

which the silencing of a few batteries would not reduce the exposure of the enemy's position. He was convinced that the risk in his method would not be so great in the case of bombarding as in that of a fort, and also would not be so encumbered with smoke. He advocated the increased lateral range as procured by his system, for the following reasons—that any method which enables the same number of guns to efficiently perform more work is a great gain, and the number of men would be reduced, which would enable a large reduction in works, guns, and the garrison, to be made with safety, in times both of war and peace, the latter being of the greatest importance in effecting enemy, without destroying efficiency. The special committee on Moncrieff carriages reported that *one gun mounted on a Moncrieff carriage may do equal work with two or more guns mounted behind shields*, and that it was superior in economy and efficiency. Major General F. Eardley Wilmot was the president of the committee, and was assisted by six distinguished officers of the Royal Artillery and Royal Engineers. The lecturer also read extracts and opinions to the same effect, from General Sir J. L. Simmons, K.C.B., Colonel Jervis, the late Sir John Burgoyne, and His Excellency Baron von Schell. With regard to the chances of exposure of casemated forts composed of those of the batteries on his principle, he was of opinion that, in the case of casemates, not only should the iron shields be taken into account, as was done by Lieutenant English, but that the chance of ricochet off the glacis should also be considered, and this he reckoned would take place over half of the vertical area of 200 ft., and he remarked that it was common sense to suppose that the enemy would prefer to attack objects of which they could see the damage as in forts with swelling embasures than to attack with no elevation above the line of glacis. Lieutenant English stated that he desired concealment of the Moncrieff batteries, because the whereabouts of any battery would be given within fifty yards by the newspapers, and the position of a battery would be discovered by the enemy by the puff of smoke from the gun; the lecturer appeared to put no faith in either of these arguments, which he answered by stating that sailors would undoubtedly prefer to lay their guns by a reliable observation on the parts of casemates or shields rather than trusting to reading the newspapers, or taking angles on puffs of smoke during action from a number of guns, and perhaps with a breeze blowing. The lecturer emphatically stated that the casemates were sometimes desirable, but he thought that that expensive form of fortification should only be used where there was no alternative. He stated that the counterweight carriages had answered beyond expectation, and that every thing was satisfactory except the delay, which was caused, he alleged, by opponents of his system, whose influence had hitherto been exercised without open expression; he therefore felt that Lieutenant English had done him a good service in expressing these opinions so ably, and openly bringing the subject before the public and out of the slough of despond. He concluded by recognizing the support received from the Government, and testified to the advantages which they would procure from his system.

The chairman, Sir Lintorn Simmons, Admiral Byder, Captain Selwyn, and Major Knollys, confirmed the arguments adduced by Major Moncrieff, and spoke greatly in favour of his system. The meeting terminated after the usual vote of thanks had been passed and acknowledged.—*Broad Arrow.*

The visit of the Heir of all the Russias to England appears to have been tuned singularly well to coincide with that of the Shah of Persia, and, considering the delicacy of the relations between the three Powers in the East, it is curious to read of the future Czar visiting the Eastern potentate in the London palace of Queen Victoria. The uneasiness of the Russian Press on the subject of the Shah of Persia's visit is also noteworthy. We read in last night's Globe—“The *Invalide* foresees that the stay of the Shah amongst us will have political results. The official Russian paper thinks the English Government will take advantage of this occasion to fix definitely the limits of the Persian frontier on the side of Afghanistan. Russia's progress and the Khiva expedition have alarmed the Afghan States, whose security greatly interests England. For long, as is known, Persia has coveted the Khanate of Herat, and the annexation of the independent territory of Seistan has been accomplished. According to the reports of the English officers sent in 1870 to Beloochistan to arrange for a telegraphic line, the Persian frontier should be considerably extended to the south. Now, as Afghanistan is the key to England's Indian possessions, the interest of England (the Russian paper says) in a definite arrangement of frontiers that will give her security for the future, is naturally very great.”—*Broad Arrow.*

The British Admiralty have issued orders that for the future, when ships are commissioned, the old plan of rigging them by the crew is to be resumed, as it has been found that the practice of rigging and storing the vessels by the men of the steam reserve and dockyard was attended with much inconvenience to the officers and crews placed on board a few days only before the ships sailed for a foreign station, and necessarily left them in ignorance of the manner in which the ship was rigged or her machinery gear stored or the vessel stored.

Admiral Mahan, lately French Minister of Marine, recently issued a circular warning insurance agent that an American was trying to sell a machine, a small torpedo, for destroying or insured ships with impunity. It looks like a block of coal of about six inches by three, and could be put into the coal bunker without the slightest suspicion. Once there, it would, when once thrown into the furnace explode after a fixed time, thus enabling the captain and crew to get away, or might explode as it lay. The Birmingham, England, *Daily Post* claims to have received one of those infernal machines, which will, it alleges, perform the duties required of it.

In order that every iron ship in Her Majesty's Navy shall possess the means of temporarily stopping a flow of water into the ship through a shot hole or leak, the Admiralty has issued directions that in future all such vessels shall be supplied with small thrummed mats, made in accordance with patterns supplied to the dockyards, to be placed over the shot hole or leak on the outside as quickly as possible, so that the damage may be got at inside and repaired in a more permanent manner.

An interesting work has been published at Leipzig giving an account, by a German student, of the part taken by members of the different German universities in the late war. Out of the 13,765 German students matriculated in the summer term of 1870, 4,510—that is, a third—went through the campaign, about 3,500 of whom were in the ranks, and 1,000 attached to the ambulances. Out of 1,505 university professors, 15 were under arms, 253 devoted themselves to the care of the sick and wounded, and 129 worked for the national cause by speech and pen.

The value of gun cotton as an explosive has been further advanced by the investigations in progress at the Chemical Department in the Royal Arsenal, Woolwich, presided over by Professor Abel soon after the terrible explosion at Stowmarket it was discovered that gun cotton could be securely kept in water without depriving it of any of its virtue, and that even when soaked with moisture, it can be exploded with a detonating fuse just as readily as if perfectly dry. Professor Abel proposes to use it for the bursting charges of shells instead of gunpowder, the remarkable part of his plan being to fill the shells with water, in which a few skeins of the gun cotton are placed. It has been found on experiment that the combined action of the gun cotton and water is to break up the shell into many fragments, so that coram shell may be almost as effective as shrapnel. Professor Abel even goes further than this, and proposes to use the gun-cotton and water mixed in solution to charge shells, and his projects are at present receiving the earnest attention of the officers who conduct such scientific inquiries on behalf of the government.

It will be remembered that an inquiry into war contracts by a special committee in the French Chamber, led to a statement by the Duc d'Audiffret Pasquier, that when the recent war was declared with Germany the French had only 2,050 guns. It seems there were only 236 batteries, representing 2,376 guns, and that waggons were wanted for some of these, and horses. The same report, which publishes these figures, states that the French during the war lost over 7,000 guns, so that there must be some error, unless the enemy carried away a great deal of unserviceable material, guns found in the forts, and pieces purchased abroad, or manufactured during the course of the war. France will have to lay out about £40,000,000 to replenish her arsenals, give weapons, etc., to her new army, and place herself in a position to enter upon a campaign.



Notice to Contractors.

SEALED TENDERS, addressed to the undersigned, and endorsed, "Tender for works at Ste. Anne, Ottawa River," will be received at this office, until noon of THURSDAY, 15th day of JULY next, for the formation of a channel through the shoal below the Rapids at Ste. Anne, Ottawa River.

Plans and Specifications of the works can be seen at this office, and at the Machine Canal office, Montreal, on and after WEDNESDAY, 2nd day of JULY next, where printed forms of Tender will be furnished.

The signatures of two solvent and responsible persons, residents of the Dominion, willing to become sureties for the due fulfillment of the contract, must be attached to each Tender.

The Department does not, however, bind itself to accept the lowest or any Tender.

By order, F. BRAUN, Secretary.

Department of Public Works,  
Ottawa, 28th June, 1873.