d* of the cock, and so as to enable the rear end of the guard to be moved from against the stock down into the position shown in Fig. 1 by dotted lines. An arm, *e*, projects from the front end of the guard, and has an arc, *f*, of cogs or teeth formed on one side of it, they being made to engage with a gear-wheel, *g*, fixed on the turning shaft or journal *h* of the rotary charge-receiver. By moving the trigger-guard we affect that of the charge-receiver. Besides this, when we move the trigger-guard away from the stock we rotate the magazine and elevate the cock.

The rotation of the magazine is effected by a spring-pawl or pitman, *i*, that is jointed to the trigger-guard at one end, and works at its other end with a series of depressors, *k k k*, &c., formed in a circle in the rear side of the magazine. A spring-retaining pawl, *l*, elevated to the plate G, works through the plate, and with a second set of depressors, *m m m*, &c., formed in the rear side of the magazine. This latter pawl serves to hold the magazine in place at the termination of each movement of it effected by the impelling-pawl *i*.

The mode of elevating the cock by means of the trigger-guard may be thus explained: The front part of the end or portion of the trigger-guard that turns on the tumbler-axe has a slot, *n*, made through it, as seen in Figs. 3 and 9, the latter being a front view of the upper end of the trigger-guard. A stud

or pin, *o*, is made to extend from the axle of the tumbler of the cock and through the said slot. When the trigger-guard is depressed or moved away from the stock the lower end of the slot *n* is brought to bear against the pin *o*, and so as to elevate the cock during such downward movement of the trigger-guard. The cock being elevated high enough for the trigger to snap into the notch of the tumbler in the usual way, it will be held up by the trigger. During the return movement of the trigger-guard the slot *n* moves freely on the pin *o*. The upper part of the trigger, together with the mainspring *Q* and tumbler, are represented by dotted lines in Fig. 1.

The operation of the gun is as follows: By depressing the trigger-guard, the charge-receiver and magazine are simultaneously rotated, the former far enough for the reception of the charges of powder and ball or shot, and the latter so as to carry a load of such powder and ball or shot directly into line with the connecting-passages of the barrel. By turning the gun a little a load will pass from the magazine into the charge-receiver. This done, the trigger-guard is to be moved up to the stock, and while this takes place it rotates back the charge-receiver so as to close the passages that convey the

load through the side of the barrel and bring the nipple or cone passage into communication with the powder in the charge-receiver. On pulling the trigger a discharge of the gun will take place. This operation may be repeated while there are loads in the magazine.

I do not claim as my invention a rotary magazine connected with the barrel of a firearm, such being in common use in repeating-guns; but

What I do claim is—

1. The combination of the rotary charge-receiver with the rotary magazine and the barrel of the gun, so as to operate substantially in manner and for the purpose as set forth.

2. And I also claim to so combine the percussion hammer or cock and the rotary magazine with the trigger-guard that by the movement of the said guard away from the stock they may be simultaneously put in motion and the hammer brought up to full-cock, as specified.

In testimony whereof I have hereto set my signature this 30th day of April, A. D. 1853.

EDMUND H. GRAHAM.

Witnesses:

R. H. EDDY,
FRANCIS GOULD.