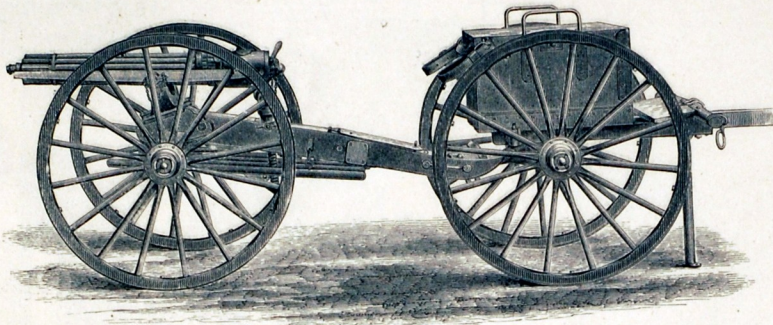


THE GATLING GUN.

As the delay in General Middleton's forward movement, according to the statement of a courier who arrived at Humboldt on the 4th inst., has been occasioned by the expediency of awaiting the arrival of the Gatling gun shipped from Swift Current on board the

its lower surface is always parallel to the upper side of the lever (L), but on sliding it forward the height of the lever (L) is increased, and the sliding box (D) is fastened. The screw (G) working through the side of the box (D) against the lever (L) serves as a second absolute fastening of box (D) on lever (L). On the end of the lever (L) is pivoted at *e*, the

lateral motion can be given to the gun by a simple movement of the operator. The binder permits or checks lateral motion, and a screw adjusts the elevation. If in firing the correct elevation has been obtained, the screw is fastened, and the gun can be moved laterally in a horizontal line, so as to cover, at this elevation, any desired lateral distance.



MUSKET-CALIBRE TEN-BARREL GATLING GUN, WITH CARRIAGE AND LIMBER COMPLETE.

steamer Northcote, most of our readers will agree that a fuller description of this improved engine of modern warfare than we had space to furnish in our issue of the 25th ult. will not only be generally acceptable, but of primary interest. First of all, then, we present an accurate illustration of the musket-calibre ten-barrel gatling gun, with carriage and limber complete, procured from the Gatling Gun Company, of Hartford, Conn., by the Department of Militia for the use of the North-West Field Force. Fig. 2 of the engravings shows elevation of top swivel with gun resting thereon, also lever. Fig. 3 is a plan of swivel and lever without gun. This fixture supplies the place of the elevating screw and oscillator

handle (E), so that when depressed its lower part pushes the key (F) forward and tightens the slide (D). When the lever (E) is raised it pulls the wedge (F) back, and loosens the slide (D). The handle (E) clasps a round lug (f) on the lower rear end of the wedge (F). The spring (e) serves to press the handle (E) downward. In operation the loosening the binder, B, allows the gun when on the carriage a lateral sweep of 90°, by means of lever, L, which is grasped at E with the left hand, while the right hand turns the crank. On tripod or gunwale the gun can be swept around the full circle, or 360°. After loosening the screw, G, the gun can be raised or lowered, as a pressure under the handle,

The operator's body being in the yoke steadies the gun, even when the binder is loose; he can work the crank with his right hand, resting his left on the yoke.

The earlier model Gatling guns had cartridges fed to them by means of feed cases, or by a drum, but recently a new method for supplying the cartridges to the gun has been devised, which is *positive and certain in its action*. In the old methods of supplying ammunition to the gun it was possible for the cartridges to jam in feeding down from the feed cases into the carrier or receiver, but in this newly-improved feed, the mechanism never loses control of the cartridges from the time they leave the feed machine until they enter the

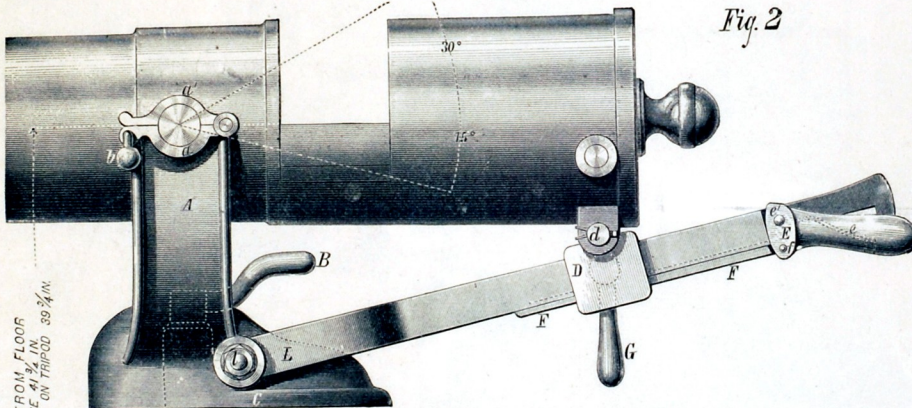


Fig. 2

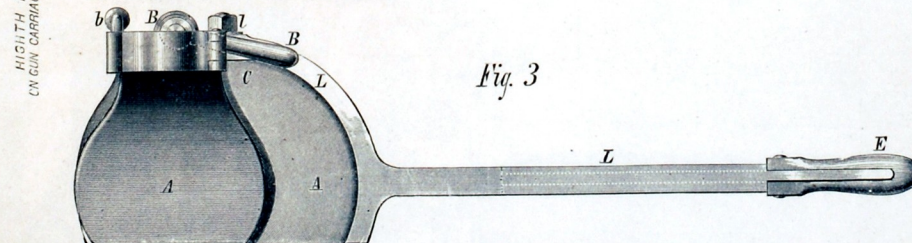


Fig. 3

HIGHTH FROM FLOOR
ON GUN CARRIAGE 4 1/2 IN.
ON TRIPPOD 39 3/4 IN.

formerly used. It consists of fewer pieces, and is simpler than the screw and oscillator. With it the gunner has better and more instant control of his piece. According to a description in the *Scientific American* of recent date, the gun being well balanced on the fixture, the gunner controls the movement of the piece with his left hand, using his right to turn the crank. The gun rests with its trunnions in the trunnion boxes (a) which are supported by the swivel (A). The caps (a') of these trunnion boxes are held by an improved device (b), which prevents the accidental opening of the boxes, as in other styles, with keys which may fall out. The lower part of the swivel (A) fits the bed plate of gun carriage, tripod, etc., so that the gun and swivel can be quickly changed from carriage to tripod, or to the gunwale of a ship, or elsewhere, and be held firmly in place by the binder (B). To the lower part of the swivel (A) is pivoted the fork lever (L), which extends under the rear of the breech of the gun, being united with the gun by the sliding box (D), which is held between two lugs on the lower side of the breech by the pivot bolt (d). This box fits on the lever (L), so as to slide back when lever and breech of gun are raised, and forward when they are lowered. Under the lower side of the lever (L) there is a key or wedge (F), which is tapered so that

E, loosens the box, D. The breech can be raised 30° and lowered 15°, total 45°. By removing the hand at any desired point the spring fastens the gun, or the handle can be pressed down. For more absolute security when at target shooting, or when a certain aim must be retained, the screw, G, is fastened. Both binder, B, and screw, G, are used to secure the gun when travelling on the carriage. By means of this fixture a man may follow moving objects with an accurate fire, or also shoot from the deck or tops of a vessel when rocking at sea. The elevating and ranging lever, shown on the guns in the engraving No. 4, is made after the model of 1879. The gun rests in the swivel in the same manner as in Figs. 2 and 3, and the same binder is employed. The lever is a plain one, on which slides a box fastened by a pivot bolt to the breech of the gun. Against the side of the lever in slide or box a friction shoe is fitted, which is held in its position in the box by a heel on each end. On the rear end of the lever there is a tapering handle, on which fits the socket of a yoke, which may be easily put in place or removed, and it is fastened by a taper pin. A leather strap which passes under the socket of the yoke is slung over the shoulders of the operator, allowing him to raise or lower the gun, and as his body fits into the yoke any desired

chambers, are loaded, fired, and the empty cases extracted. With this new feed it is impossible for the gun to fail in its operation, even when it is worked by men unacquainted with its use. This new improvement not only greatly increases the rapidity and certainty of fire, but enables the gun to be fired at the rate of over 1,200 per minute, and at all degrees of elevation or depression, which is something no other machine gun can do. By firing the gun at proper elevations, ascertained by means of a quadrant, the bullets discharged from it can be made to fall upon men behind breastworks or entrenchments at all distances from 200 to 3,500 yards from the gun. The "high angle," or "mortar" fire, adds greatly to the effectiveness of the gun, and will, no doubt, prove of inestimable value in future warfare. Experiments have proved that musket-size balls, fired from a Gatling gun at high angles, strike the ground with sufficient force to penetrate from two to three inches of timber. About 1,200 shots per minute can be fired from the gun, raining down a hail-storm of bullets on the heads of men behind entrenchments, thus making such positions in a short space of time untenable. Open breastworks, or uncovered entrenchments would furnish little or no protection to troops against the fire of this formidable weapon.

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