

caused to be crowned with success a task which had otherwise failed. Also, in another instance of the sailor who flew a kite over the top of Pompey's Pillar, by which means a party of British officers succeeded in getting a rope over the top, and climbing up, discovered that it had once been surmounted by a statue. It is the practical man who, when a gaping wound in an arm or leg is spurting out the life-blood at a rate which blanches the cheeks of other and less practical bystanders, places his thumb on the artery and directs the applying of a knotted handkerchief as a *tourniquet* above the wound, and thereby saves a life. It is the practical man who gives a prompt emetic in a case of poisoning, never at a loss so long as there is warm water, or any of the dozen other things to be had. It was the practical woman who, when threatened with a watery grave by means of the swamping of a boat in a storm, put her feet in the bottom hoops of her crinoline, and made the skirts a buoy to support her instead of a weight to drag her down. It is the practical person who is ready to roll in a woollen shawl or coat the terror-stricken woman or child whose clothes have caught fire. It is not, "mere presence of mind" that leads or permits one to do these things in emergency. Any phlegmatic person may have presence of mind; but unless he is practical, absence of body is much better in case of danger, and just as good in others' need. It is the practical man who can rig up a tool to do a special and unexpected work in a country town, or, in a neighbouring wharf, to repair a disabled steambot; who can splice, when snapped, the heavy shaft of an ocean steamer; the practical general who always feeds his army when on a march, and allows no rivers to block his progress, if he can make a pontoon or other temporary bridge.

Now, in contradistinction to the practical person, let us recall some of the unpractical people. It is the unpractical person who spends his own time and substance and his neighbours' in seeking after perpetual motion, or, in other words, making a machine to run itself, and supply the power lost through friction. Another unpractical person is the one who places four turbines in a line horizontal to get out of the second, third and fourth each as much power as the first developed, while claiming that the first utilizes or develops 80 per cent. of the theoretical power. It is unpractical to drive a nail in wood with the wedge end lengthwise of the grain, so as to split, instead of crosswise, so as to cut and penetrate. He is unpractical who bleeds to death when cobwebs are plenty to staunch the blood. It was a practical monkey who, when tied by the collar by a rope just too short to allow him to lay hands on the mantel ornaments, "backed up" at the coveted treasures and deftly removed them with his hind feet; it was not a practical master who did the tying, nor was it a practical woman who painted her cellar steps from top downwards, and found herself a prisoner.

The foregoing are familiar instances of what is practical and what is not, and will show that to be practical implies keen perception, retentive memory, good judgment, the facility of combination and cool and prompt action.

By Webster we further find that practical training implies "To teach and form by practice;" "to exercise." The necessity of practical training is obvious. It saves time, money, lives, material. The application of the words is not to be restricted to any particular

trade, but to all; it is applicable to man, woman, boy, girl, father, mother, child. There is millions in it to the professional man, farmer, miner, laborer, artisan. It is of equal advantage to the employer and the employed. It has been the saving of nations, and the want of it has been the discomfort of others—as in the case of the late Franco-German war, in which the practical training of the German nation gave them the advantage. Then why should that system of education which makes one nation the vanquisher of another, equally powerful in numbers, be almost ignored in our public schools? "Practice makes perfect," it has been wisely said, but it does more. Practice in one occupation not only gives deftness, readiness, neatness and strength in execution in one line, but it gives the power of new conception, of invention and application.

Let it not be supposed for one moment that in advocating the necessity of practical training afterwards, that we ignore theoretical teaching, or we advocate a reduction or change in the usual course of school studies to those whose parents desire their children to follow up, but there is a class, and a numerous class, who leave school with a mere superficial knowledge of the higher studies which is so very superficial as to be of no practical use to them in after-life—in fact time lost never to be recalled; when, had they been permitted to devote the time engaged in endeavoring to learn a smattering of classics, or the higher branches of mathematics, to practical subjects of service to them in any mechanical trade, or in agricultural pursuits, the advantage to them and the community would be tenfold. We feel that the present system of public school education in Canada requires a radical reform, and that it is not adapted to the mass of the children who receive their education at the public schools.

By practical training, in contradistinction to practical teaching, we mean *useful* training, after leaving school, from books, from observation, from self-culture, and the exercise of our reasoning powers; such training, in fact, would, if taught, save many from losing money, time, patience, and even senses, in seeking to do impossibilities, or losing themselves in a net work of absurdities, without any regard to fixed rules and laws, and which they could have thought out in a common sense way, or read in any common sense book.

Practical training, therefore, means useful training after leaving school or college, from books, from practice, from observation, and, particularly, from self-culture. The mechanic who cannot make working drawings as well as work from them is at a disadvantage. The architect who can draw a chase and beautiful design of building, without being able to carry out his work in all its details, to supply the working drawings, to know when the work is properly executed, and have a practical knowledge of construction, is, in reality, but a mere draughtsman. The inventor who cannot put his thoughts in lines, loses half the value of his invention. The man of general practical information always commands a higher salary than his equal in all other respects, and the man who only knows one thing can never improve or increase his knowledge nor apply it, save in one way. The man with practical training will save money for his employer, receive promotion in his line, and may eventually become an employer himself. Practical teaching in the first place should be made compulsory in all public schools. Every school teacher should be able