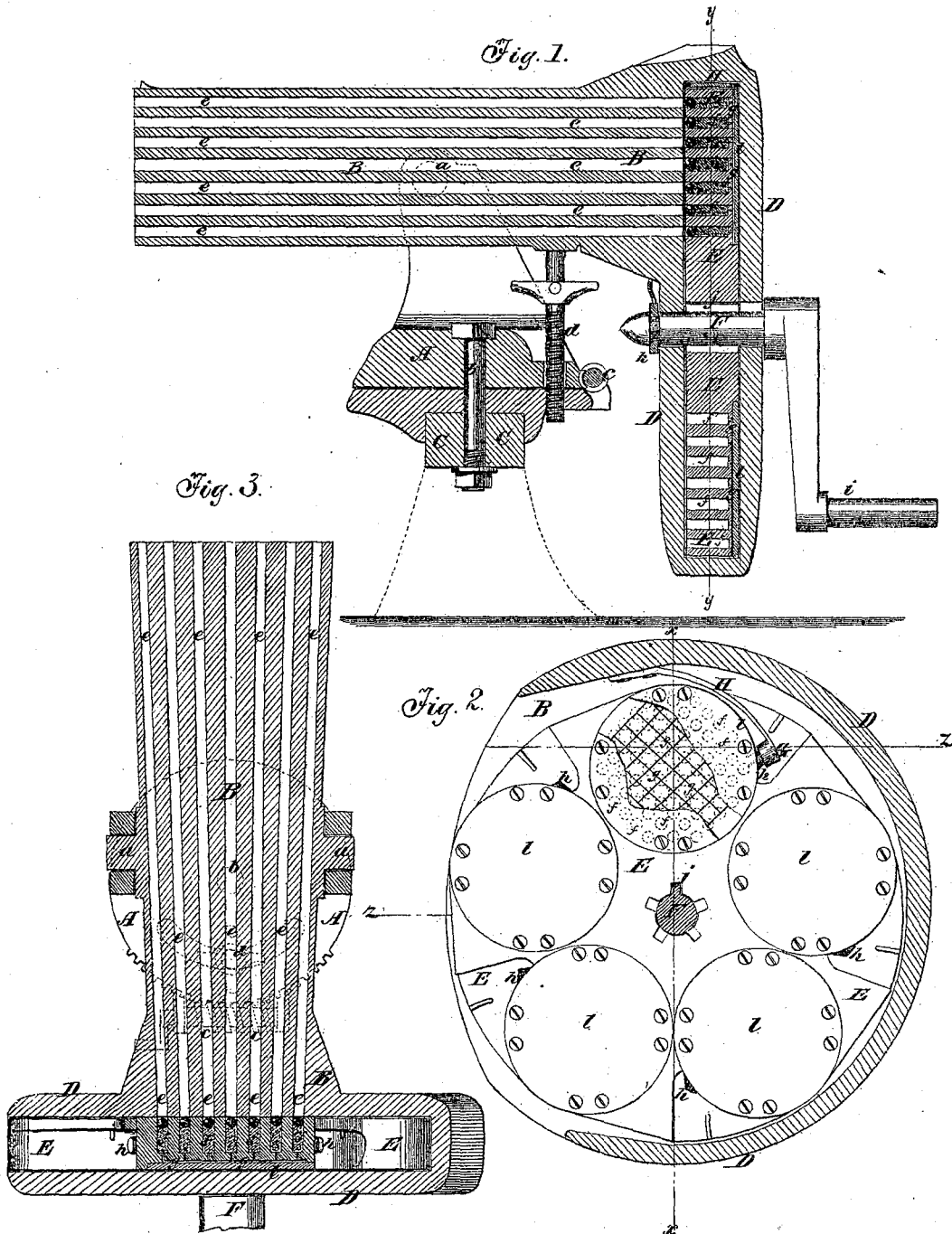


E. BREHM.
REVOLVING CANNON.

No. 110,194.

Patented Dec. 20, 1870.



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UNITED STATES PATENT OFFICE.

EDUARD BREHM, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN REVOLVING CANNONS.

Specification forming part of Letters Patent No. **110,191**, dated December 20, 1870.

To all whom it may concern:

Be it known that I, EDUARD BREHM, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Revolving Cannon; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved revolving cannon, *xx*, Fig. 2, being the section-line. Fig. 2 is a vertical transverse section of the same, *yy*, Fig. 1, being the section-line. Fig. 3 is a horizontal section of the same, *zz*, Fig. 2, being the section-line.

Similar letters of reference indicate corresponding parts.

My invention relates to a revolving cannon for rapid firing, and my purpose is to improve thereon, as hereinafter described, and subsequently specified in the claim.

A in the drawings represents the frame in which the cannon-body B is hung, by means of trunnions *a a*, in the well-known manner. The frame A terminates at its lower end in a turn table or plate, which is, by a swivel-bolt, *b*, pivoted to the stationary or supporting frame C. A worm, *c*, hung in the frame C, and meshing into the toothed edge of the turn-plate of A, serves to set the cannon horizontally, so as to point it in any desired direction. A vertical screw, *d*, arranged in the frame A, behind the trunnions, supports the breech end of the cannon, and serves to adjust the range of the same.

The cannon-body B consists of the front barrel and of the breech-chamber D. This breech-chamber is enlarged downwardly and to the sides, as shown, and is slotted to receive behind the barrel a disk, E, which is supported by a shaft, F, that is under the barrel, hung in the breech-piece. The barrel has one hundred (more or less) bores, *e e*, or longitudinal perforations, of which each constitutes a barrel in itself. The disk has five (more or less) sets of cartridge-chambers, as shown in Fig. 2, each set containing as many separate receptacles *f f* for cartridges as there are bores or perforations *e* in the cannon. Each recepta-

cle *f* receives one cartridge, and is, by a backwardly-extending fine perforation, connected with a groove or chamber, *g*. The groove or chamber *g* is in communication with a nipple, *h*, which projects from the disk E, there being one nipple *h* for each of the sets of cartridge-chambers. Whenever a percussion-cap on one of the nipples is exploded it will ignite the powder in the groove or chamber *g*, and thereby also all the cartridges of the set to which it pertains. When the disk is so turned that the several cartridge-receptacles of one set are in exact line with the bores *e*, and when then these cartridges are exploded, as aforesaid, their charges will all be passed through and directed by the said bores or barrels *e*. The disk can then be turned to bring another set of cartridges into line and have the same discharged. The turning of the disk is effected by means of the shaft F, which has a crank-handle, *i*, to be turned. The shaft can be readily withdrawn to release the disk and permit its removal and the insertion of another. The shaft has a projecting lug, *j*, which, entering a notch in the disk, serves to carry the same round with the shaft. A forked key, *k*, fitting over the grooved front end of the shaft, serves to retain the same in position for operation.

The hammer G, for exploding the charges, is secured to a spring, H, and is raised by the cam-shaped edge of the disk between the nipples. When a nipple arrives under the hammer the latter is suddenly forced down upon the same to explode the percussion cap, and to lock the disk in the proper position for the discharge.

The bores of the barrel B diverge from their breech ends in a horizontal direction, as is clearly shown in Fig. 3, so that they will serve to spread the shot and to sweep an extensive expanse of ground.

The grooves or chambers *g* are protected by removable plates *l*, which are held in place by means of screws or other fastenings. When these plates are taken off the said grooves or chambers can be properly cleaned or filled.

It is designed to take to a field of operations a series of disks, E, properly loaded, and to rapidly replace each one when discharged by one that is still loaded, and to reload those which are emptied while the others are being discharged, so as thereby to be able to keep

up an absolutely irresistible fire against an approaching enemy.

A suitable armor, made of sheet metal or other material, can be applied to the frame of the cannon for protecting the men attending to the loading and operation of the same.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A disk, E, having a cam-shaped edge, and

several single-nippled sets of cartridge-holders, combined, as described, with a spring-hammer, G, which automatically locks the said disk and explodes the cartridges in the manner set forth.

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