

CONTENTS OF No. 1, VOL. VI.

POETRY.—	Page
Montcalm's Burial.....	10
EDITORIAL.—	
Introductory to Sixth volume of Vol. Rev...	6
Field Fortifications.....	7
"A Volunteer" on Military Organization...	7
Unmolested demand for the restoration of Gibraltar to Spain.....	7
Military Transport.....	8
Grand Duke Alexis visit and object to U. S. Questions affecting the efficiency of our military organization.....	9
Lt.-Col. T. B. Strungo on "Artillery Tactics".....	9
News of the Week.....	9
Reviews.....	10
CORRESPONDENCE.—	
A Volunteer.....	1
RIFLE MATCHES.—	
Leamington vs. East Tilbury.....	1
SELECTIONS.—	
The evacuation of Canada.....	12
The plague in Buenos Ayres.....	12
Odger & Co.....	12
New canal boat.....	12
Capt. Strange on Practical Artillery.....	12
Autumnal Manoeuvres of British Army—No 5.....	17
The German Naval Force.....	12
Heavy guns for Malta.....	12
Foreign Military and Naval Items.....	12

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The Volunteer Review,

AND

MILITARY AND NAVAL GAZETTE.

"Unbribed, unbought, our swords we draw,
To guard the Monarch, fence the Law."

OTTAWA, MONDAY, JANUARY 8, 1872.

THERE are certain conditions under which an armed force constrained to act on the defensive must be handled in order to enable it to counterbalance a disparity in numerical strength or discipline. A good deal depends of course on the selection of a position capable of giving every military advantage and opposing every possible disadvantage to the assailant. A defensive position should afford the following conditions:—Natural obstructions; effective cover from the enemy's fire and the fullest development of that of the defenders; complete command over the ground by which the assault advances, command of all the lines of approach; freedom of movement for offensive or defensive operations to the defenders; secure natural points of support on both flanks and rear. All requisites for encamping and supplying an army, line or lines of retreat ample and secure. Natural positions seldom combine all these requisites and have to be rendered available by artificial means, hence the necessity for fortifications. This may be defined as the art of arranging a position in such a manner that an inferior force can resist a superior, and it consists of temporary or field fortifications constructed for the exigencies of a campaign or permanent fortifications to cover vulnerable points of great moment and strategical value. Intrenchments or lines are fortifications of considerable extent, and the principles which govern the construction of temporary works apply also to those of a permanent character, the only difference being in the material and design of the structure. A Field Work is a fortification of a limited extent—all fortifications are merely accessory defensive means—and must consist of a covering made of earth, brick, stone, wood, or iron, sufficient in height and thickness to screen the defenders and intercept the missiles by which it may be assailed.

The technical terms describing the parts of such fortifications are as follows, beginning from the outwards:—The *Glacis* is a mound of earth with a gentle slope outwards, or the natural slope of a hill. The *Ditch* is an excavation furnishing earth for the formation of the parapet, it consists of the *counterscarp* next the glacis, a berm or small space extending between the crest or top of the counterscarp and inner face of the glacis, the bottom of the ditch. The *Scarp*, the berm between the scarp and parapet, the exterior slope of the parapet, the interior slope, superior slope—a line connecting the exterior and interior slope—in case of musketry being alone used merely a prolongation of the slope of the glacis, the interior slope of the parapet is known as the breast height; when artillery is used it is from three to four feet above the glacis but parallel thereto, and the interior slope is known as the *Genouilliere*. The *Banquette*, a platform for musketry to enable the men to fire over the parapet, and sometimes a trench or shallow excavation in the rear of the Banquette for troops to stand in. The rule to be observed in all cases is that no space in front or flank of the works is free from the fire of the defenders. There are two cases which will offer facilities to the assailant. The first is when their fire does not command the approaches; this is called a *section without fire*. The second is when there is no natural or artificial glacis and the fire sweeps above the approach; this is termed a *dead angle*. It is very important that the parts of the general plan of fortification in relation to the position to be defended should be so distributed as to do away with those defects, and this is frequently the most severe test of the skill of the military engineer, because in addition to other principles it is not always possible to bring a front, flank and cross fire on a column of attack, and yet that is the problem to be solved for successful defence.

In order to effect this object a portion of the line of defence is thrown forward to compel the attack thereon, and the problem is sought to be solved by making the retired part perform the duty of flanking the assailants. The condition indicates that the general outline of the plan should be an angular system, the salient or advanced parts being towards the enemy and the re entrants towards the assailed. This disposition is denominated *flanked*, because the advanced parts must be first assailed and they are covered by the fire of the re entrant; the advanced parts are called *faces*. The *Re entrant Flanks*—the line connecting the flanks is called the *curtain*; an angle formed by two faces is a *salient angle*, by two retired lines a *re entering angle*, and that made by a face and the opposite flank an *angle of defence*. The line bisecting a salient angle is denominated the *capital*; the distance from a salient to its opposite flank is a *line of defence*. Whether segmental or angular bastions are used the nomenclature remains the same and defines the terms used in fortification as a science, and for its practical application.

MODERN SEAMANSHIP.—So far as the loss of ships may be taken as a criterion, modern seamanship can be demonstrated by statistics to be superior to that which it has happily replaced. During the twenty-two years of war ending with 1815, our naval ancestors lost 61 ships of war by foundering, 278 by wreck, and 13 by burning, besides those captured by the enemy, making 352 vessels, with 14,311 lives, totally lost by accident, or, as the *Times* would say of the modern navy, lack of seamanship. They did not in those days record strandings attended with trifling injuries, such as those of the *Agincoirt*, *Lord Warden*, *Caledonia*, *Rever*, &c., but reasonably estimating these at five vessels stranded for one lost, our immediate ancestors attained an annual average of 16 accidental total losses and about 80 groundings. Admitting that during that period they had on an average nearly twice as large a naval force as at present, and halving, therefore, the losses, there is still a wide margin between the eight annual losses of the old officers and the less than two per year of modern seamanship. True, their charts were defective, and *Megaras* not uncommon, but the harbors and channels are of the same depth and extent for our 6000 ton frigates, which require 28 ft. of water to float them, as for their 500-ton frigates, which were less than 16 ft. deep. Even admitting many other mitigating considerations favorable to ancient seamanship, these must be weighty indeed to equalize, much more to reverse, the ratio of eight annual accidental losses to the modern less than two. Surely, in the face of such statistics, the claim of old officers to superior seamanship must be based on something else than safe navigation. The modern navy glories in its succession to a wonderful heritage of renown, earned by the consummate pluck and the prodigies of valor performed by preceding generations; but when old officers enquire, too unwisely, "What is the cause that the former days were better than these?" they provoke the reminder that naval history records only their good deeds. Tradition tells of ships holding aloof in battle—of lack of seamanship, in gunnery, in discipline, in the well ordering of their crews, as well as of the presence of disorder and of preventible disease, the fruit of ungodliness and vice too shameful to speak of, inefficiency which compares badly even with the American and French ships of those times. It is the naval authorities and officers of the day who are responsible for each of those things and in none of them, except courage and daring, has the navy of to day any good thing to learn from that of the past.—*Frazers Magazine*.

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