

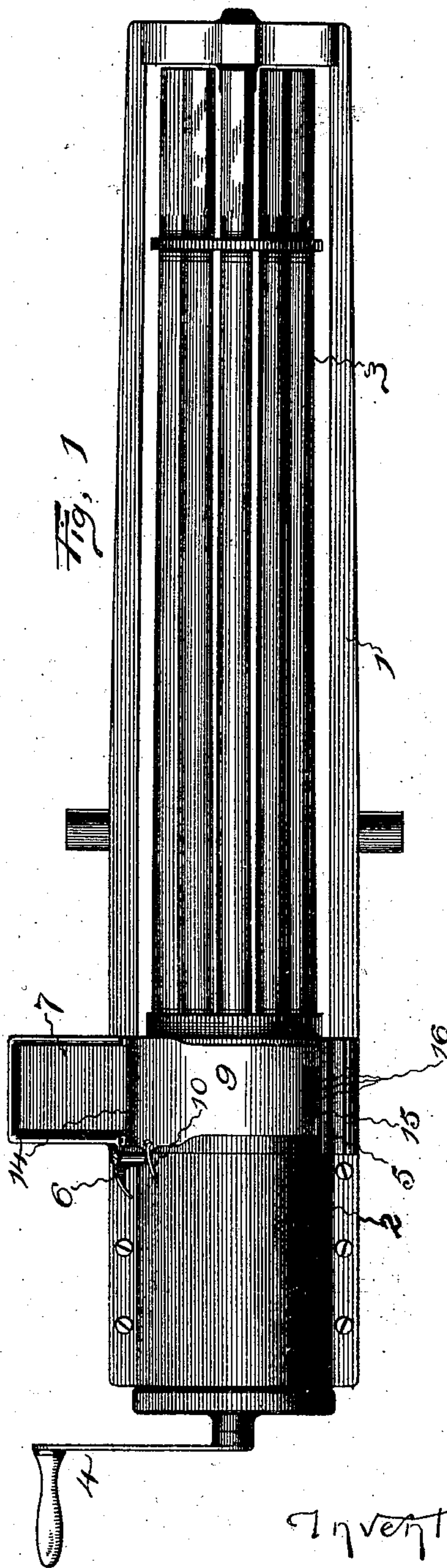
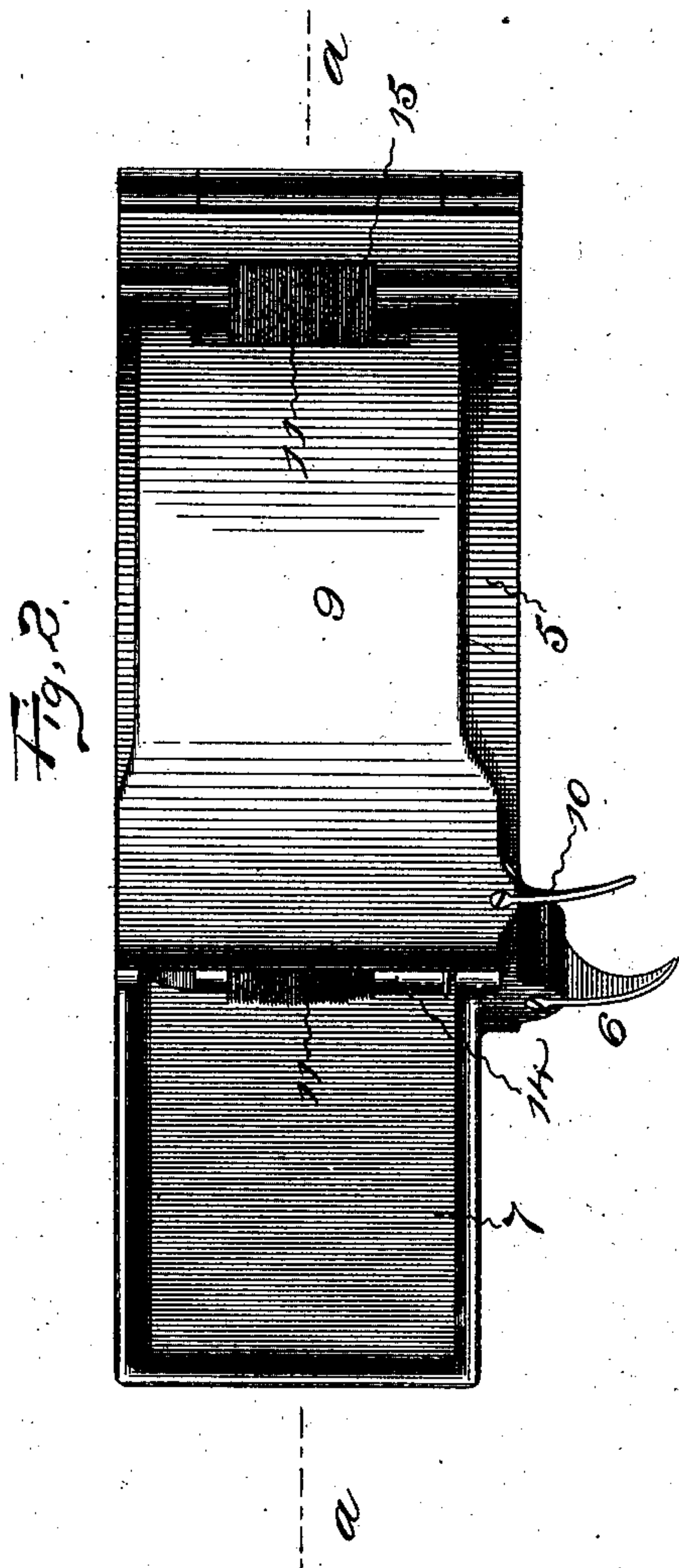
(No Model.)

2 Sheets—Sheet 1.

R. J. GATLING.  
MACHINE GUN.

No. 504,831.

Patented Sept. 12, 1893.



Witnesses:

Clarence E. Buckland.

P. A. Phelps.

Inventor:

Richard J. Gatling, by  
Harry R. Williams,  
att'y

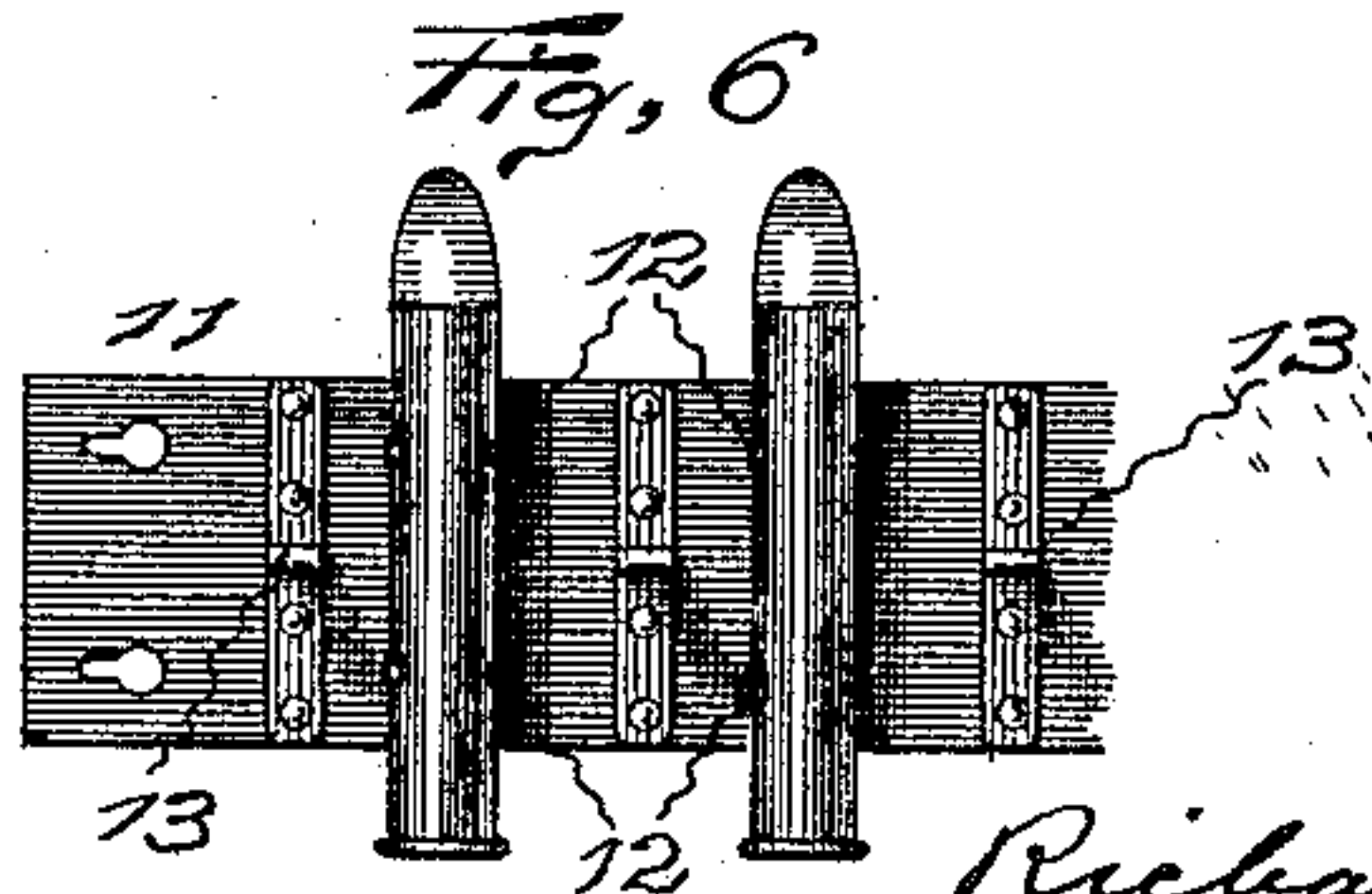
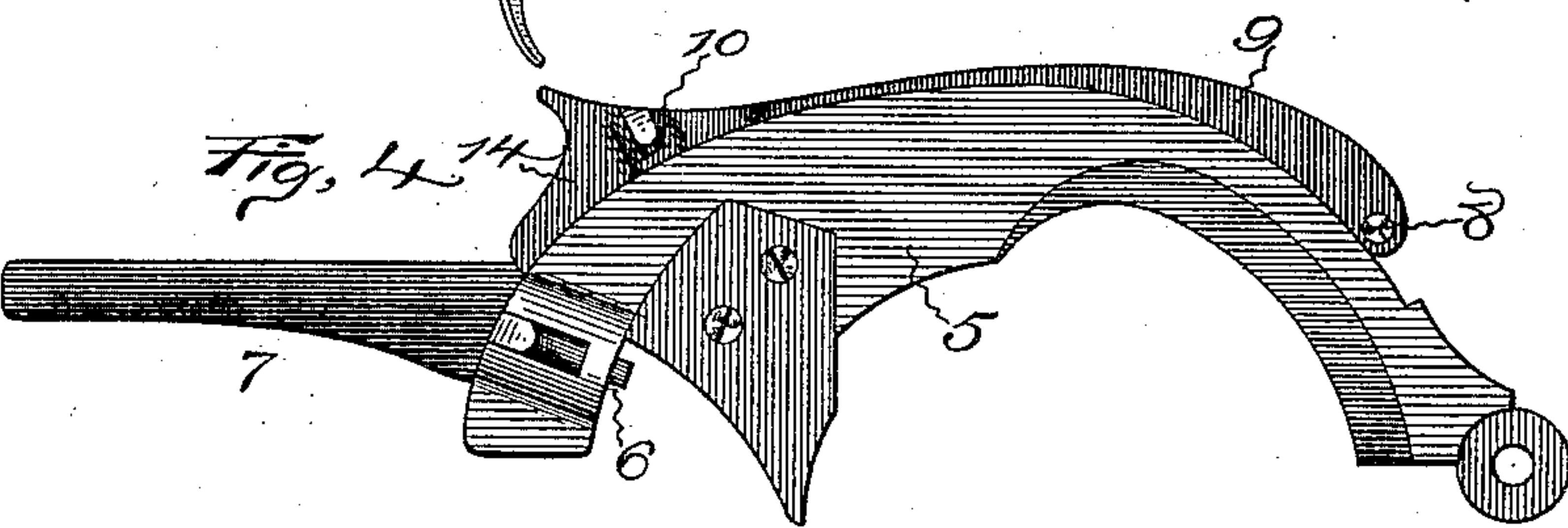
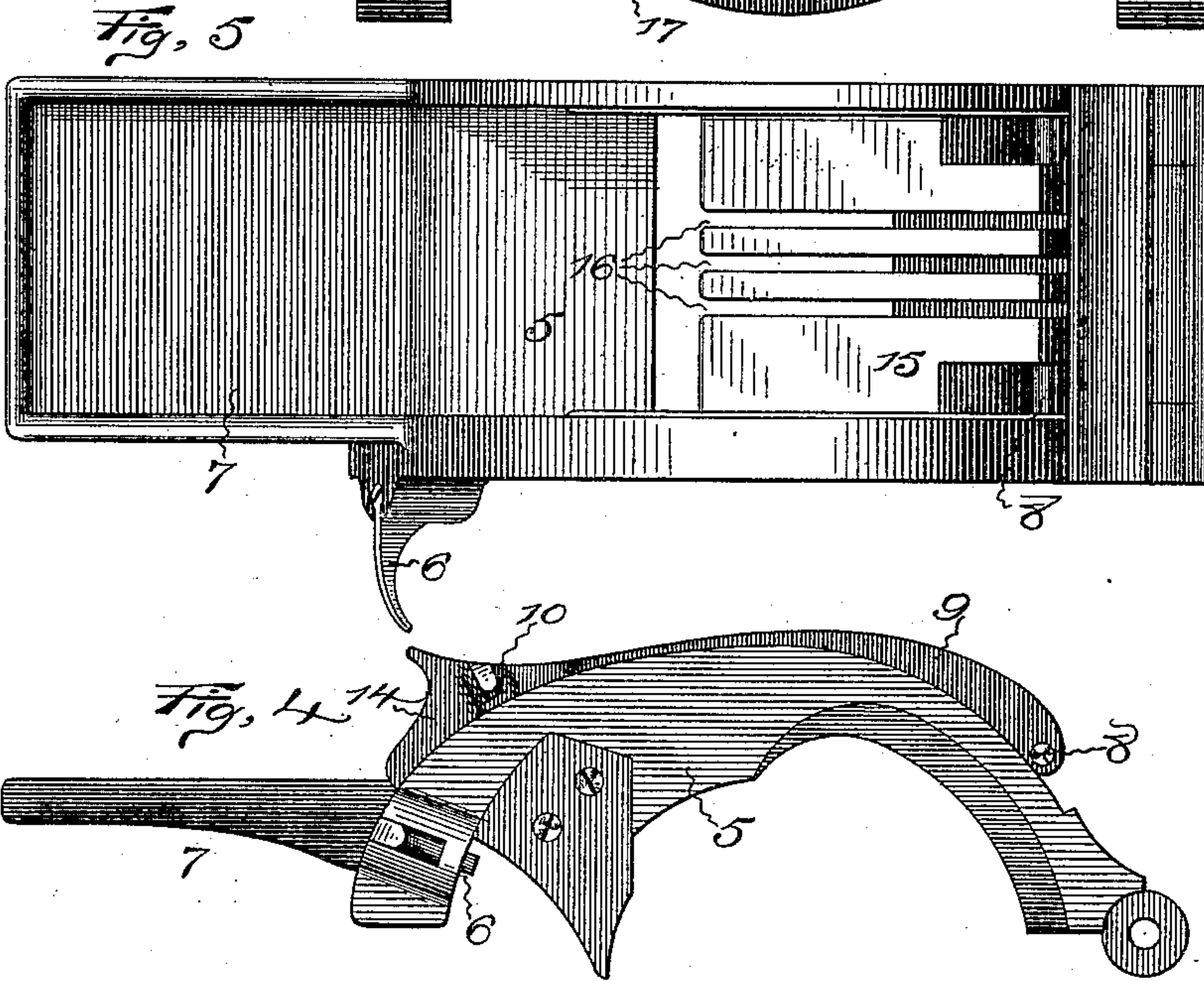
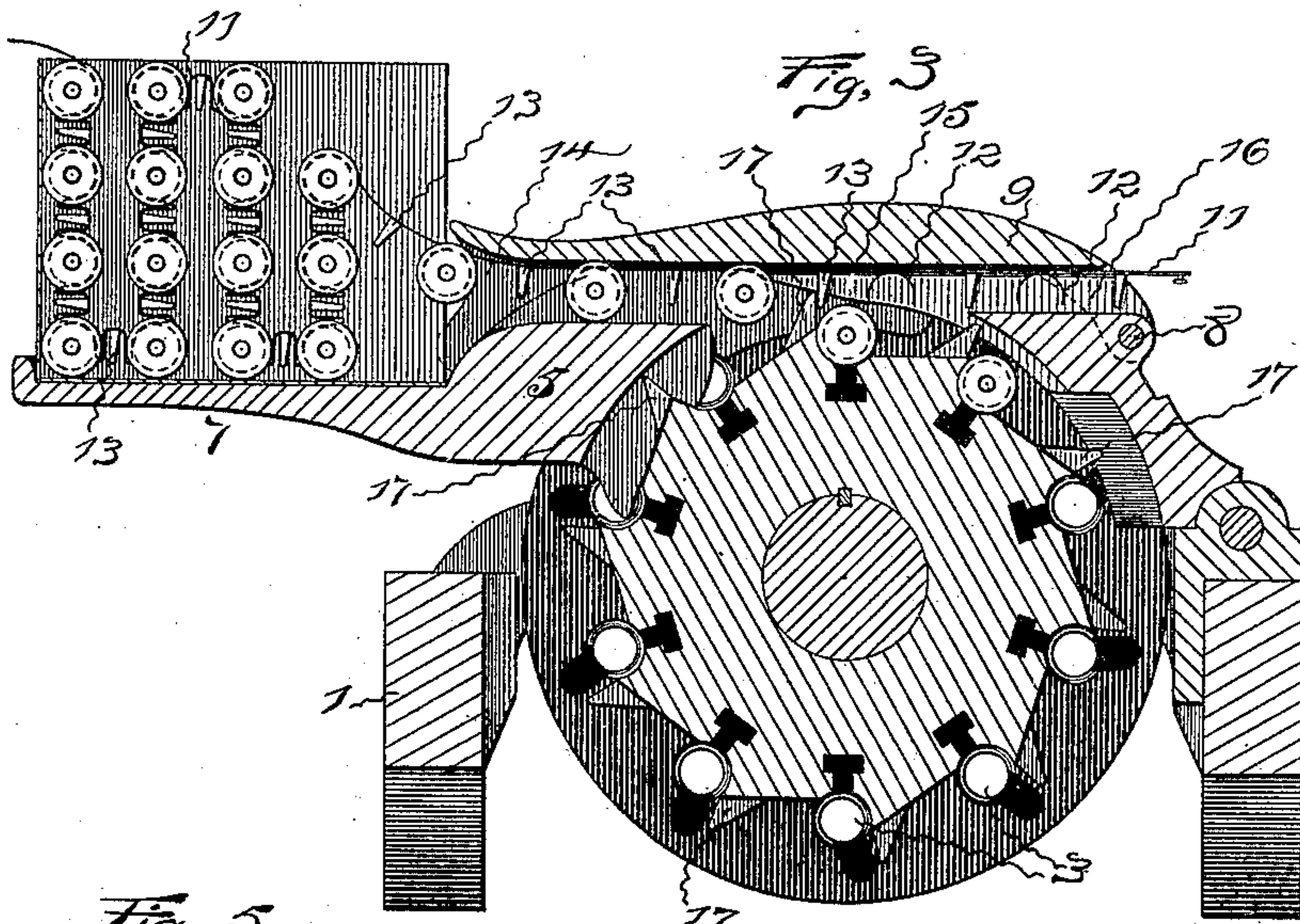
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2 Sheets—Sheet 2.

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# UNITED STATES PATENT OFFICE.

RICHARD J. GATLING, OF HARTFORD, CONNECTICUT.

## MACHINE-GUN.

SPECIFICATION forming part of Letters Patent No. 504,831, dated September 12, 1893.

Application filed October 20, 1892. Serial No. 449,428. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD J. GATLING, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Machine-Guns, of which the following is a full, clear, and exact specification.

The invention relates to the class of guns commonly known as Gatling guns, and the object is to so construct such a gun with an infallible feed and stripping mechanism that cartridges may be fed positively and accurately to the revolving carrier in front of the reciprocating locks, by a flexible belt, and one cartridge be surely stripped from the belt and enter each space behind the breech of each barrel when the gun is in action, regardless of the speed of revolution of the carrier.

To this end the invention resides in a gun of this class having a revolving group of barrels and lock-carrier-cylinder with reciprocating locks, a hopper with an opening for the passage of the belt and cartridges, arms for stripping the cartridges from the belt, and fingers projecting from the carrier for positively feeding the belt through the hopper, as more particularly hereinafter described and pointed out in the claims.

Referring to the accompanying drawings: Figure 1 is a plan view of the gun provided with the improvements. Fig. 2 is an enlarged plan of the hopper. Fig. 3 is a transverse section of the gun on plane denoted by the broken line *a-a*. Fig. 4 is a side view of the hopper. Fig. 5 is a plan of the hopper with the cover removed; and Fig. 6 is a detail view of a portion of the belt with cartridges.

In the views 1 indicates the frame of a Gatling gun of ordinary form and construction, having the usual breech-casing 2, group of rotary barrels 3, and crank 4 for revolving the barrels, while at the rear of the barrels just forward of the breech-casing is the hopper 5, which being hinged to one side of the frame and provided with a catch 6 at the other side, may be lifted to uncover the breech of the barrels, as in the common Gatling gun. The hopper 5, which on one side has a shelf 7 for holding the cartridge packages, is cut away on top, and near the opening thus formed by

means of a pivot 8, is hinged cover 9 having a catch 10 on the side opposite the hinge to hold it closed over the opening.

The belt 11 has on one surface along each side of the center, at proper intervals, curved spring fingers 12 adapted to clasp and yieldingly hold the cartridges, while between these fingers are downwardly projecting prongs 13.

The cover 9 has a flaring mouth 14 opening toward the shelf 7, and the hopper on that side is cut away enough to permit cartridges to enter the gun through that opening as they are drawn along by the belt, while on the other side the cover closes down nearly to the hopper leaving but a narrow mortise 15 for the passage of the belt. The upper face of the hopper on the hinge side adjacent to the narrow mortise is provided with grooves 16 to permit the passage of the projecting prongs and the fingers that hold the cartridges, but not for the passage of cartridges, the under face of the hopper on this side being so wedge-shaped that the cartridges are stripped from the fingers of the belt and allowed to drop into the carrier as the belt is drawn along.

To the carrier, near the edge of the grooves in which the locks reciprocate in the common Gatling gun, are secured arms 17 that project toward the plane of the center of the belt in such manner that each sweeps around when the gun is in action so as to come in contact with a prong projecting from the belt and pull the belt forward a distance sufficient to enable the wedges on the interior face of the hopper to strip one cartridge from the grasp of the fingers on the belt and bring another prong into the path of the following arm.

The hopper is provided with the customary plows for ejecting the exploded shells, as in the common Gatling gun.

In order to start the feeding of cartridges into the gun the cover of the hopper is raised and the belt laid in the mortise 15 with the first prong in its groove in front of the arm projecting from the top of the carrier, so that when the carrier revolves in action the belt is drawn along an absolute and positive distance each time to enable one cartridge and but one cartridge to be dropped into each carrier groove as it comes around, thus insuring an absolute certainty of feeding a cartridge at



the proper time, in order that one will be fired from each barrel every revolution.

Belts holding the cartridges are packed in boxes in any suitable manner so that when  
5 put upon the shelf with the box covers removed they may be freely drawn into the gun. The ends of the belts which are preferably provided with fastening buttons and  
10 holes are left projecting from the box so that when one belt is nearly run out another may be attached in order to keep up a continuous and rapid feed.

If desired the shelf on the side of the hopper may be made detachable or so as to swing  
15 out of the way when not in use holding a box of cartridges, which of course could be held in the hand while the belt is running out.

I claim as my invention—

1. In combination with the revolving barrels  
20 of a Gatling gun, a carrier cylinder having projecting arms revolving with the barrels, a hopper hinged to the frame of the gun with an opening for the passage of a belt through it above the carrier in the plane of the project-  
25 ing arms, and a belt with spring fingers for grasping cartridges and with prongs between each set of fingers projecting into the path of and engaging with the arms on the carrier, adapted to pass through the hopper, substan-  
30 tially as specified.

2. In combination with the revolving barrels of a Gatling gun, a carrier cylinder having projecting arms revolving with the barrels, a hopper hinged to the frame of the gun with an  
35 opening for the passage of a belt through it above the carrier, a cover with its bottom face cut away to leave a space for the passage of the belt hinged to the hopper over the opening, a belt with spring fingers for grasping  
40 cartridges and with prongs between each set of fingers projecting into the path of and engaging with the arms on the carrier, adapted

to pass through the hopper, substantially as specified.

3. In combination with the revolving barrels 45 of a Gatling gun, a carrier cylinder having projecting arms revolving with the barrels, a hopper hinged to the frame of the gun with a wide opening on one side for the entrance of the cartridges and belt and a narrow opening 50 on the opposite side for the passage of the belt only, above the carrier, with grooves through the hopper adjacent to the narrow opening for the passage of the spring fingers and prongs, and a belt with spring fingers for 55 grasping cartridges and with prongs between each set of fingers projecting into the path of and engaging with the arms on the carrier, adapted to pass through the hopper, substantially as specified. 60

4. In combination with the revolving barrels of a Gatling gun, a carrier cylinder with projecting arms revolving with the barrels, a hopper hinged to the frame of the gun with a wide opening on one side for the entrance of 65 the cartridges and belt and a narrow opening on the opposite side for the passage of the belt only, above the carrier, with grooves through the hopper adjacent to the narrow opening for the passage of the spring fingers 70 and prongs, a cover hinged to the hopper over the opening, with its bottom face cut away to leave a space for the passage of the belt, and a belt with spring fingers for grasping cartridges and with prongs between each set of 75 fingers projecting into the path of and engaging with the arms on the carrier, adapted to pass through the hopper, substantially as specified.

RICHARD J. GATLING.

Witnesses:

CLARENCE E. BUCKLAND,  
H. R. WILLIAMS.