

guns into rifles of smaller calibre, by inserting a wrought-iron tube in the bore, has been pushed to a considerable extent; no less than 640 of these converted guns being in service, with no failure yet recorded. The guns selected for conversion have been the 8-inch and 10-inch shell guns, and the 68-pounder, giving to the new rules calibres of 7 and 8 inches.

The breech-loading guns of Krupp are largely in use on the continent, particularly by Prussia, Russia, and Belgium. It is stated that Russia has contracted for 400 of these guns of 11-inch calibre; projectile, 495 lbs, charge, 83 lbs. of prismatic (Rodman) powder; I. V., 1,300 feet.

Rifled Mortars form now either a part of the recognized armament of most of the leading foreign powers, or are the subject of continued experiment to that end.

Prussia has a rifled mortar weighing 7,480 lbs; calibre, 8 inches; charge, 8 lbs; shell 160 lbs; I. V., 600 feet.

The Russians have bronze rifled mortars of 6 and 8 inches calibre. The former weighs, 3,060 lbs; charge, 8 lbs; projectile, 90 lbs; I. V., 800 feet. The latter weighs 8,625 lbs; charge, 19 lbs; projectile, 195 lbs.

In England experiments have been made on the conversion of the 13-inch S. C. mortar into a 9-inch rifled mortar by lining the bore with a wrought-iron tube, according to the Palliser system of conversion. A series of experiments has also been conducted to test the capabilities of the steel guns made for the Abyssinian expedition, when used as mortars. These guns are of 8-inch calibre; weight, 146 lbs; length 2 ft. 2 inches; are mounted on a wrought-iron carriage weighing 223 lbs; and carry a 12-pound shell with a bursting charge of 1 lb. Of 50 shots fired at angles of elevation varying from 30 deg. to 55 deg., all but four struck point first, giving an average penetration of almost 5 min. in stiff clay soil.

The only rifled mortar ever constructed in the United States, so far as we know, is due to the intelligent and persevering study of a gentleman in private life, and not at all to official experiment, influence, or encouragement.

**Field Artillery.**—In Great Britain numerous experiments have been made of late to determine the relative endurance of bronze and wrought-iron field guns, with the several result decidedly in favor of the former, which are proposed for adoption in the India service. It is true that the recent failures of certain bronze guns made at Woolwich have led to the impression that uniformity cannot be secured in their manufacture, but we are not prepared to admit this in the face of recent improvements in the making of bronze and casting of bronze guns.

A marked feature of the field gun of the Russian, Austrian, and Prussian services in comparison with our own, is the greatly increasing weight of the projectile thrown, without a proportionate increase of weight in the gun. For example, the Russian 4 pounder of 3.42 inches calibre, weighs only 765 lbs. and throws a shell of about 16 lbs. weight, with an initial velocity of 1,884 feet, the charge being 1 lb. 8 oz; the 9-pounder weighs 1,382 lbs., is of 4.2 inches calibre, and with a charge of 3 lbs. of powder and projectile 31.3 lbs, gives 1,050 I. V. This gun though but little heavier than our 12-pounder smooth-bore, is scarcely inferior to our 4.5-inch rifled gun weighing 3,600 lbs; the 12-pounder siege gun weighs 2,061 lbs., is of 4.7 inches calibre, and with a charge of 3 1/2 lbs. and projectile of 36 lbs. gives 1,006 I. V.; the 24-pounder weighs 4,914 lbs.; is of 6 inches calibre; charge, 7 lbs.; projectile, 71 1/2 lbs.; I. V., 1,083 feet.

To be continued

THE STRANDING OF THE "AGINCOURT."

The Minute of the Board of Admiralty on the negligent stranding of Her Majesty's ship Agincourt, which we print in another column, will relieve the country from a great anxiety, and dispel any momentary misgiving which may have been suggested as to the fairness of Mr. Goschen and his colleagues in upholding the discipline of the Navy. Seldom has so sweeping a sentence been pronounced by the Admiralty; but, on the other hand, seldom have the annals of the Navy revealed such wide spread negligence, Vice-Admiral Wellesley, C. B., and Rear Admiral Wilmot, C. B., are directed to strike their flags; Captains Wells and Beamish, of the Minotaur and Agincourt, are superseded together with the Admirals; Staff Commander Kiddle, the Senior Navigating Officer of the Flagship, is placed upon half-pay, and, if the report be correct that the Agincourt is to be paid off, Staff Commander Knight, of that ship, will suffer the same fate, while the Captains and Navigating Officers of the Warrior and Northumberland, the ships astern of the Agincourt, are censured for not apprising the Agincourt, of the immediate danger in which she was standing. Not only are these signal examples made of the officers who are most to blame, but the duties so generally transgressed have been defined in terms of the most exact precision; and, finally, the approbation of their Lordships is given to the officers and men of the squadron for their exertions in lightening and rescuing the Agincourt, with an express notice of skill exhibited by Lord Gifford in rendering the assistance of the Hercules. We cannot sufficiently express the satisfaction we feel that a great emergency in the history of the Navy has been met in a manner equal to its importance, and we congratulate the country that Mr. Goschen and his Board have exhibited so full a capacity for the stern duties of command.

We must not, indeed, blink the fact that a great emergency had arisen, and that the disaster which befell the Agincourt, and has also befallen the Psyche and the Caledonia, betokens a gradual but dangerous decline in the navigation of the British Navy. Steam, which had added so great a power to our fleets, has largely impaired the qualities of seamanship and navigation which once distinguished our Naval officers. Before the introduction of steam into the Navy every departure from a harbor or return to port was an exercise in seamanship, navigation and pilotage, for the Captain and Lieutenant as well as for the master of the ship. Now it is the rarest incident when the commander trusts to anything but steam for moving in or out of harbor, and the ship's direction is very generally left exclusively to the Navigating Officer and Engineer. This alone can account for the surprising apathy with which Admirals, Captains, and officers of the watch alike, on the recent occasion in Gibraltar Bay, suffered Staff Commanders Kiddle and Knight, without check or interference, to steer the fleet into evident danger.—*Broad Arrow.*

The following is said to have been copied literally from an old tombstone in Scotland.  
 "Here lies the body of Alexander Macpherson, who was a very remarkable person. Who was two yards high in his stocking feet, and kept his accoutrements clean and neat.  
 He was slew  
 At the battle of Waterloo,  
 Being shot by a bullet  
 Plump through the gullet;  
 It went in at his throat,  
 And came out at the back of his coat."

DOMINION OF CANADA.



MILITIA GENERAL ORDERS.

HEAD QUARTERS,

Ottawa, 13th September, 1871.

GENERAL ORDERS, (20.)

ACTIVE MILITIA.

No. 1.

MEDICAL STORES.

The Medical Officers of such corps as have already performed the Annual Drill are requested to transmit to Deputies Adjutant General commanding Districts, for transmission to Head Quarters, returns showing the number of sick they have treated and the quantity of medical stores they have expended, in order that some statistics on this subject for future guidance may be obtained. These officers are also requested to state what, in their opinion, are the deficiencies of the "Medicine boxes," and in what particulars they may be improved. The attention of all Medical Officers is called to an article on this matter in the "Canada Medical Journal" of June last.

In future, on conclusion of the Annual Drill at the various camps of exercise, the whole of the Medicine Boxes are to be returned into the respective District Stores.

No. 2.

INSPECTION RETURNS.

Referring to General Order (12) 5th May last, paragraph 19 (page 54 of pamphlet) Deputies Adjutant General commanding Military Districts will transmit to Head Quarters without delay, the Annual Inspection Returns therein called for of all corps in their respective Districts which have performed the Annual Drill for 1871-'72. They will be careful to furnish the statistical information required in the Inspection Returns, and when such is omitted a special report in explanation thereof is to be made.

No. 3.

PROVINCE OF ONTARIO.

Mooretown Troop of Cavalry

No. 2 Company, (Mooretown,) 27th "Lambton" Battalion of Infantry, gazetted "to do mounted duty when required," is hereby struck off the strength of the 27th Battalion and formed into a troop of "Cavalry," to be styled the "Mooretown Troop of Cavalry."

To be Captain.

Captain George Stewart, V. B.

To be Lieutenant:

Lieutenant Duncan Cunningham, V. B.

(Continued on page 595.)