2 Sheets—Sheet 1.

T. J. CAMPBELL.

Machine Gun.

No. 35,504.

Patented June 10, 1862.

Fig. 1.

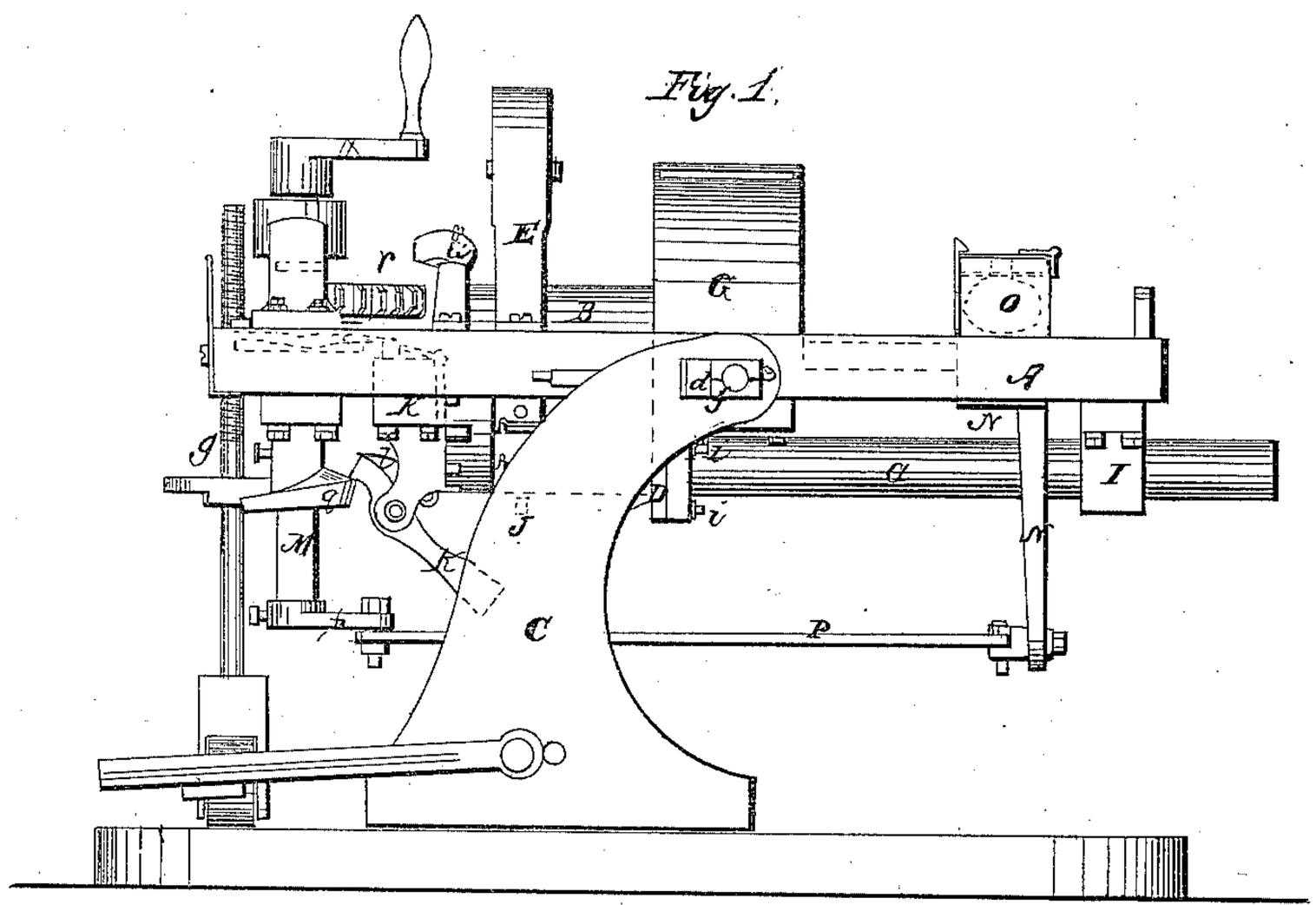
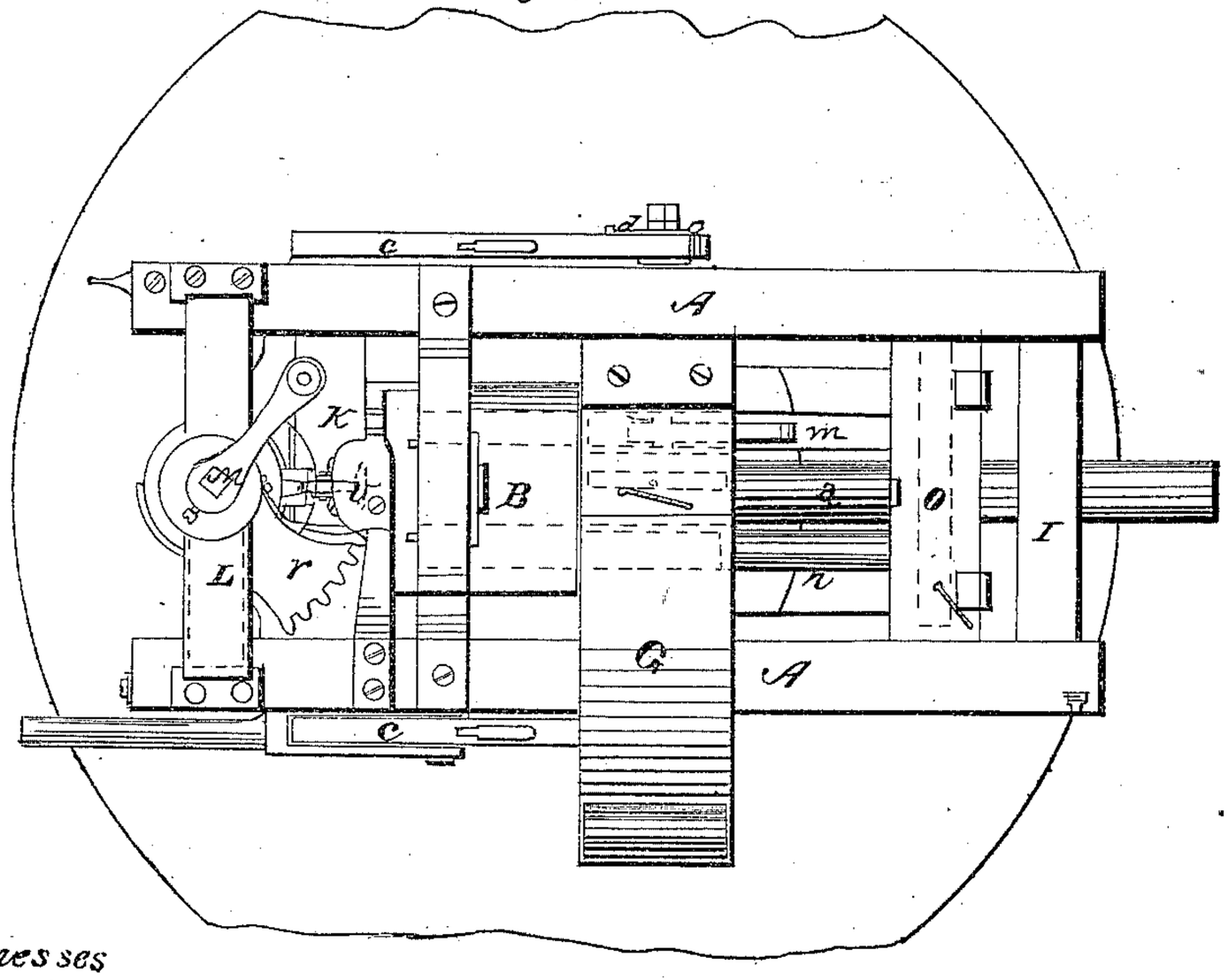


Fig. 3.



Witnesses
J. B. Woodward
E. F. Calhoun

Inventor
Thos. J. Campbell.

2 Sheets—Sheet 2.

T. J. CAMPBELL.

Machine Gun.

No. 35,504.

Patented June 10, 1862.

Fig. 2.

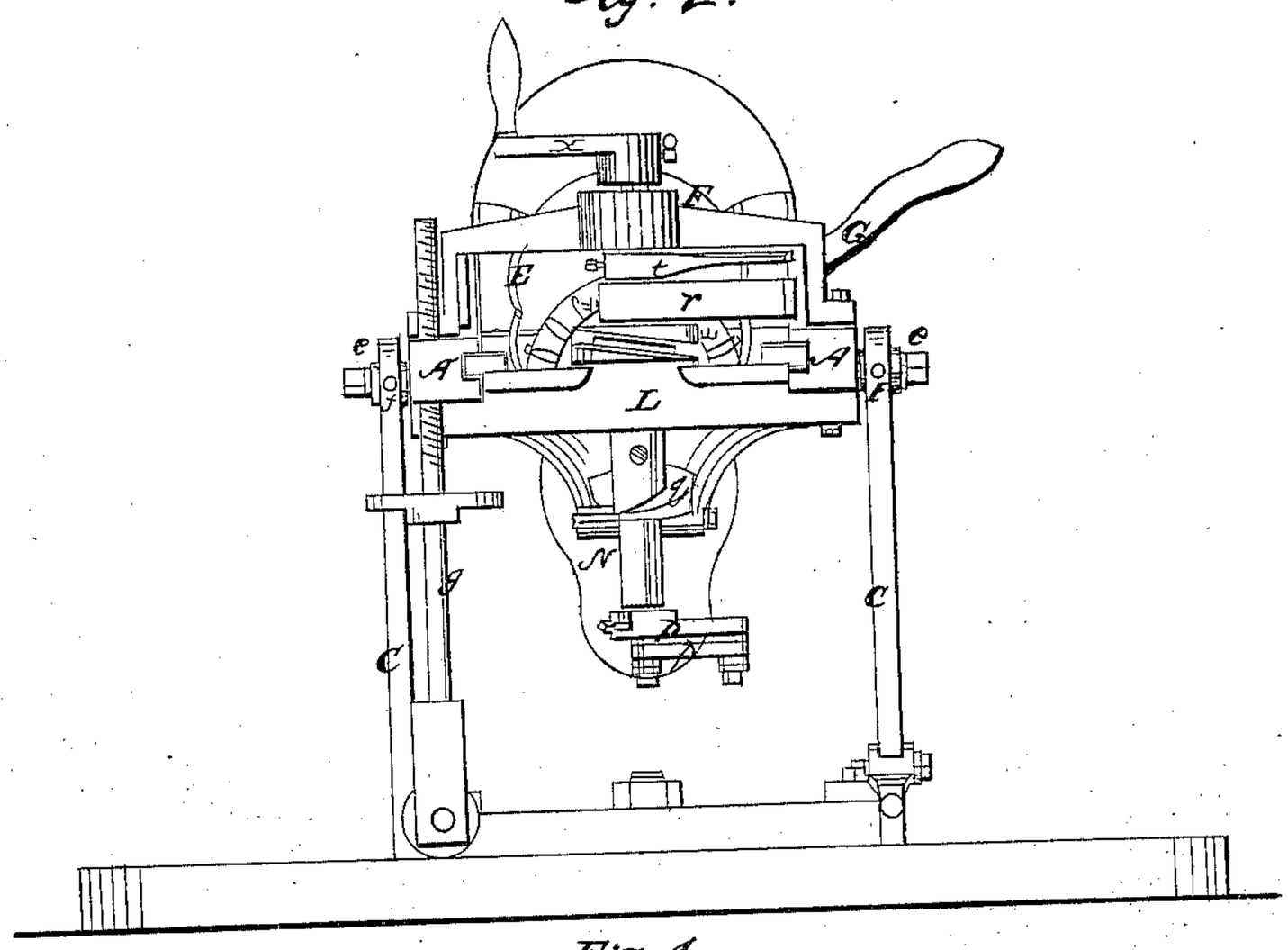


Fig. 4

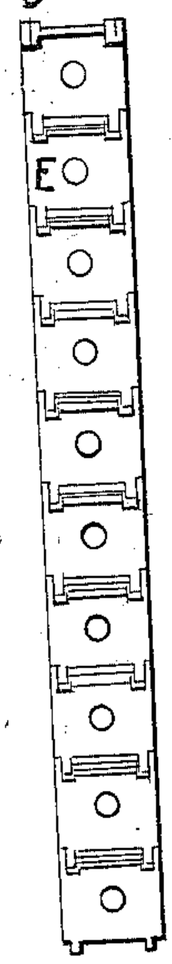


Fig. 6.

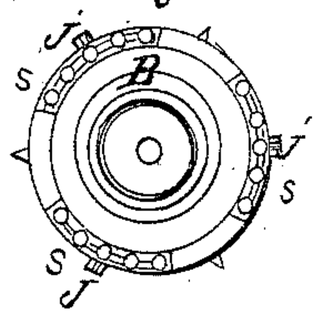


Fig. 7.

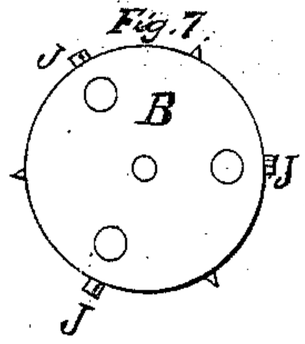


Fig. 5.

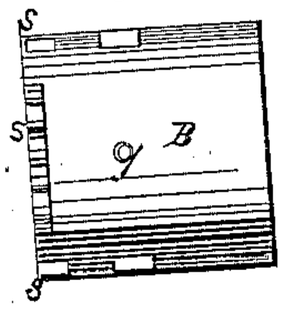
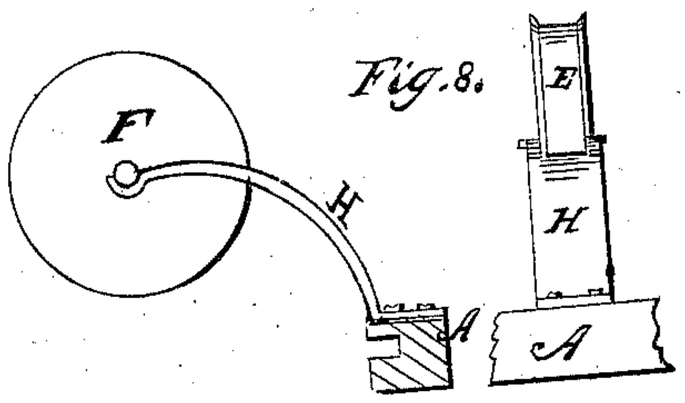


Fig. 8.



Witnesses.
J. B. Woodruff
L. F. Callan

Inventor.
Thos. J. Campbell

UNITED STATES PATENT OFFICE.

THOMAS J. CAMPBELL, OF LINCOLN, ILLINOIS.

IMPROVEMENT IN AUTOMATIC REVOLVING ORDNANCE.

Specification forming part of Letters Patent No. **35,504**, dated June 10, 1862.

To all whom it may concern:

Be it known that I, THOMAS J. CAMPBELL, of the town of Lincoln, in the county of Logan and State of Illinois, have invented new and useful Improvements in Revolving-Cylinder, Self Swabbing, Capping, and Firing Ordnance, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification.

Figure 1 represents a side elevation. Fig. 2 is an end view. Fig. 3 is a top view or plan. Fig. 4 is a section of the capping-belt. Fig. 5 represents a side elevation of the cylinder. Fig. 6 shows a rear end view of the cylinder. Fig. 7 is a front end view of the cylinder. Fig. 8 represents the side and end view of the capping-belt roller and spring.

My invention consists in the construction and peculiar arrangement and combination of the parts, as follows: the mode of revolving the cylinder, the application of the capping-belt, the manner in which the gun is swabbed, lubricated, and loaded, and the arrangement for working the hammer.

To enable others skilled in the art to make and use my automatic ordnance, I will proceed to describe the same in detail, referring to the drawings and the letters marked thereon.

Like letters indicate similar parts in all the figures.

For the purpose of mounting a revolving-cylinder cannon and the other necessary appliances, I make a substantial frame, A A, of timber or metal, the side pieces being of sufficient length and placed parallel to each other and far enough apart to receive and support the barrel *a*, the revolving cylinder B, and all the other necessary mechanism to operate it in the space between them. The frame A being elevated in position for placing and working the gun mechanism on a bracket-frame or carriage, C C, in the top of the sides of which are long openings *d d*, into which are trunnion-boxes *e e*, with india-rubber springs *f f* pressing against them in the rear to act against the recoil of the ordnance, the trunnions, being firmly made with or connected with the sides of the frame A A, will admit of the ordnance being elevated or depressed to bear upon an object, and is operated by the standard-screw *g* in the rear end of the frame. The frame A has cross-pieces I J K L to support the various parts of the mechanism, as follows: The barrel *a* is supported near its muzzle by passing through an opening in the cross-piece I, and is secured and held in position to the revolving cylinder B by a flange, through which bolts *i i* pass, holding it firmly to the cross-piece J, the rear end of the cylinder B being supported by the cross-piece K, the same projecting on the under side, and into which the hammer *k* and spring *l* are fitted and made to operate on the nipple *j j j* to discharge the piece. In the rear of the piece K is the cross-piece L, into which a vertical shaft, M, is fitted, having on it the necessary cams and cranks to produce the various automatic motions required to load, fire, and swab the piece.

The swab *m* and rammer *n* are attached to a sliding frame, N, which supports a reservoir, O, into which the cooling and lubricating substance is put and conveyed through the shank of the swab *m* into the cylinder B. At the same time the rammer *n* is forcing the charge into another chamber, which is in position to receive it, and the third chamber is being discharged.

The swabbing and loading mechanism are worked by a pitman, P, connected with a crank, *p*, on the lower end of the vertical shaft M. The hammer *k* is lifted by a snail-cam, *q*, and the cylinder B is revolved by a segment of a gear-wheel, *r*, which alternately locks into sectional gear *s s s* in the rear end of the cylinder B. A little in advance of the segment *r* is a lifting-cam, *t*, operating a spring-latch, *u*, which holds the revolving cylinder B in the proper position to swab, load, and fire.

The priming or capping is effected by an endless belt, E, having holes or cavities, into which are inserted percussion-caps at such distances as to fit the nipples on the cylinder, and as it revolves alternately changes the position, so that all of the caps will be exploded. The capping-belt E is supported over the cylinder by a pulley, F, on a spring-standard H. This cannon is designed for fixed ammunition. The ball-cartridges are put into a hopper or conductor, G, and by their gravity will follow each other, so as to be in readiness to load, so long

as there remains any in the conductor, the whole being put in motion and operated by turning the crank X.

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

1. The application of the capping-belt, operated by the action of the cylinder B.

2. The lubricating-box O, in combination with the reciprocating swab *m* and ramrod *n*, substantially as set forth.

THOMAS J. CAMPBELL.

Witnesses:
J. B. WOODRUFF,
L. F. CALLAN.