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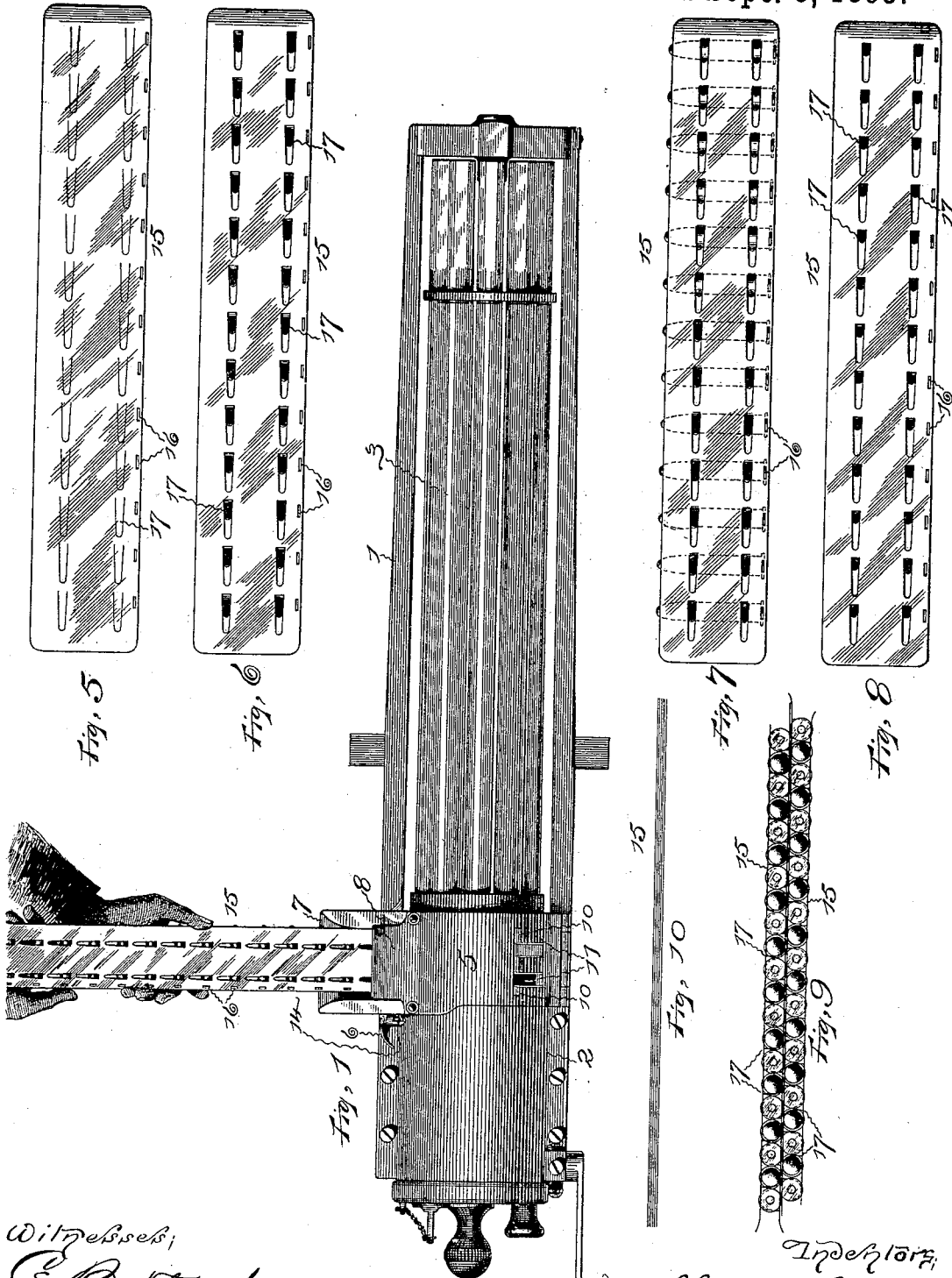
2 Sheets—Sheet 1.

C. M. BRODERICK & J. VANKEIRSBILCK.

FEED FOR MACHINE GUNS.

No. 504,516.

Patented Sept. 5, 1893.



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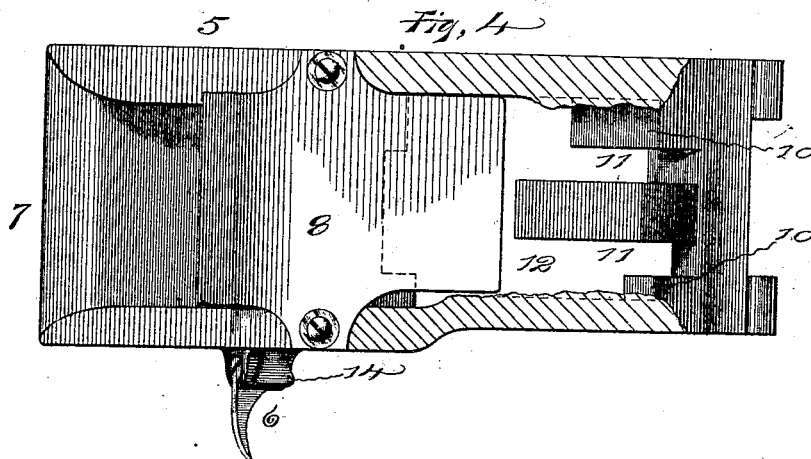
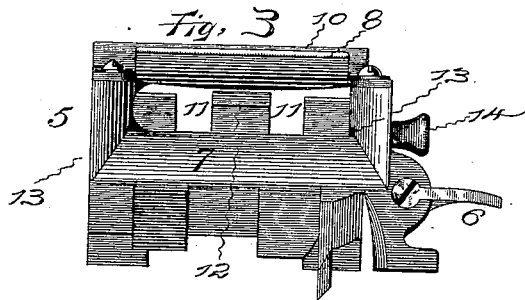
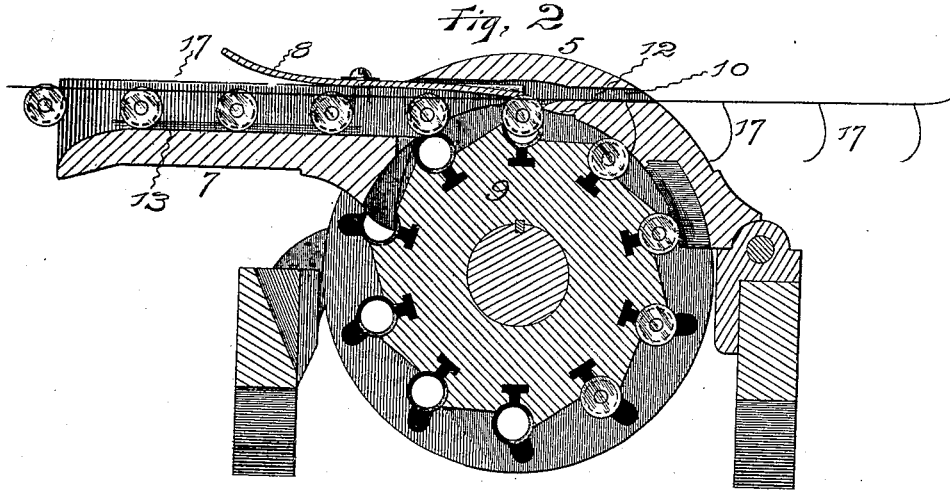
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FEED FOR MACHINE GUNS.

No. 504,516.

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UNITED STATES PATENT OFFICE.

CLEMENT M. BRODERICK AND JOHN VANKEIRSBILCK, OF HARTFORD, CONNECTICUT, ASSIGNORS TO THE GATLING GUN COMPANY, OF SAME PLACE.

FEED FOR MACHINE-GUNS.

SPECIFICATION forming part of Letters Patent No. 504,516, dated September 5, 1893.

Application filed December 19, 1892. Serial No. 455,555. (No model.)

To all whom it may concern:

Be it known that we, CLEMENT M. BRODERICK and JOHN VANKEIRSBILCK, citizens of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Feeds for Machine-Guns, of which the following is a full, clear, and exact specification.

The invention relates to the feeds of that class of battery or machine guns commonly known as "Gatling guns;" the object being to provide simple means in which ordinary ammunition can be quickly packed at the factory, arsenal or on the field, whereby the cartridges, without danger of being wrongly presented under the excitement of action, can be rapidly fed surely and positively into the gun regardless of the angle of elevation or depression; which means are cheap and occupy but little space so that after use, while they may be repacked if necessary, they can be abandoned, a large supply being carried in a small package.

Referring to the accompanying drawings: Figure 1 is a plan of the gun illustrating the manner of using the feed. Fig. 2 is an enlarged transverse section of the gun through the hopper. Fig. 3 is a view looking into the hopper from the side. Fig. 4 is a plan of the hopper with part cut away to show the construction. Fig. 5 is a plan of a plate from which a feed strip is stamped. Fig. 6 is a similar view with the cartridge holding prongs bent. Fig. 7 is a plan of the same illustrating the position of the cartridges. Fig. 8 is a plan of the feed strip after use. Fig. 9 is a view of a package of ammunition held in the improved feed strips; and Fig. 10 is a package of feed strips without ammunition.

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.

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. This hopper

has cut through one side an opening of a size to admit the passage of cartridges, beneath which is a shelf 7 for guiding the cartridges into the opening, while on the top is placed a thin plate 8 having an inner elastic edge about over the center of the carrier cylinder 9 of ordinary form. On the other side the opening through the hopper is reduced to a narrow slit 10 except where the two mortises 11 are cut. Beneath the opening the under side of the hopper at the center is sharpened or formed as a wedge 12. If it is desired at any time to extend the surface of the shelf 7 a flat metallic plate may be inserted with its edges in the grooves 13 and there held by the set screw 14. The rest of the gun is made as the common Gatling gun.

The feed strips 15 of indefinite length are cut or stamped to shape from thin cheap sheet metal, preferably tin or brass that has some resiliency but which is pliable under sufficient tension. Rows of V-shaped slits are cut each side of the center along the strips and opposite each slit a small rectangular socket, recess or slot 16 is punched. Usually at the time these slits are cut the tongues are bent outward forming the circular prongs 17 which have a loop of a diameter slightly smaller than the cartridges they hold. When the cartridges are thrust into the clasp of the prongs a portion of the rims of their heads enter the rectangular slots opposite the prongs so that the cartridges cannot slip or slide endwise. The front ends of the strips are bent or curved upward so that when thrust into the large opening in the hopper of the gun they will not catch under the wedge but pass out above the wedge through the thin opening on the opposite side. These strips which are very cheap and easily formed, may be transported or stored in packages without ammunition, as shown in Fig. 10, so that a large supply can be kept in a small space until desired for use, or the prongs may be bent out at the factory or arsenal and the cartridges slipped into their clasp. When filled with cartridges the strips may be packed in bundles of any desired size, as illustrated in Fig. 9 where four such strips are shown, and then wrapped in a covering of thin paper or the like. As the strips are stiff a paper board box is unnecessary and

the package will occupy but little more room than the ammunition alone. When it is desired to use such a package the wrapper is torn off and the curved end of a strip thrust into the large opening of the hopper. The front edge of the opening in the hopper is curved so as to be only large enough for the passage of the ball ends of the cartridges and not of a size that will admit the rims, to prevent any chance of the strips being inserted into the hopper wrong end foremost, which would clog the mechanism and disable the gun. The strips can only be inserted right end first and as the successive edges of the grooves in the carrier cylinder come around when the gun is in action they catch the successive cartridges and push them forward until by contact with the wedge the cartridges are forced from the clasp of the prongs of the strip. The strip then passes out through the narrow slit the prongs going in the mortises, while the cartridges drop into the grooves of the carrier cylinder and are fed to the barrels by the common reciprocating lock mechanism. Usually after firing the cheap sheet tin strips with the prongs bent out, as shown on the right of Fig. 2, are left on the ground where they drop, but of course they can be picked up and the prongs bent down so that they may again be used to receive and conduct cartridges into the gun. The prongs clasp the cartridges with a slight resiliency and hold a portion of the edge of the rim in the small rectangular slots in such manner that they cannot slip endwise from the strips but are presented evenly to the gun regardless of the angle of elevation or depression at the time of use. Of course, if desired, these strips may

be of indefinite length or may be attached one to another to form a continuous belt, but on account of the stiffness of the strips they can be readily handled and quickly fed to the gun in ordinarily short lengths to permit of very rapid firing.

We claim as our invention—

1. A cartridge feed for machine guns consisting of a metallic plate provided with rows of hook-shaped prongs for encircling the cartridges, each of which prongs is attached to the plate at one end only so as to grasp the cartridges from one side only, substantially as specified.

2. A cartridge feed for machine guns consisting of a metallic plate provided with rows of hook-shaped integral prongs for encircling the cartridges, each of which prongs is attached to the plate at one end only so as to grasp the cartridges from one side only, substantially as specified.

3. A cartridge feed for machine guns, consisting of a metallic plate provided with rows of prongs adapted to clasp the cartridges, and slots for receiving a portion of the rims of the cartridges opposite the prongs, substantially as specified.

4. A cartridge feed for machine guns consisting of a plain metallic plate having an up-turned front end and rows of hook-shaped prongs for encircling the cartridges, each of which prongs is attached to the plate at one end only, substantially as specified.

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