

prove of a course that will probably end in producing a very limited number of good officers, and an unlimited supply of pedagogues, nor are we in the slightest degree surprised at the mechanical failures in the Ordnance of the period.

To ordinary mortals, the usual way of obtaining proficiency in a speciality would be to train the individual to its theory and practice, leaving light literature for leisure hours. The system pursued is admirably calculated to make Jacks of all Trades, and masters of none.

The following text of the award of the German Emperor on the San Juan Boundary question is taken from the *London Echo* of the 30th Oct. last,

"We, William, by the Grace of God German Emperor, King of Prussia &c., after examination of the treaty between the Government of Her Britannic Majesty and that of the United States of America, dated at Washington, May 6, 1872, by virtue of which the above named Governments have submitted to our arbitration the question at issue between them, viz., whether the line of boundary which, according to the treaty dated at Washington, June 15, 1846, after it had been continued westward along the 49th parallel of north latitude to the middle of the channel which separates the continent from Vancouver's Island, shall be further drawn southerly through the middle of the said channel and of Fuca Straits to the Pacific Ocean, should be run as claimed by the Government of Her Britannic Majesty, through the Rosario Straits, or through the Canal of Huro, as claimed by the Government of the United States, in order that we should decide finally, and without appeal, which of these claims is most in accordance with the true interpretation of the treaty of June, 1846, have, after taking into consideration the statement of the experts and jurists appointed by us to report upon the contents of the respective cases, and counter case with their inclosures, given the following decision.

The claim of the Government of the United States—viz., that the line of boundary between the dominions of Her Britannic Majesty and the United States should be run through the Canal of Huro, is most in accordance with the true interpretation of the treaty concluded between the Government of Her Britannic Majesty and that of the United States of America, dated at Washington, June 15, 1846.

Given under our hand and seal at Berlin,

WILLIAM.

Oct. 11, 1872.

This decision is said to have been influenced by the offer of Captain (now Admiral) Prevost in 1859, to accept on the part of the then British Ministry, the Douglas or central channel as a compromise, and that Mr. Bancroft, the United States Minister at Berlin produced a letter of his to Mr. Campbell the agent on the part of the United States making such an offer.

So far as the document itself shows, no reasons are given for a very extraordinary decision. The dicta of the experts and jurists, however, are detailed by some of the

leading journals, and they are ridiculous enough.

What special aptitude the German Emperor or his people had to determine such questions, or what their particular opportunities were for forming a judgment in the matter, can only be told by philosophers of Gladstone's class, but the Holy Alliance has benefitted by the move in no ordinary degree.

#### REVIEWS.

*Blackwood* for November contains the following articles:—

The Parisians—Book II.

The Shores of Biscay.

On a Resurrectionist.

A True Reformer—Part IX.

Montalembert.

La Bruyere.

The end of the Banquet.

On Autumn Manœuvres.

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#### GUN COTTON V. GUNPOWDER.

From the *London Army and Navy Gazette* we take the following: "The vexed question of 'gun cotton v. gunpowder' assumes, daily, features of increasing importance. A series of most interesting experiments has just been conducted in the Royal Arsenal at Woolwich, with the view of ascertaining the relative degrees of effect produced by the explosion of compressed gun-cotton in combination with different proportions of nitre and other compounds, when detonated with 'Abel's electric detonator,' and the results which have been obtained throw a vast amount of additional light upon the varied characteristics of this explosive element. But before commenting upon these results, it may be as well to advert to the nature of detonation in contradistinction to combustion. One of the principal attributes of compressed gun-cotton is, that, when one or more of its discs are detonated by means of fulminate of mercury ignited in a tin tube with a little loose gun cotton at the top, for such is briefly the construction of an electric detonator—it explodes with terrific violence and a loud report, whilst the same discs may be ignited with an ordinary fuse or portfire, and will only fly away harmlessly until they are consumed. Gunpowder on the other hand whether ignited partially or instantaneously throughout the mass, is invariably more or less violent in its action, and, no matter whether the slow-burning or the quick burning natures are made use of the difference, in effects produced is only in degree. By detonation in fact, as applied to compressed gun-cotton, we have a totally distinct action set up to that of combustion, either as applied to gunpowder or gun-cotton, being the result of the violent influence exerted by the fulminate of mercury in the detonator. The forces in this case which are brought into play are so excessive, that the chemical combination previously existing in the compressed gun cotton are destroyed, and the particles assume a fresh arrangement altogether the various elements being separated from one another instantaneously, with great explosive effect. There is no necessity for any combination of the oxygen of the air with the ingredients of the gun-cotton to produce a condition analogous to combustion, a supply oxygen, being instantaneously evolved by the material itself in the act of detonation. Hence, in a word, combustion and detonation are

two separate and distinct conditions. And the results which have been arrived at in regard to detonation are truly surprising. In order to produce any considerable effect with gunpowder, as is well known, it is absolutely necessary to confine closely the explosive agent, in order to form a resisting medium for the forces generated by the powder gases waves to exert themselves against. But gun cotton when detonated, required scarcely any resisting medium, a slight 'tamping' of sand patted over it with the hand being sufficient to ensure a most violent explosion. Solid cylindrical shot 10 in. in diameter, with a small hole drilled in the centre, were charged with a thin column of cotton filling the hole, and weighing about a pound; but although the extremity of the aperture was only lightly closed with clay, the shot were split into fragments by the explosion. Flat discs of compressed gun-cotton weighing one-quarter of a pound were also placed upon iron slabs 1.8 inch thick resting upon hollow cylinders of iron, so as to support the edges but not the centres. A thin tamping of sand some few inches in depth was then piled over the gun-cotton and upon the detonator being fired the iron slabs flew into a number of pieces. This property of gun-cotton when detonated, viz., to form a resisting medium for itself, cannot be too highly estimated.

#### BRITISH COLUMBIA.

Our British Columbia files brings us intelligence of the arrival of Mr. Justice Gray at Victoria, Vancouver Island. He arrived out on the 26th October by the steamer "Prince Alfred," and was received by a deputation of leading citizens, including Mr. Justice Crease, Mr. De Cosmos, M. P., and Mr. Wallace, late M. P., for Vancouver District. The new Judge took his seat on the Bench on the 31st October, having been sworn in by the Chief Justice; and the compliment was paid him by his learned brothers of asking him to deliver the judgement of the Court, in a case which had created some interest. It appears that a murderer named Bell had been tried, convicted and sentenced to death. Application had been made to Ottawa for a commutation of sentence, which was refused, but the Sheriff refused to carry out the sentence, pleading that he had not received the Governor's warrant which, before Confederation, was issued to the Sheriff in such cases. The Court decided that the warrant was not necessary, and instructed the Sheriff to proceed to the execution of the sentence. Mr. Justice Gray travelled via the Isthmus of Panama, in going to his new sphere of labor.

The Italians, says the *London Globe*, are disturbed by reflections on the enormous force to be put at the disposal of the French Government by the new military law, when its influence on the recruiting of the Army is fully felt. By one estimate the number of men whom France will be able to put in the field under the new system will be over three millions. The Italians do not quite like the prospect. Their papers are therefore advocating the immediate extension to the peninsula of a similar system, under which there shall be very few exemptions from compulsory military service, and the period shall be raised from twelve to twenty years. Thus Italy shares in the universal fever. Although M. Thiers has counter-ordered the mines that were being constructed on the Italian frontier in connection with the defence of the French side, it is evident the Italians do not breathe freely, as they contemplate the prevailing militarism of the Gaul.