

FARROW'S  
MILITARY ENCYCLOPEDIA

A DICTIONARY OF MILITARY KNOWLEDGE

ILLUSTRATED

WITH MAPS AND ABOUT THREE THOUSAND WOOD ENGRAVINGS

BY

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"What is obvious is not always known, and what is known is not always present."—JOHNSON.



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and the muzzle will be diminished; and a larger number of grains will be thrown out unconsumed. It is evident, therefore, that the effect of a charge of powder on a projectile should not increase with the size of the charge; and experiment shows that beyond a certain point, an increase of charge is actually accompanied with a loss of velocity. The charge corresponding to this point is called the maximum charge. All experience proves that the longer a piece is, in terms of its caliber, the greater will be the maximum charge in proportion to the weight of the projectile. For heavy cannon, 19 to 20 calibers long, the maximum charge may be stated to be  $\frac{1}{4}$  the weight of the projectile; and for light cannon of the same length,  $\frac{1}{3}$  to  $\frac{1}{2}$  of this weight; the increase of range for charges above the weight of the projectile, being very small. A charge of  $\frac{1}{4}$  the weight of the projectile, and a bore of 18 calibers, is the most favorable combination that can be made in smooth-bored cannon, to obtain the greatest range with the least strain to the carriage. In the early days of artillery, when *dust* instead of grained powder was used in cannon, the weight of the charge was equal to that of the projectile; after the introduction of grained powder, it was reduced to  $\frac{1}{2}$ , and in 1740 to  $\frac{1}{3}$ , this weight.

**MAXIMUM RANGE.**—In gunnery, the very extreme range of a projectile either *in vacuo* or in the air. In the former (were it possible), with a given velocity, the extreme range of a spherical projectile would be obtained at an angle of 45°; in the latter, with a velocity of 1600 feet per second, the maximum range would be obtained at an angle of about 32°; a 56-lb shot would, under these circumstances, at 32° elevation, range 5720 yards in the air, and 23,946 yards *in vacuo*, and at 45°, 26,666 yards *in vacuo*. The maximum range of rifled ordnance is much in excess of that of smooth-bore guns, the 9-inch gun having ranged over 11,000 yards.

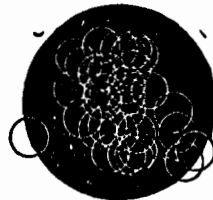
**MAYHEM.**—Wounding is the name sometimes

the loss of one of the jaw-teeth, the ear, or the nose, was no Mayhem in common law, because these members can be of no use in fighting.

**MAYNARD PRIMER.**—A primer made by indenting a sheet of paper at regular intervals, filling each indentation with a small charge of percussion powder, and covering the whole with another sheet of paper firmly pasted on. The sheet is then cut into strips, each strip containing 60 primers in a single row, and, to protect it from the moisture, it is covered with a thick coat of shellac varnish.—See *Friction Primers*.

**MAYNARD RIFLE.**—While special attention has been paid to the manufacture of superior sporting rifles, the interest in rifle shooting at long range, has led to the invention and introduction of what is known as the "New Creedmoor Rifle," in which the acknowledged and superior merits of the Maynard system are introduced, securing convenience, safety, accuracy, and efficiency, all made applicable to meet the present demand for long range practice. The Creedmoor rifle is a 32-inch, 44 caliber, specially adapted to the requirements of the Creedmoor range, and to which has been applied every facility and appendage which has been found by trial and experience best adapted to secure the most satisfactory results, including ammunition, vernier, and wind-gauge sights, spirit level, and all of superior models and workmanship. All the advantages comprised in the Creedmoor rifle, have also been applied to a new model mid-range target rifle, 32-inch, 40 caliber, designed and especially adapted for target practice and ordinary field-service.

This rifle is represented in the drawing, together with two models of targets selected from the large number in possession of the Massachusetts Arms Company, and representing a fair average result for the distance named. The rifle has an elevating peep, adjustable rear-leaf, and Black's combination-sights, and weighs about nine pounds.



One valuable and special feature of the Maynard system is, that it admits of an interchange of barrels of any length or caliber. The manner of attaching the barrel to the stock is very simple and as follows: Push the arm of the lever axis-pin down and forward until it stops against the screw which holds it in place, then withdraw it as far as possible; hold the barrel in the left hand, pass the lever down through the breech-piece, hook the barrel on to the axis-screw at the front end, insert the lever axis-pin

through the lever, then turn its arm back to its fastening position. No screw-driver required. To detach the barrel, place the barrel in position as for inserting the cartridge, then reverse the motions for attaching.

This is a capital gun in the field, and especially on marches through a game country, when it may be desirable to use the weapon either as a rifle or shot gun. Either barrel can be slipped into the same stock in a moment. The ammunition is peculiar. The strong brass cartridges are loaded at leisure, costing nothing but for the powder and lead, and may be used over and over again for any number of times. One can carry cartridges in his pocket, loaded with different sizes of shot, and slip in and fire any size wanted, for large or small game. The rifle in itself is confined to the central-fire ammunition in each and all of the calibers, excepting the .22, in which the rim-fire ammunition is used; but, by the application of a simple device rim-fire cartridges may also be used. See *Hadley Firing-pin*.