

## Emplements of Husbandry.

### Introductory.

Nothing is more interesting than to spend an hour occasionally in looking back on the manner in which the early farmers of this world cultivated their estates, and tracing the progress made from age to age since the ancient Israelite tilled with his wooden scraper and "head" ox-yoke, down to these palmy days of tripple furrow ploughs and six-thousand-dollar steam-cultivators. The path of improvement was a long one; but if slow, it was still onward—and in the last fifty years the march of progress has been greater than in the sixty centuries that preceded them.

In all countries the improvement in implements of husbandry has of late years been very great—but in no part of the world has it been so great as on the continent of North America. A new country, dependent at first on other lands for its machinery, is unfettered by old customs and prejudices; and its people are apt to look keenly when importing for the article best adapted for the special work to be done, rather than for that which common use and want has accepted. And when home manufactures spring up in opposition to the imported implement, the mechanic strives hard by improvements on the old articles to meet local ideas and suggestions, and thereby distance his foreign competitor. In North America he has every chance in his favor of doing this. Large landed estates are here not numerous; fifty, one hundred, one hundred and fifty, and two hundred acre farms, are the rule all over the continent. On these farms, the lord of the manor is the farmer in occupation; and he is his own bailiff, ploughman, and herdsman. He is up with the morning sun and stands at the head of his 'hired help' as the master power in all the operations of the farm. He sees the work done; he sees how it might be done better; he sees wherein an implement fails—he is interested in the defect being remedied, and he hastens to the machinist and suggests the idea which is elaborated into a valuable and permanent improvement.

In Canada our farmers, blacksmiths, and implement makers have done their full share in this work of progress. It is true, they have not only invented, but availed themselves liberally and promptly of the inventions of our friends across the lines and across the seas; and these improvements have been most cleverly applied. As a rule agricultural implements are turned out in Canada in a style of workmanship that for strength, simplicity, and finish is worthy of all commendation.

The implement manufacturer of North America has another great advantage over his competitor across the Atlantic, in the higher rate of wages paid here and the difficulty even then of getting a sufficient supply of skilled labor. The result is a steady and ever increasing demand for implements of all sorts by which labor can be economized—and when a new implement or new improvement of this kind is announced the demand is at once enormous and the profits remunerative. The mowers, reapers, and thrashing machines of the present day, when contrasted with those of but a few years back, give ample demonstration of all this. And the work of improvement still goes on as steadily and satisfactorily as ever.

In assuming charge of this department of the CANADA FARMER, it is the intention of the writer to commence his work with a brief description of the various agricultural implements now available to the Canadian farmer and horticulturist. Those manufactured in Canada will of course, receive primary attention—but where advantage can be gained by importation from the United States or Great Britain, such implements will be described and when possible illustrated. All new inventions tending to reduce labor will be duly noted and the improvements from time to time made will not be forgotten.

### PLOUGHS.

We begin our series with the first implement of importance to the farmer—viz., the plough. And amongst our hundreds of thousands of ploughmen, how few there are who really know how to perform their work properly! How many are satisfied with the most erroneous impression that all that is necessary is merely to turn over the largest area in the shortest time! When the country was new, and the soil retained all its natural strength and elements undisturbed, this notion might be tolerated; but as crop after crop comes to be raised off the same ground, a sad degeneration, both in quantity and quality of production, soon convinces the husbandman that good ploughing is of vital importance. What is the plough designed to do?

- 1st, To pulverise the soil to a proper depth for the roots.
- 2nd, To submerge in this pulverized soil all vegetable matters already growing on the surface, in order to facilitate and hasten their decay, and thus convert them into a soil-strengthening manure.
- 3rd, To mix the partially exhausted surface-soil with that which is untaxed, and consequently stronger, below.
- 4th, To divide the land off into "rigs" of suitable width, high in the middle, and rounding down towards the dividing furrows at each side, so as to permit the escape of any surplus surface-water, which would otherwise prove injurious.

On newly cleared land with stumps, the soil is usually so strong that a simple turning over or pulverizing is all that is necessary for two or three seasons. The implement to be aimed at in such a case is one that can be readily handled and guided amongst the extending stump roots—one that can be speedily unearched to skip over a root, and as speedily dipped

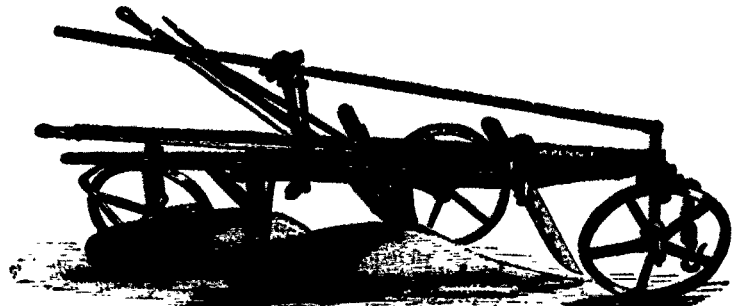
some years ago by a Mr. Hill and called "Hill's Patent," which is now being manufactured in various parts of Canada, and is a universal favorite.

"Fancy ploughing," is that style which is obtained by setting the ploughshare and coulter so that each will form the side of the furrow slightly hollowed, and thus show a fine sharp 'comb' when the furrow is turned over. Ploughs for this purpose should have a long regularly curved mouldboard to turn the furrow easily and evenly without breaking it.

Iron ploughs are mostly used for this purpose, with the irons specially set—making the peculiar kind of ploughing so popular at ploughing matches; although it is a question of grave doubt whether it is the style of ploughing adapted for general use. These same ploughs, however, without the peculiar set in the irons, form good soil ploughs, and are the best suited for forming a seed furrow when the seed is hand-sown and harrowed in. The grain drill is now getting into such general use that this is becoming of less consequence; and we already see the general purpose plough gradually taking the place of its more expensive rival.

The "jointer" or double shear French plough is often erroneously called a subsoil plough. The functions of the two are quite distinct.

The "jointer" is an ordinary plough, with the beam of sufficient length to admit of a small skim plough in front of the other. This skim is set so as to cut not more than 1½ inches off the corner of the turning slice, which it rolls over like a ribbon into the bottom of the furrow. The "jointer" is designed to cover all roughnesses so that a field of clover for instance, after being ploughed down by it for manure, should not show a single green blade. A wheel at the front of the beam serves to steady the plough and regulate the depth. These implements are specially adapted for ploughing down sod, manure, clover or any roughness, and we are glad to observe that they are getting into more general use—indeed many farmers now use them and no others.



DOUBLE FURROW PLOUGH.

into the soil again on the other side of it. In short, the quantity of the ploughing and not the quality is what is looked at in new land. The plough best adapted to this purpose must have a short sole, with short beam and handles, and a quickly curving mouldboard. Two very serviceable implements of the kind, and well known over western Canada, are the "No. 4 Plough" and the "Amsterdam," both of which have done good service in new land. In selecting either of these, or any other of a similar kind, a steel mould-board will be found preferable to a cast-iron one, as being less amenable to the effects of the decayed vegetable matter at the surface.

Next comes the general purpose plough, by which we mean a plough adapted to all kinds of work on a cleared farm; really the most useful one on any farm. It should have a beam of medium length, with the handles so proportioned as to give the ploughman full control over it and his team; a mouldboard with a nice easy curve that will pack the furrow well when ploughing 10 inches deep. In heavy clay or black loamy soils, steel mouldboards are preferable, because they clean more easily and better, whilst in light gravelly or sandy ground, cast-iron ones are equally good and cost less. We notice what we consider a decided improvement in ploughs, becoming general among manufacturers, viz., a wrought iron beam with wooden handles—giving the strength and durability of an iron plough, at a little more than half the cost. It would be a difficult task to select any one or two general purpose ploughs from among the large number manufactured in the country and recommend them as superior to all others; for there is scarcely a district of 15 miles area within the Province, in which ploughs are not made, specially adapted for that district, and perhaps not nearly so well suited for any other. But we may mention one plough, patented

The "double furrow plough" is designed to plough two furrows at once. It is mounted on wheels with lever for raising it out of the ground, when turning at the ends of the furrows, or for regulating its depth. It is worked by three horses and, inasmuch as each ordinary plough requires two horses, making four horses for two ploughs, there is a saving of one horse by using the "double furrow." We are of opinion that this two-furrow implement is a great success, and will soon be in general use over Canada.

We have recently seen a "three furrow" plough, imported from Britain, which was designed to be operated by three horses, but which requires four. In other respects it is the same as the "double furrow," with a third plough added.

Both the "double" and "triple" furrow ploughs are best adapted for cleared farms where there are no stumps or other obstructions, and where the soil is not too heavy.

The "subsoil plough" is designed to follow another plough, and loosens the subsoil without bringing it to the surface—the object being to break the under pan or cake which forms in land that has been ploughed for several years to a uniform depth. It is built on the principle of an ordinary plough, but without any mouldboard, and it has a slide extending backwards and upwards from the share, over which the soil must pass. An admirable implement of this class is made by Mr. Watson of the Ayr Agricultural Works.

The "double mould" or ridging plough is used for the purpose of making drills, or laying the earth up against potatoes, turnips or other roots. Having a double mouldboard, which can be contracted or expanded to any required width, the advantage is obvious: viz.—that in one trip along the furrow the work of two trips with the ordinary plough can be accomplished.