

disposed to dispute. Many, however, may feel inclined to ridicule the idea of "naval drill" in inland schools. On this point one of Her Majesty's School Inspectors, Mr. Tuffnel, cites the opinion of the late Recorder of Doncaster—Dr. Hall:—

"When I first saw," wrote Dr. Hall, "the contrivance (a ship rigged with masts and ropes at a school) at Mettray, in France, I could not refrain from intimating a doubt as to its practical utility. But I found that I was quite mistaken. In France the experiment was tried at the suggestion of the Minister of the Marine himself, and the youths so exercised are received on board ship as sailors, not as lads. At Ruysselede the success is still more striking. In the course of last year, the second of the experiment, no fewer than sixty-four colonists (youths educated at the institution) entered the mercantile marine and the military marine, and their conduct has been so superior that the establishment is overwhelmed with applications from ship-owners."* The success of the naval drill, wherever it has been tried in English schools, has, as might have been expected, been quite as satisfactory as in France.

Gain to the Productive Energy.—The gain to the productive energy of the country, resulting from the drill system, is a subject of which the importance cannot be overrated. In an opening address delivered by Mr. Chadwick before the British Association for the Advancement of Science, in 1862, he returns to this topic, and discusses it in considerable detail. In that address he shows conclusively the immensely superior efficiency of educated labor over uneducated labor, of those educated under his system over those brought up under the old routine. "On the practical testimony," he says, "of such men as the distinguished members of this association, large employers of labor, Mr. W. Fairburn and Mr. Whitworth, it is established that for all ordinary civil labor, four partially trained or drilled men are as efficient as five who are un drilled. In other words, considering the educated child as an investment made by the State, for a trifling expense of about one pound per head, the productive power of that investment may, by physical training, be augmented by one-fifth for the whole period of working ability. Some distinguished authorities," he adds, "consider that he understates the gain of productive power when he put it down as one-fifth, and assert that it is practicable to give to three men by this system the working-power of five." Now, what does this mean? It means that we can, by a change of our mode of education, add as much to the productive energies of the nation as if we had added one-fifth, if not two-fifths, to the number of the working classes, and this "without the expense of educating the additional one-fifth, feeding, clothing, housing them or administering their public affairs."

School Drill and Natural Defence: Upper Canada.—We now proceed to say a very few words upon the last topic which we propose to discuss in connection with this subject, namely: the bearing of the half-time system with military drill on the question of our national defence.

From the Reports of the Chief Superintendent of Education for Upper Canada, it appears that the number of boys attending the Common Schools in that part of the Province was, in 1860, in round numbers, 172,000; in 1861 the number was 178,000; in 1862, 185,000; in 1863, 192,000; in 1864, 198,000; and in 1865, 204,000.

The number of boys attending the Common Schools in Lower Canada, for 1860, is not stated in the Report of the Superintendent for Lower Canada. The total number of pupils, however, is given, and assuming the proportion between boys and girls to be about the same as in Upper Canada, the number of boys attending schools that year may be put down at about 80,000. The total number of boys, therefore, in Upper and Lower Canada, attending school in 1860, would be about 250,000 or a quarter of a million.

* In the number of *The Athenaeum* for December 31st, 1864, there is an interesting account of the results of the "half-time" system in the children's establishment at Limehouse in England:—

"The school is conducted on what is called 'half-time,' a system much recommended, and found to work extremely well. Mr. Moseley, the intelligent and earnest superintendent, gave it as his decided testimony, that the children came to their lesson-books brighter and fresher and give more close and efficient attention when they are on half-time. The children are in school on alternate days, half of them being in the school, and the others employed in industrial occupations. The children are not occupied more than eighteen hours in the week in close book-instruction, the other portion of their time being employed in industrial training.

"The addition of physical training is a wonderful improvement in the system of education. The influence of the drill gives the boys self-respect; they become smart, active, clean-limbed, adroit; they acquire the control over their own limbs. Systematized drill gives the boys, early, an initiation into the virtues of duty, order, obedience to command, self-restraint, punctuality, patience,—no small addition to the value of a man's heritage in himself! Cheerfulness and prompt obedience seemed the characteristics of the children, both boys and girls."

Assuming, however, one-fifth of this number to be, from physical or other causes, incapable of drill, and this is, doubtless, an over-estimate, there would still remain 200,000 boys undergoing drill in our common schools—if the system was universally carried out. At the end of ten or twelve years from the first inauguration of such a system in Canada we should have, probably, half a million of youths who had undergone a regular course of drill; a very large proportion of whom would be capable of bearing arms, and, should the emergency arise, could be readily converted into good and serviceable soldiers. Our common schools would thus be made the nurseries of our militia.*

Our duty in this matter.—It is not very long since the heart of our people was stirred at the near prospect of a struggle between the Mother Country and the States. That struggle has been for the present happily averted; but who shall say for how long? It is to be hoped that if the danger which then threatened us should hereafter actually come upon us we may not be found as hopelessly unprepared to meet it as we then were. And, assuredly, we shall not be unprepared for such an emergency, if, we shall have previously established military drill as part of the ordinary instruction given in all our public schools.

It has been wisely said by one of our ablest statesmen, referring to the recent threatened difficulties with our neighbours: "That it is the first point of patriotism with us to create an enthusiastic attachment among all orders of men for our Constitution." If this be the first point of patriotism, I should say that the second is to give all orders of men in our State the skill and ability necessary to enable them to stand forth confidently in the hour of danger in defence of their altars and their homes.

It is to be remembered, too, that within the last few years the position of Canada, both as regards the Mother Country and the States, is entirely changed. To England we had been in the habit of looking with confidence for protection from every danger, and from the States we thought there was no danger to be apprehended. Now, on the contrary, we have received warning from England that we must take measures to protect ourselves, and, at the same time, we have received warning from our neighbors that we need to do so. It is this peculiar crisis in our colonial history which gives to the question of our national defences such paramount interest at the present moment. In the energy and zeal with which, on the recent occasion to which we have referred, men of all ranks, from one end of the Province to the other, responded to the call to enrol themselves for the defence of the country, we have an earnest and a proof of the spirit which animates the people. It will be the wisdom of our statesmen to foster and encourage this spirit of patriotism, and to turn it to the best account.

What our Neighbours are doing.—Our neighbours across the lines have not been slow to perceive that the best way of promoting the growth of patriotism and a love of military life among their citizens is by following out the Chadwick system, and making military drill part of the ordinary business of their schools. The system has in fact been in practical operation for the last two or three years in many schools and colleges in the Union. The Governors of the States of New York and Massachusetts have, in their addresses to the State Legislatures, called attention to the subject as one of momentous importance. Educational reformers have advocated it, and measures have been introduced (if they have not been actually passed) into the Legislatures of certain States, to make military drill compulsory on all boys above ten years of age attending the schools which receive aid from the public purse. "*Fas est ab hoste doceri.*" We have learned from our neighbors many a lesson, which had far better been left unlearned; let us learn from them, in this at least, one good and useful lesson. A senator in Massachusetts lately, giving his views on the importance of military studies in colleges, says: "Let the drill be regular and compulsory, taking the place of the very irregular and inefficient physical exercise now in vogue, and our colleges would be vastly improved in their educational form, and the commonwealth would, in a short time, have a numerous body of intelligent men, well skilled in the military science and art, who will become teachers in our lower grades of schools, and be competent, when the alarm is sounded, to lead our citizen soldiers in the field."

What is doing in the Canadian Schools.—In view then of the present crisis of our national history, it is satisfactory to know that in Canada some steps are being taken towards "putting our house in order." In both sections of the Province the able Superintendents of Education have, of their own accord, established military drill in a large number of the grammar and common schools throughout the country. In the *Journal of Education* for Upper Canada, many

* Drill when thoroughly acquired in youth, would, like swimming, riding, or skating, remain a permanent acquisition. So true is the maxim:

"Quo semel est imbuta recens servabit odorem testa tui."