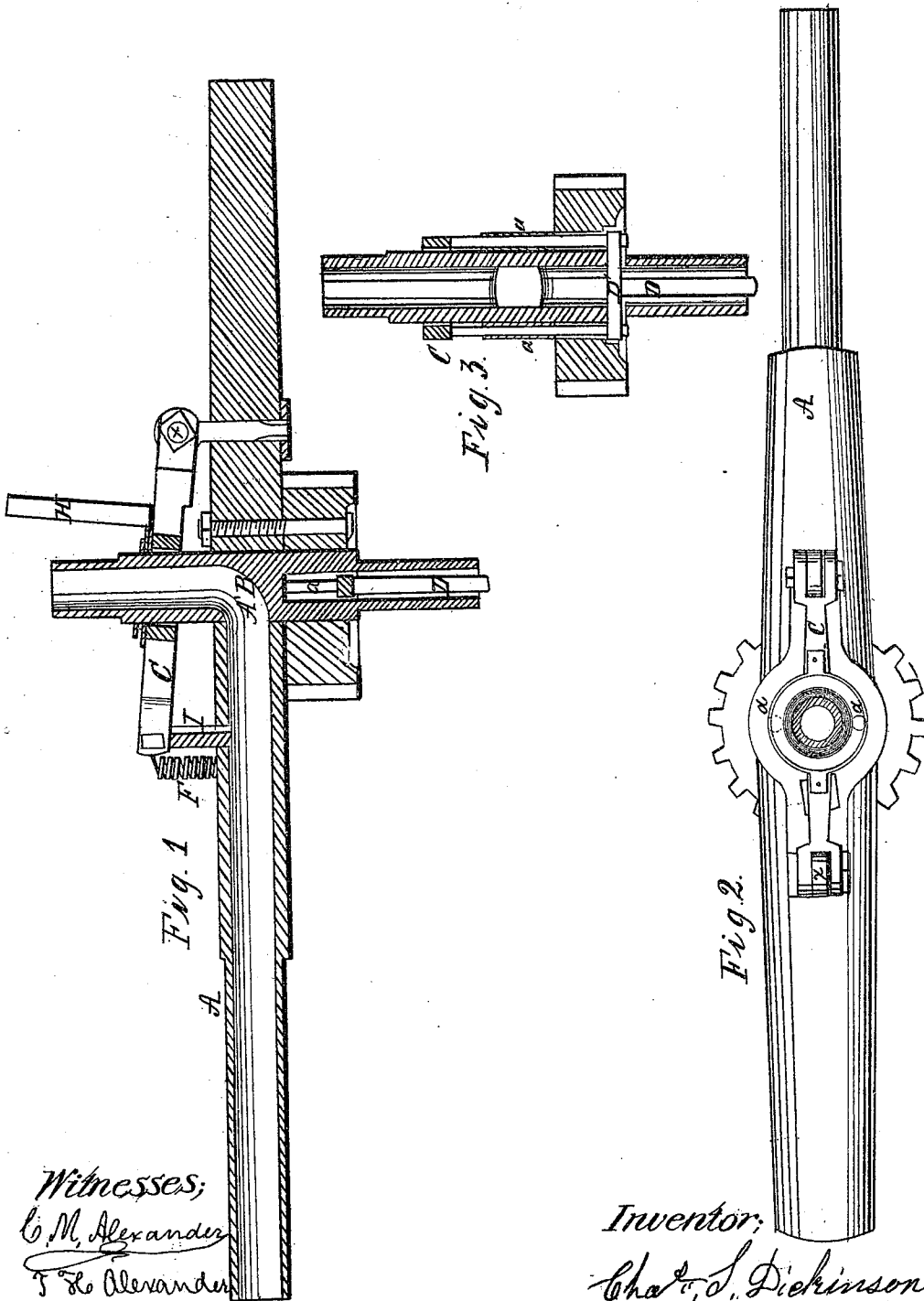


C. S. DICKINSON.  
Machine Gun.

No. 24,997.

Patented Aug. 9, 1859.



Witnesses;  
C. M. Alexander  
J. S. Alexander

Inventor;  
Chas. S. Dickinson

# UNITED STATES PATENT OFFICE.

CHARLES S. DICKINSON, OF CLEVELAND, OHIO.

## IMPROVEMENT IN CENTRIFUGAL GUNS.

Specification forming part of Letters Patent No. 24,997, dated August 9, 1859.

*To all whom it may concern:*

Be it known that I, CHAS. S. DICKINSON, of Cleveland, in the State of Ohio, have invented certain new and useful Improvements in Mode of Discharging Balls from Centrifugal Guns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in constructing and arranging the several parts together, which will be hereinafter described, for the purpose of discharging balls from the barrel of a centrifugal gun.

In the drawings, Figure 1 represents a longitudinal vertical section. Fig. 2 represents a top view. Fig. 3 is a cross-section.

In the figures, A represents the barrel of the gun, which is connected with a shaft, B, at its rear end in such a manner that the bore of the gun corresponds with and meets a bore in said shaft, as is represented at A'.

The construction of the shaft B is seen in Fig. 1, it being provided with two chambers or bores, which are separated from each other by solid metal at the center of said shaft.

D represents a rod, which passes into the bore in the lower end of the shaft B and attaches to a cross-piece, D'. To each end of the cross-piece D' a rod is attached, and marked *a a* in the drawings.

C represents a lever, which is hinged to the barrel at *x*, said lever being provided with a collar, which surrounds the shaft B. The front end of this lever C is provided with a rod or pin, I, which plays into the bore of the gun through a hole in the barrel.

F represents a coiled spring, one end of which is attached to the barrel and the other to the lever, said spring being for the purpose of holding the lever down to the barrel. The rods *a a* press against the collar of lever on its under side, and serve to elevate said lever when necessary.

H represents a rod or bar, which may be attached to the lever C for the purpose of operating said lever from any desirable point.

In operating this gun the barrel is set in motion (a circular motion being given to it) by means of steam or other power, said barrel being connected with other machinery, of course, such as gear-wheels, &c., which are not here represented. The balls pass down through the bore in the upper part of the shaft B, connecting with the bore of the gun, and then into the gun-bore. The lever C being held down by the spring F and the pin I, crossing the bore of the gun, the balls are stopped and cannot pass out. When a sufficient motion has been communicated to the barrel power is applied to the rod D, which, by means of cross-piece D' and rods *a a*, operates the lever, raising it so that the rod or pin I leaves the bore and allows a ball to pass by. The operation of the rod D is only momentary, and consequently the lever C and the pin I pass back to their positions almost instantly, allowing only one ball to pass out through the barrel. At each operation of the rod D a ball is allowed to pass out of the barrel.

The barrel may be allowed to have any required number of revolutions to each operation of the rod D or lever C; but this I will regulate as circumstances may require.

What I claim as new, and desire to secure, is—

1. The employment of lever C, provided with a collar which surrounds shaft B, pivoted or hinged at *x*, and provided with a pin or rod, I, when the same is used, substantially as and for the purpose specified.

2. Operating lever C in one direction by means of rod D and its connections through the center of the shaft B, and in the other direction by means of spring F, for the purpose of discharging the balls from the barrel at the proper time, substantially as set forth.

In witness whereof I hereunto set my hand this 4th day of June, 1858.

CHAS. S. DICKINSON.

Witnesses:

C. M. ALEXANDER,  
D. A. DICKINSON.