

main at peace, and it will require all the patriotism we have, to enable us to hold our own a few years hence. But, fairly considered, the progress of the last five years in the organization of our National Army is full of promise for the future, and we doubt not that the present year will see such measures of improvement as to satisfy the most exacting that as much as possible has been done within a given time. Let us hope, and persevere, and let the officers of the Force realize fully that they are the officers of an "Army"—not of a Militia and Volunteer Force, in the usual acceptation of the words.

It may seem a trivial point to urge in this connection, but we think that more importance should be attached to the, at least, yearly issue of a Canadian "Army List." A feeling of brotherly connection, even where personally unknown, as well as of pride in the service to which they belong, is fostered more than is generally thought, among men who find their names associated year after year in such a publication, but it should be differently arranged to those hitherto published, and it would be a discredit to officers if a proper and reliable List should fall to the ground for want of patronage at a sufficient price.

CHEESEPARING BY THE GLADSTONE GOVERNMENT.—The following extract from an English religious newspaper, the *Rock*, furnishes a brilliant example of economy as understood by the Gladstone Government, the slaves of the manufacturers, who (not the aristocracy) are the real grinders of the faces of the British poor.

The "Royal Military Asylum," Chelsea, is, as is well known to Londoners, an institution founded by the Duke of York, for the education of 500 orphans of soldiers. It is admirably conducted on military principles, and is the one thing that sheds a lustre on the memory of the somewhat unscrupulous commander-in-chief. About 50 per cent of the pupils enter the army on the completion of their term of scholarship:—

"Wishing to see the boys at public worship, we went last Sunday to the School Church—a very plain structure at the North West corner of the grounds. A stained-glass window over the Communion Table is the only particle of ornament it possesses. The north gallery was occupied by the servants of the asylum, who looked quite smart in their scarlet gowns and blue ribboned bonnets, and the bright uniforms of the drill sergeants and other officers were conspicuous in the midst of the few civilians who were present. At a few minutes before eleven, the lively strains of the brass band playing a march were heard in the distance, and presently the little soldiers made their appearance with the jaunty step imparted by the music marking the progress to their respective seats. We were very much surprised to find them dressed in short loose coats of rough blue material, which detracted very much from their usual picturesque appearance. We missed the little red jackets and thought the children looked more like little sailors than soldiers. The red jackets are now only worn on fine days, the

economical arrangements of the Government not having spared even those little boys. As some little saving could be effected, appearances were disregarded."

THE WOOLWICH INFANT.

The trials of the 35-ton gun to determine the size of the bore and some other details having passed the preliminary stage, the question arose as to the most suitable carriage upon which to mount it for naval purposes, the gun having been especially designed for the armament of the new iron-clads. Arrangements were therefore made for the gun to be fired on Thursday week at the proof butts adjoining the Royal Arsenal from a carriage constructed for H. M. S. ship *Decastation*, armor-plated turret-ship, and a platform erected for the purpose. This carriage is massively built of wrought-iron plates, having one bracket considerably longer than the other, as it is designed to put two 35-tons into each turret, and the long bracket on one gun carriage will correspond to the same one on the opposite side of the other, so as to suit the shape of the platform upon which the guns recoil. Considerable changes have been made in the "saddle" and other apparatus for effecting the "muzzle-pivoting" arrangements. It was essential that the saddle itself, upon which the entire weight of the gun depends, should be constructed in the strongest possible manner. As, however, it was found impossible to forge so large a mass in one piece, the jaws of the saddle and the trunnion blocks have been manufactured of cast steel. In the sides of the brackets, and directly underneath the trunnions of the gun, are huge wrought iron slots for the saddle to rest on. These are removable at pleasure after the weight of the gun has been lifted off them, and smaller ones can be inserted in their places, thus lowering the axis of the trunnions. The saddle itself is raised or lowered by an hydraulic press immediately beneath its centre. Another hydraulic press is situated below the rear of the brackets, which elevates or depresses them, thus raising or lowering the breech of the gun. Hence it will be seen that the axis of trunnions and the breech of the gun can be elevated or depressed to any required angle, while the muzzle of the gun remains in the same constant position. This is the principle of "muzzle-pivoting," and through its agency we are enabled to dispense with the necessity of having large portholes. Connected with the rear rollers of the carriages are two eccentrics and an endless chain, by which the brackets when elevated in rear are thrown entirely upon the rollers, enabling the gun to be brought forward after its recoil with the greatest possible ease. The slope of the platform on board ship will be three degrees. The carriage will be fitted with Scott's compressors to both brackets, in order to check the recoil, which it is anticipated, will not exceed six or eight feet. This is a most cleverly contrived apparatus. A stout bar of wrought iron in the shape of a horseshoe passes through the base of the bracket and round the platform slide, and by means of a hand wheel and screw grips tightly the compressor plates beneath the platform. For Thursday's experiments the carriage was mounted upon a steeply inclined wooden platform with iron "ways" having a buffer of wood attached beneath which would come in contact with an enormous block of timber connecting the slides at the summit of the platform in case the gun should attain that position in its recoil.

This precaution, however, turned out to be quite unnecessary, for the "Infant" in its most violent struggles did not get more than 8 ft, up the inclined plane, which was at an angle of 8 degrees. A number of persons were assembled to witness the experiments. Sir David Wood, the Commandant of the Garrison, and all the heads of department in the Arsenal, together with many other officers holding various positions, anxiously watched the progress of affairs. The result of the firing was most satisfactory, both as regarded the behaviour of the gun and carriage. The initial velocity of the projectiles registered during the experiments was exceedingly good. With 115lb. of pebble powder (Waltham Abbey) 1284 feet in one second was obtained, while with 120lb. of the same material the high figure of 1322 was reached, being two feet in advance of any hitherto registered with this powder. It has not been decided that the calibre of the 35-ton gun is not to be increased over the 12 inches, the result of the series of experiments, which terminated at three weeks since, having been so entirely satisfactory to the committee.—*Broad Arrow.*

REPLY TO SIR CHARLES DILKE

The annual soiree of the members of the Mechanics' Institution of Halifax, England, was held on the 4th inst., in their hall which was densely crowded. The chair was taken by the Hon. Robert Lowe, Chancellor of the Exchequer. After the reading of the report and the distribution of certificates to the successful students, Mr. Lowe delivered a long address on 'Primary Education' embracing reference to current topics. Referring to Sir Charles Dilke's attack on royalty, he said:

A member of Parliament, of whom I have no desire to speak in terms of displeasure, has seen fit in the exercise of his duty to call the attention of a public meeting in the north of England to the manner in which the Government has dealt with the Civil List to the Royal Household, and to the private conduct of the Queen. I do not deny, and shall not take upon myself the duty of censuring that gentleman for bringing forward such things. It is a matter in his own discretion and judgement, but it happens that I am the person upon whom it devolves to answer for the department which administers the Civil List, and for myself I shall throw no obstacle in the way of a most searching investigation to any member of Parliament who may demand it in the proper manner, and to any member of Parliament who may seem fit to bring it forward in the proper quarter. The member I have referred to is one of whom I have some knowledge. I esteemed him as a man of promising abilities and I think it a pity he did not devote those abilities to what I conceive a better purpose. I may remark that I think his conduct deserves very severe censure. Having formed the opinion he had—and no doubt he has formed them conscientiously—it was his duty to raise the question in a proper place.

Of course it is easy to come before an audience not versed in the matters to be brought before them, and to create cheers by reading over a list of the quaint offices of the Royal household which had been handed down from reign to reign for centuries past. It is very easy to make strong, rash, and I will say unfounded statements before an audience in which no one was prepared to dispute the truth of these statements, or to make any reply. I submit that when such charges are to be deliberate