

The fourth round was fired at 3:25, with 220 pounds of powder and a shot weighing 1,254 pounds. The recoil was increased to 38 feet 1 inch, the maximum vertical play of the springs being three quarters of an inch, and the horizontal travel 18 10 inch. The muzzle velocity was 1,503 feet per second; the pressure in the powder chamber of the gun, 22.2 tons, and that on the base of the shot 21.4 tons per square inch. The shot penetrated 36 feet into the sand at a depth of five feet from the surface.

The fifth round was fired at 4:5, with 230 pounds of powder and a 1,260 pound projectile. The recoil from this shot was reduced to 37 feet 1 inch, showing that the springs were transmitting the motion to the mass of metal in the gun and carriage, or, in other words, that the motion was being absorbed by the weight. The maximum vertical play of the springs was three quarters of an inch, and the horizontal travel one and one-tenth inch. The muzzle velocity was 1,550 feet per second, the pressure on the chamber 29.6 tons, and that on the shot 21.8 tons per square inch. The shot penetrated forty-three feet into the sand at a depth of five feet from the surface. In this round a number of burning pebbles of powder were propelled from the gun over the butts, indicating that the 2.0 pound charge was rather more than the gun could consume.

The final shot for the day was fired at five minutes to 5, with 240 pounds of powder and a projectile weighing 1,258 pounds. The recoil was this time brought up to 38 feet 2 inches, the vertical and horizontal play of the springs being the same as in the previous round, viz.: three-fourths of an inch and 18 10 inch respectively. The muzzle velocity, too, was the same as in the last round—1,550 feet. The pressure in the gas chamber was 27.3 tons per square inch; that on the base of the shot had not been taken at the time the visitors left the proof ranges. The shot penetrated the sand to a distance of forty-seven feet at a depth of five feet from the surface. Burning pebbles of powder were again projected forward with the shot.

This concluded the first part of the test of the eighty-one ton gun—a weapon whose construction has met with severe criticism, and whose manufacture has required the best and latest appliances. After each discharge the gun was critically examined, and on no occasion was the slightest alteration in any of the joints observable. The velocities exhibited by the gun amazed everybody. The "energy" imparted to the shot at the fifth round rose to the enormous pitch of 26,400 foot tons, or about the estimated force with which the prow of the *Iron Duke* encountered the *Vanguard*. This gun is intended for the *Inflexible*, which is to carry four of these guns, the second of which is now constructing. A prominent engineer yesterday stated, on the ground, that before long England will possess a 160-ton gun firing a one-ton shot, which at one mile range can tear the strongest ironclad all to pieces.

We republish from the columns of the *United States Army and Navy Journal*, of 13th November, a review of the "History of the Civil War in America," by the COMTE DE PARIS, for the valuable information it gives illustrative of the main principles on which military operations on this continent should be based.

Our own opinions on *minor tactics* is singularly sustained, as is also the theory of de-

fensive operations, which we have also advocated.

The experience of past history has shown that no officer trained in any of the existing European systems would be at all likely to succeed as a military leader in America, and it explains in a striking manner, the primary cause of what to the casual observer would look like unaccountable failures. This history is a valuable addition to the knowledge of the military student, as it appears to have been written by a very disinterested and keen observer, perfectly capable of deducing by correct analysis the practical lesson taught by each operation, and by the accumulated experience of the whole war.

Our respected contemporary the *Ottawa Times* seems to have a moderate opinion of the statesmanship displayed by the Washington Cabinet with reference to its recent note to the Court of Madrid on Cuban affairs. We copy its article in another page, although we do not entirely concur in the deductions drawn from General GRANT'S action, the results as far as they have transpired justify the comments to some extent.

We regret the delay in the publication of the Review for the past week owing to circumstances over which we had no control. However, for the future, the paper will be published regular—and will endeavour to make up for lost time.

### CORRESPONDENCE.

*The Editor does not hold himself responsible for individual expressions of opinion in communications addressed to the VOLUNTEER REVIEW.*

#### Artillery Practice.

To the Editor of the VOLUNTEER REVIEW.

DEAR SIR,—Some days since a meeting was held in Montreal for the purpose of taking into consideration the advisability of forming a Dominion Artillery Association, having for its object the encouragement and improvement of Artillery practice, on a system similar to that of the Dominion Rifle Association, which in itself has not of late years been effective in inducing the Militia of the Dominion to concentrate in large numbers at their Annual Matches; in fact it has been mooted that the money expended by Government might be used to much more advantage if distributed among the different Provincial Associations.

It is not my intention to throw cold water on the laudable action taken in the matter by those at the head of the Dominion Artillery Association as it now stands, but if it has been found almost impossible to make the Dominion Rifle Association as great a success as might be desired; how very much harder will it be to make the Artillery one of any great benefit except to those Brigades or Batteries in the immediate vicinity of where the Annual Matches might be held.

It does not cost an Artilleryman any more to travel and live while attending matches than it does a Rifleman, but the cost of ammunition is very much greater, besides he will not have the advantage of his comrades who use the rifle, in being able to practice with the arm he would use during the matches should he belong to a Battery whose Head Quarters are at a distance from where the matches might be held. The trouble and cost of transporting guns would alone prevent the

guns of his Battery being moved. Take it altogether the association, unless worked on some different system from the one of the Dominion Rifle Association, will fall in being of any great benefit to the Canadian Artillery as a whole.

If I might be allowed to suggest through your columns a plan which, if carried on under Government sanction and support, might be of some real use to this arm of the Force; it would be to have during the Summer Camps of Instruction in the several Provinces, where as many men as possible could attend for periods of eight or ten days, in detachments of ten from each Battery; at a time, might go through a thorough course of Gun practice under competent instructors, the number of Batteries sending men at the same time to be of such numbers as to keep the camp up to the required strength. A careful record to be kept of the practice of each non-commissioned officer and men and the prizes to be awarded at the end of the season to those making the best practice. This attendance at camp might form part of the Annual Drill, for if the detachments of a Battery have gone through a good practical course of Gun Drill and practice under good instructors the subsequent training of Batteries or Brigades is a matter easily accomplished. The instructors might be had from the Schools of Gunnery who ought by this time to be able to furnish competent ones, and if they are ever to be useful to the Country, it might be as well in some way like this as any other.

I remain Sir,

Your Obedt. Servant,

KANUCK

Montreal, Jan. 10th, 1876.

(FROM OUR OWN CORRESPONDENT.)

MONTREAL, 7th Sept. 1876.

There has not been such a New Year's Day seen in this city since 1845—in that year there was scarcely any snow on the ground, and the winter did not commence until the 1st of February. The New Year in Montreal of 1876 was like a spring day—a little rain fell, and the ground being soft and muddy, sleighing was impossible, and wheeled vehicles, with the sleigh bells attached to the horses harness, was the order of the day.

The Prince of Wales Rifle band mustered in full strength on New Year's Eve and serenaded Colonel Fletcher, the Deputy Adjutant General of the District, as well as Lieut.-Colonel Beal and other officers of the regiment.

In consequence of the fire at St. Helen's Island that destroyed the Barracks of the B. detachment of artillery on Friday evening the 31st ultimo, Capt. Devine and his command have been ordered to Quebec. It is said that at no time was the magazine on the Island in danger, the wind was not blowing in that direction, and ample precautions were taken by Mr. Phillips in charge of the same for its safety if even sparks had been flying around it.

There is a good deal of discontent amongst the volunteers who turned out so readily on the occasion of the Guibord burial at not having been paid, the more especially, as this is the second time they have been deprived of the money due them by the Corporation of Montreal.

The 6th Fusiliers give a grand Concert at the Mechanic's Hall on the 13th inst. The proceeds it is understood, will be devoted to charitable purposes.

Glad to hear your paper is to get support from the Militia Department.

Cardinal Manning has been lecturing on national greatness. In the course of his address he said that he believed that in our country in the world was the administration of justice more unimpeachable than in any land; in international justice; also, that religion held a foremost place. The Cardinal expressed his firm conviction that one of the best ways to prevent bloodshed was to be properly armed.