

say, that is, tends to increase the width of the slice cut off by the coulter, the bridle is shifted to the left by moving the pin into another hole; when it goes out of the land, as it is called, that is, diminishes the width of the furrow-slice, the pin is moved a hole or two to the right, until the plough has no tendency to deviate to either side. If it inclines to rise out of the ground, the ring is shifted in the iron bridle, and placed in a hook or notch higher up; if, on the contrary, it dips too deep, the ring is hooked lower. Thus a plough may be made to go straight and at a regular depth, without any more force being applied to the stilts than is required to counteract inequalities in the land, or accidental obstacles, such as stones or roots, which might throw the plough out of the ground. When the soil is of unequal texture, it is useful to have a small wheel connected with the fore part of the beam, so as to prevent its dipping downward, which would require a great pressure on the stilts to keep the point of the share up, and thus increase the friction of the sole on the ground, and, consequently, the labour of the horses. In the Rutland plough, two wheels are connected with the beam, one of which runs in the furrow to the right, and the other on the unploughed soil to the left. When the plough has been well adjusted, and the larger wheel runs in the angle of the furrow, it acts as a gauge to regulate the width of the slice, as well as its depth; in very uniform soils without stones, the plough, when set in the proper direction, will make a very straight and even furrow, parallel to the one in which the wheel runs, without any person holding the stilts; so that all that is required is to turn the plough at the end of each furrow, and set it into the proper line to form the next. As this admits of a very correct adjustment, no unnecessary force is required to draw the plough, and hence this plough appears to be the easiest for the horses; and if the wheels are not very heavy, and the plough is of a good form, it certainly requires less power to move it than many which are without wheels. There are some very irregular and stony soils, where a common swing-plough can scarcely be kept steady without the help of wheels, and where it would not be so convenient to have the beam fixed on the wheels. In this case, a separate carriage is necessary, that the ploughman may have a fulcrum on which he can raise his plough, or turn it to either side to avoid any considerable stone or other obstacle. As a general rule, it may be safely asserted that a slight but strong swing-plough, in the hands of a clever ploughman—with one wheel in particular soils, but, in general, without any wheel—will effect its purpose with the greatest precision, and the least exertion of the horses drawing it. Theory and practice agree in this; and if any experiments appear to throw a doubt upon it, we shall probably find some circumstances which have influenced the result, when wheel-ploughs have appeared to require the least power of draught. But wheels have one advantage—they will enable an inferior ploughman to make better work than he could possibly do without them; and that, too, with less labour to the horses, because, from his want of skill, the swing-plough would be continually subject to sudden deviations, requiring him to use his strength to counteract them; and each exertion of the ploughman adds to the labour of the horses.

The numbers in the following table show the comparative draught of the same ploughs in different soils; they are from Mr. Pusey's experiments:

Trial 1. Sandy loam.....	17½	stone.
" 2. Clay loam.....	47½	"
" 3. Loamy sand.....	16½	"
" 4. Strong loam.....	31½	"
" 5. Clay loam.....	28½	"
" 6. Moory soil.....	20	"

"Without entering into any comparison of ploughs differently constructed, it is evident that the shape of

the plough must vary with the nature of the soil which it is to turn up. A light soil must be shovelled up; a mellow one may be turned over with any kind of mould-board; a very stiff, tenacious soil, which adheres to any surface pressed against it, will be more easily turned over by a few points of contact which do not allow of adhesion. Hence the point and turn-furrow have been made of all imaginable shapes, and while one man contends for a very concave form, another will admit of nothing which is not very convex. That plough will, no doubt, have the least draught which is best suited to the soil which it has to move. The lighter the plough is, consistently with sufficient strength, the less draught it requires, all other circumstances remaining the same. Lightness and strength combined are, consequently, great advantages, and if a very light plough does its work as well as a heavier, there can be no doubt that it is preferable. Durability is nothing compared with the saving of one horse in three; it is cheaper to have a new plough every year than to keep an additional horse all the year. If a wooden plough is found to be more easily moved than an iron one, there can be no doubt which should be preferred.

### A MUNIFICENT PROPOSAL.

We learn from the *Journal of Education*, that the Chief Superintendent of Schools for Upper Canada, has received a communication from a gentleman in England, generously offering a special sum of money, to be placed at Dr. Ryerson's disposal, for the noble purpose of opening 500 new schools in the western portion of the province, "for a sound religious and scientific education." Agriculture, it is suggested, should form a part of the routine of study to be pursued in those schools. Sincerely do we hope, that so valuable and patriotic an object may be realised. If we were to enter upon a tour of agitation, our motto should be, EDUCATE, EDUCATE, EDUCATE. For upon "a sound religious and scientific education" depend alike the happiness of individuals and the prosperity and safety of the state.

### FIFE'S SPRING WHEAT.

Otonabee, Colborne District.

To the Editors of the *Agriculturist*.

MESSRS. EDITORS,—One of our farmers having been so fortunate as to introduce a new kind of wheat into this township, of which a brief notice was given in the *Cobourg Star*, 12 months ago; I trust a more full account of it may not be unacceptable to your readers, as from its tendency to resist the effects of rust, and its adaptation to low black soils; it requires only to be known to be extensively cultivated and highly valued.

Eight years ago Mr. David Fife having a friend about to revisit Scotland, requested if an opportunity occurred, that he would forward to this country a small quantity of wheat from some of the northern ports of Europe. On landing at Glasgow he found a vessel discharging a cargo from Dantzic; having procured a portion, he sent it to Mr. Fife, who sowed it the spring following, and it came up various kinds, as might be expected, and the whole was affected by rust, except this variety, of which there was but five ears, and two of them were destroyed by cattle, yet from the remaining three ears he raised the third year half a bushel; from the produce of this he supplied some of his friends with a few bushels, and it began to be noted for not rusting, and one person had twenty-eight bushels from one bushel sown. Next year the Agricultural Society introduced the Club