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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, TUESDAY, MARCH 31, 1874.

TO CORRESPONDENTS.—Letters addressed to either the Editor or Publisher, as well as Communications intended for publication, must, invariably, be *pre-paid*. Correspondents will also bear in mind that one end of the envelope should be left open, and at the corner the words "Printer's copy" written, and a two or five cent stamp (according to the weight of the communication) placed thereon will pay the postage

IN another column will be found an extract from the London *Standard* of Feb. 18th, on Colonel FLETCHER'S able Memorandum on our "Militia System." The opinion of outsiders is particularly valuable inasmuch as it enables us to judge of the weak points in our system and to take advantage of the advice tendered, if in accordance with our local necessities and power.

FROM the following extract it would appear that the problem of armor piercing shells has been solved—if so, then plating a vessel to keep out the destructive effects of shell fire is useless, and, as we predicted from the first, a return to the old type inevitable, if, as the German authorities allege they have a shell sufficiently strong and a gun sufficiently powerful to pierce a 14 inch plate, a greater revolution than that which has occurred within the last ten years in Naval Architecture is a necessity which cannot be voided, and it will reduce the system of attack and defence of fleets to the simple rules by which they were governed in the days of sailing craft which consisted in securing room to manœuvre with rapidity and accuracy of fire and skill in handling the fleet, squadron, or ship.

"A military contributor to the *Cologne Gazette* says that the new Mauser rifles will immediately be served out to six corps d'armies of the German army, the two Bavarian corps retaining the Werder rifle as heretofore. The bayonet which since 1735 has been uninterruptedly used in the Prussian and afterwards in the German army, is at the same time to be abandoned. The two newly organized divisions of siege artillery are to have, besides the new rifled 21 centimetre mortars used in the sieges of Paris and Strasburg, and the 21 centimetre siege gun, a rifled 28 centimetre mortar. The weight of the shell of the 28 centimetre howitzer, when loaded with 28 kilogrammes, and it is believed that the shell of the 28 centimetre mortar will be of about the same weight. The weight of the shell of the 21 centimetre siege gun, loaded with 65 kilogrammes only. Each of the siege artillery divisions will be provided with forty rifled 21 centimetre mortars (two only were used before Paris, and four before Strasburg), 21 centimetre siege guns, and probably ten rifled 28 centimetre mortars, besides from 330 to 360 guns of other calibres. The heaviest gun hitherto used in the German ironclad fleet is the 26 centimetre naval gun, which discharges a steel shell of 184 kilogrammes, loaded with 37.5 kilogrammes of prismatic powder. It is said, however, that a still heavier piece of artillery—the 23 centimetre gun, with a loaded steel shell of about 250 kilogrammes—will be supplied to the two German ironclads *Deutchland* and *Kaiser*, which are now being built in England, and are expected to be ready for sea in the course of the present year. The projectiles fired by this gun have gone straight through a 12 inch plate and a considerable distance beyond it on the other side. The writer adds that the 30½ centimetre guns made in Krupp's establishment have not yet been adopted for the German coast artillery, but that their adoption may now be regarded as certain. This gun has an ordinary shell of 296 kilogrammes, with a charge of 60 kilogrammes of prismatic powder, and an elongated cast iron shell of 257 kilogrammes, with a charge of 50 kilogrammes of powder. It is believed that either of these shells will penetrate a 14 inch plate with ease."

The most extraordinary statement in the foregoing is the avowed intention of the Prussian military authorities to relinquish the bayonet as an offensive weapon. If, as has been asserted, the precision and rapidity of fire attained by the modern system of small arms precludes the possibility of using the bayonet at the decisive moment, the course has common sense to support it; but it is very doubtful after all whether any position has been won without a resort to hard fighting and consequently the bayonet is a necessity in that view. We are inclined to think the lessons or supposed practical deductions from the events of the last war are being carried too far—that theories founded on its exceptional experiences are not to be implicitly relied on, and it is quite possible that the results may be—a school of military pedants—exactly similar to those who succeeded to the traditions of the *seven* years war, may find in a second JENA cause to regret the substitution of speculation opinions for practical facts.

Meantime it should be a subject of investigation amongst our military men as to the actual value of the bayonet as a soldier's weapon, and the true consideration of the impulses that will actuate a man or body of men engaged in a hand to hand struggle or melee will lead to the determination that a weapon of some sort apart from the firearm is necessary. The reasons for this are so obvious that we shall not write them, but the conclusion is inevitably forced on us that a weapon so simple and effective as the bayonet, is the one best adapted to meet all the requirements of the case. About it cluster all the traditions of British prowess, daring, and endurance, and we are of opinion that in actual contest it would give the soldier possessing it a very decided advantage indeed over the man armed with a rifle alone, no matter how accurate its fire and skilful he may be in its use.

The only lessons worth studying in the late war was the system of organization which the victors developed. BISMARK will find his equal as an astute statesman, and VON MOLTKE probably his superior as a General, but the organization will still be the most complete the world has yet seen.

THERE has been recently an accidental explosion at Woolwich of one of WHITEHEAD'S fish *Torpedoes* attended with loss of life considerable damage. The *Army and Navy Gazette* of 7th Feb. thus refers to it:—

The recent explosion of one of Whitehead's fish torpedoes at Woolwich Arsenal, by which accident one man was killed on the spot and several others dangerously wounded, gives rise to some very important questions. But before dwelling upon them, it may be as well briefly to describe the construction and internal arrangements of this now justly dreaded infernal machine. The torpedo consists, then, as its name implies, of a fish shaped body, twelve feet long by sixteen inches in diameter, with a compartment at either end closed by a bulkhead and an engine room in the centre, some eighteen inches in length. The whole is, constructed of malleable steel three sixteenths of an inch thick, and hammered upon "formers." The motive power is compressed air, which is contained in the hinder compartment, and the bulkhead of this, which presents a convex surface to the pressure from the air chamber, is of the toughest steel The compressed air is conducted to a small oscillating engine, consisting of a large and small cylinder, the smaller of which receives the compressed air direct from the air chamber, and the larger are the "exhaust" from the small cylinder. The engine gives motion to an *ordinary screw shaft, which turns a gun* metal screw propellor at the tail of the fish. The pressure of the compressed air is regulated by an enormously powerful spring pressure gauge, which runs through the force compartment of the fish, and is kept at tension when the air chamber is charged. As the pressure of the air lessons, so the