## V. Correspondence of the Journal.

### 1. THE TEACHER IS NOT A DESPOT.

Various are the views of outsiders about our business. Some, reflecting on the continual exercise of our patience, compare us to saints, while others, as the American writer in this Journal for September, call us despots. With these conflicting opinions, we hardly know what we are; for my part, I have no objections in harmonizing both views, and am willing to be called a *despotic saint*. In judging an artist, some regard should be had to the times and country in which a man lives; the great national sentiment is apt to permeate his discourse, and, in subjects embracing government of countries and schools, an acute observer can, sometimes, determine, by the *timbre* of the article whether the writer is an Englishman, a Frenchman, or an American. The above writer compares a school to a miniature republic—the teacher representing the president, and, I suppose, the boys would be "fellow citizens." An Englishman would see a small king in the teacher and subjects in the scholars, owing unconditional obedience. An Indian would liken the school to a *tribe*—the teacher to a chief, haranguing the boys on hunting, fishing, and fighting. Although all unite in the necessity for order, yet there is difference about the means. A European's motto is *you must*, an American's *if you will*. The American *lectures*; the European *leathers*. For bad boys and bad men, the American says "moral suasion;" the European says, "the birch for boys and the bayonet for men."

If we are despots, we are made so by necessity, on us is imposed the work of parents, namely:—breaking their bad boys. In this unpleasant business, a good teacher, like a good magistrate, judge, constable, or hangman, may be justly and necessarily severe, but a good teacher never can be cruel.

The same writer also says, "the despotic method may be approved by the superficial and brutal." Now, a despot is a cruel master, and, since anyone may be a teacher, then everyone is cruel. Since everyone approves his own method, then everyone is superficial and brutal! But it is not only unfair but untrue to call our bad actions brutal—we do thousands of things brutes never do. We say a man is "beastly drunk"—beasts are never drunken; would that all men would behave like brutes.

In both the Divine Law and the Civil Law, pain is the last remedy; and with every competent teacher it should also be the last remedy. Pain should never be inflicted for revenge, it should become rather a preventative of future bad actions than a retribution for past ones. And it is greatly to be regretted that its power as a preventative depends altogether on its certainty and intensity. No inhuman man is fit to be a teacher, and it is a great public error to suppose that the popularity of the best teachers depends largely on severity. Cruelty, or great severity, instead of being a sign of a good teacher, is the sign of a bad one; bad ones that lack tact, if they keep good order, always employ despotism. I often think that none but fathers and mothers are fit to become teachers—the parental sympathy one has for his own children greatly mitigates the austerity sometimes used by those not yet acquainted with a father's love. Many and many a time have I lightened the down-coming stroke, or not given it at all, when I saw the tiny but mischievous little white hand of another man's child, held out under the hard rough rod.

JOHN IRELAND,
*Guelph, P.O.*

### 2. CHANGING TEACHERS.

*To the Editor of the Journal of Education.*

DEAR SIR,—Would you be kind enough to permit me through your columns, to say a few words to some of the Boards of Trustees in rural School Sections, about the engagement or re-engagement of teachers. Few of our Trustees really know what is lost by changing teachers. One or two of the rate-prayers may have some small objection to the teacher, and on that account must have a new one or they will withdraw their children from the School. Another may think the teacher is too particular, his children do not care for going, and therefore the old one must be changed. Now, if they would but consider for a moment, how much time must elapse before the new teacher can find out the disposition of each child, and how long it takes the children to get the teacher's ways, I think there would be far less grumbling and nibbling at teachers. At least two months is taken up in this manner, and very often the whole year; and then you have lost your money, and your children have lost a year's study. A great loss this to farmers' children, especially some of the older ones, who can only attend School a few months of the year. Now that the time for engagement or re-engagement of teachers is drawing near, I would say to intelligent Boards of Trustees to ask themselves the following questions: Is our teacher moral? Is he a gentleman in and out of the School-room? Do the pupils like him? Can he manage the pupils in the School? Does he combine firmness and kindness in his government of the School? Is he punctual?

Now, if they can answer these questions satisfactorily, then I would say, by all means re-engage your teacher. Such a teacher is cheap at any price.

RURAL TRUSTEE.

## VI. Mathematical Department.

Solution of question proposed by "Clericus."

$(60^2 - 20^2) \div 2 \times 60 = 26$ feet 8 inches from stump, or 33 feet 4 inches from top of the pole.

If $x$ = the No. of feet from the ground; $60 - x$ = the No. of feet broken off. Then we have $x^2 + 20^2 = (60-x)^2$, and $x = 26\frac{2}{3}$. The 35th Prop. of III Book gives the geometrical explanation.

Correct and elegant solutions received from the following correspondents:

J. A. P. Clarke, Davenport; James Millar, Abingdon; W. R. Telford, Port Dalhousie; Con. O'Gorman, White Lake; David Robb, Birmingham; R. E. Clapp, Speedside; D. J. Doran, Cathcart; S. Moag, Smith's Falls; S. R. Brown, London; W. S. Howell, Sidney, near Belleville; Geo. K. Powell, Mimico; W. H. Colles, Hanover, and E. F. Langstaff, pupil, Guelph High School.

Correspondents are respectfully requested to answer the following problems, as soon as possible. Address, Mr. P. Doyle, Ottawa.

1. The base of an isosceles triangle is $a$, and a segment of one of the equal sides, made by a perpendicular from one of the base angles on the opposite side, is $b$; required the sides.

2. Find the sides of an isosceles triangle inscribed in a circle, whose radius is $r$, having the base equal to one half of each of the other sides.

3. In the figure to I. 5 book of Euclid, join $FG$; then $FG = 150$; angle $BGF = 22^0$, and the difference between the angles $FCG$ and $BGC = 40$; find the parts of triangle $ABC$.

### SOLUTION OF QUESTION NO. 8, IN NATURAL PHILOSOPHY PAPER FOR FIRST CLASS, JULY 1874.

BY J. DONOVAN, *Teacher, S. S. No. 11, Dover, Kent County.*

As the segment containing the condensed air is similar to the whole cone, their columns are proportioned to the cubes of their heights; and their heights are as 84 : 91=12 : 13; ∴ the volume of the segment $= (\frac{12}{13})^3 = \frac{1728}{2197}$ part of the volume of the cone; that is the air is condensed into $\frac{1728}{2197}$ part of its original volume ∴ its pressure is $\frac{2197}{1728}$ times its ordinary pressure (Marriott); that is $\frac{2197}{1728} \times 15 = 19\frac{41}{576}$ lbs. per square inch = pressure exerted on the surface of the liquid in the cone per square inch by the condensed air.

On the surface of the liquid within the cone take any area P equal to one square inch; and in the liquid surrounding the cone *in the same horizontal plane with* P *take an equal area* Q. Now, the pressure on P is = to the pressure on Q, because they are in the same horizontal plane and in equilibrium; but the pressure on P is that exerted by the condensed air, which has been shown to be $19\frac{41}{576}$ lbs.; and the pressure on Q is the ordinary atmospheric pressure (15 lbs.), + the weight of 84 cubic inches of the liquid (it being 84 inches beneath the surface of the liquid surrounding the cone.)

∴ 15 lbs. + 84 cub. inches of the liquid $= 19\frac{41}{576}$ lbs.

∴ 84 cubic inches of the liquid weighs $4\frac{41}{576}$ lbs.; ∴ one cubic inch of the liquid weighs $4\frac{41}{576} \div 84 = \frac{2345}{576 \times 84}$ lbs.. But 1 cub. inch of water weighs $\frac{1000}{1728 \times 16}$ lbs., and as the specific gravities are proportioned to the weight of = volumes. ∴ specific gravity of liquid $= \frac{2345}{576 \times 84} \div \frac{1000}{1728 \times 16} = \frac{2345 \times 1728 \times 16}{576 \times 84 \times 1000} = 1.34$. G. P. Y.

## VII. Biographical Sketches.

### THE LATE JOHN SANDFIELD MACDONALD.

The monument to the memory of the late Hon. John Sandfield Macdonald, which it has for some time been understood was under preparation, has for some weeks past been in its appointed place in the St. Andrew's Church burial-ground, Cornwall. This monument, as the inscription upon it indicates, was the spontaneous offering of the honourable gentleman's personal friends throughout