# A PRIMER FOR GARRISON ARTILLERY

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A primer for garrison artillery by M. F. Downes

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# M. F. DOWNES

# A PRIMER FOR GARRISON ARTILLERY



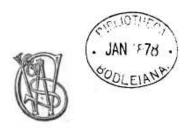
## A PRIMER

FOR

# GARRISON ARTILLERY.

By M. F. DOWNES,

MAJOR, ROYAL ABTILLERY; INSTRUCTOR OF GUNNERY.



### LONDON:

WILLIAM CLOWES & SONS, 13, CHARING CROSS.
1877.

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### PREFACE.

### TO THE GARRISON GUNNERS.

In order for the Garrison Gunner to acquire the large amount of information now necessary to make him efficient, he has to wade through a number of books not always ready at hand.

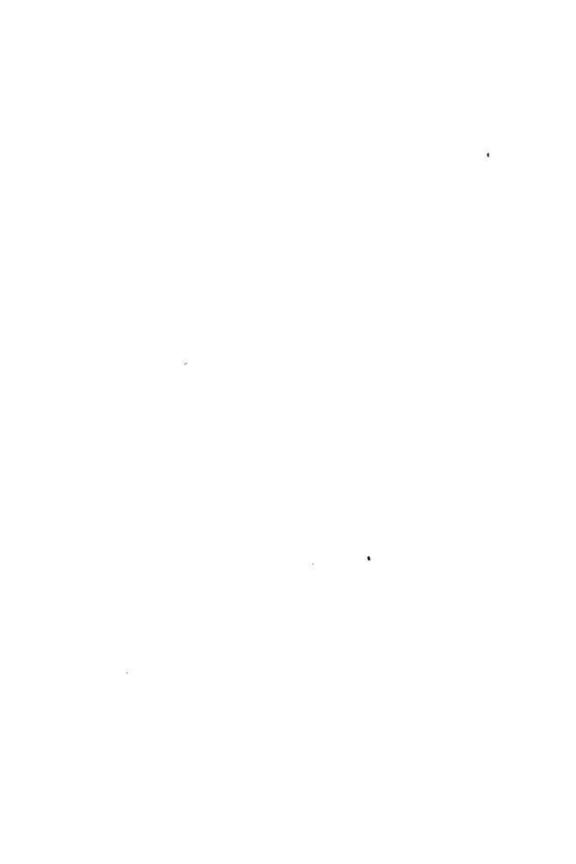
I have therefore endeavoured herein somewhat to concentrate that information and render him assistance in preparing for the annual examination on the subject of Skill at Arms.

The subjects are arranged under the same headings as in Regimental Order, Horse Guards, War Office, 1st August, 1876.

M. F. DOWNES,

Major, Royal Artillery.

Woolwich, November, 1876.



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### A PRIMER

FOR

# GARRISON ARTILLERY.

### I.

# EXPLANATION OF THE TERMS ORDINARILY USED IN GUNNERY.

Ammunition means anything and everything that is expended when firing a gun.

Ammunition Entrance.—The entrance to the magazine for ammunition (gunpowder) only.

Ammunition Passage.—A passage along which both powder and shell are transported.

Angle of Departure is the angle a tangent to the trajectory makes with the line of sight when the projectile leaves the muzzle. Owing to the jump of the gun, this is usually some minutes in excess of the angle of elevation.

Angle of Descent is the angle made by a tangent to the trajectory with a horizontal plane at the point of impact. It varies from about one-fifth to one-third more than the angle of elevation.

Angle of Elevation is the angle which the line of fire makes with the line of sight.

Artillery General Store.—A store for the reception of the spare gun stores of all natures.