

These two sums represent the fecundating powers of both plants, with this difference, that the seeds of the former seldom ripen, while those of the latter always do so, and hence, however careful we may have been to pick up the stems, new plants are certain to come from seed. We have at this moment a plantation of seedling *Agrostis*, or *Perispa*, where the thrashing machines stood; the fact being that the seeds ripened in the barley crop, where *Triticum* seldom ripens, and these would be quite enough to stock a farm.

2. There is another reason why our friend was able to felicitate himself upon his pest being the "right sort."

This stronger kind usually affects the stronger and better sorts of soil. The land in which this occurred, on the occasion referred to, was a strong loam lightened by chalk flints. The *Agrostis* prefers lighter soils with a limestone brash, among which it can creep and crawl, and about which it can dive, so that it is next to impossible to get at it in its entirety. It may, then, as a rule, be taken for granted that where *Triticum* ripens is the natural Couch grass, the land will be worth more than when the *Agrostis stolonifera* prevails—worth more, as it will be in better heart, and capable of producing better crops, and worth more, in that however badly the former may prevail, £1 an acre, ranging over four years, may suffice to get it under; but the latter will be better represented by £5, ranging over seven years. How often have we exclaimed, in an agony of mind, "for which of our sins were we placed on a Squitch farm? We plough, we drag, we chain-harrow over and over again, but it keeps its place in spite of us!" Oh! how we join in our friend's self-gratulation when he has "the right sort of Couch;" "but then," say our friends, "what nice land! How easy to work! You can always get on soil!" "Yes, yes, dear friends," we respond, "all true; but you are never off it!" Don't, then, let our farmer friends conclude, after all, that this is a mere difference of sort, as one would speak of a different sort of wheat—white and red for instance—as this is not all. It is a real difference of genus and species, differing more than a turnip and a cabbage, as they are only different species of the genus *Brassica*. It is a difference great as that of wheat and oats; and we have found that in practice it is after all a matter of great importance to know the natural history of the weeds we have to deal with, and in no matter is this more so than in having to do with the *Triticum ripens*—the right sort of Couch,—and the *Agrostis stolonifera*—"the wiry, creeping, crawling, benty Squitch."—*Bell's Weekly Messenger*.

ALFALFA AND THE POTATO BUG.—The question was raised some months ago as to the identity of alfalfa and lucerne. It was said that Mr. Edward Stabler, of Montgomery county, after seeing the alfalfa pastures of California, thought it was a different plant from lucerne, and the hope was raised that it might be introduced here as a pasture grass, which the lucerne is not. A correspondent of the *Farmers' Home Journal*, of Kentucky, disappoints us of this hope, by stating that the alfalfa is greedily devoured by the Colorado potato bug. The bug has not found its way to California, but it has reached us. The writer, speaking of the introduction of alfalfa into Montana Territory says: "To my surprise I found the plants covered with potato bugs, which were devouring it with as much greediness as they would their own peculiar plant. The potato bug is only limited by the quantity of feed a country affords for its subsistence. With broad fields of alfalfa to feed on, it would in a few years become as numerous as the grasshoppers of the Western plains."—*Maryland Farmer*.

RYE GRASS.—A correspondent of the *Willamett Farmer* says: I have tried it on three different kinds of soil, and it has done well. My opinion is that it is the best grass for dry ground that we have on this coast. I sowed one piece on a high ridge that was very ferny, and the grass grew four or five feet high, completely smothering the fern down. It is of a quick growth and starts early in the spring. I have one piece in my field that is over six feet high at present. I have some timothy alongside of it, that is not over one foot high. I have not tasted it to any great extent for hay, but so far as I have done so I am satisfied it will make fair hay, but for grazing I think it will excel any grasses we have.

"In my fertile country," said a Leicestershire man, "you could turn a horse into a field new mown, and the next morning the grass would be grown above his hoofs." "Pooh! that's nothing," cried a Yorkshireman; "you may turn a horse into a field in Yorkshire, and not be able to find him next morning."

Agricultural Implements.

An Improvement only in Name.

In a recent number of the *American Agriculturist* we observe an illustrated notice of a new plough-attachment, which is claimed to be a great improvement, but we are rather inclined to think that the improvement is one only in name. The novelty is something after the shape of a round-pointed steel shovel-blade, and this is attached by means of a Shank to a jointed and curved arm. The whole apparatus is then attached to the right or off handle of the plough, near the ground, by the same bolts as keep the mouldboard in its place, and so adjusted that the shovel, coming in rear of the mouldboard, cuts or scuffs off the fresh earth from the newly turned furrow, and causes it to drop on the furrow sole, thus, as it were, laying a fresh and mellow coating over the packed bottom. Now we utterly fail to see the point gained by any such appliance. In usual ploughing, fact it is, and the fact is to be lamented, that the furrow sole is in a measure packed down much more tightly than it was when in its natural state, undisturbed; but how is this "improvement" going to help matters? True, the hard, packed, smooth sole cannot be observed after the use of the new invention, but why? Simply because it has been covered over and is hidden. But does that affect it in any way? Does it render the packed portion a degree less firm? We trow not. Does it not instead add to the injury by throwing fresh pulverized earth in the ridge for no other purpose than to be stamped down upon the hard bottom, thereby adding injury to injury. The sole alone is surely enough to be packed without adding anything more to it. But when the earth, as mentioned, fresh and pulverized, is scattered into it, then it is plain that this latter addition serves only as a carpet over its stiffened sub-ponents for the feet of the ploughman, and that instead of its being or inducing a further pulverization, it in reality necessitates the packing of more than if it had not been there at all. When it is remembered that pulverization is one of the grand aims which must always be kept in view in cultivation, and that the deeper the pulverization is the better, unless it be on soil too heavily impregnated with magnesian limestone or other such injurious elements, the force of our remarks will be appreciated. As a general rule, we believe our ploughs are just about as perfect in respect of pulverization as ploughs can be made, and that no additional contrivance by way of attachment will be very much of an improvement. We incline strongly, however, to an opinion which is speedily gaining ground, and which in many places has been practically adopted—to do away altogether with the plough on good cleared land, and use instead the 6 or 8-horse deep tamped cultivator. It will give the soil a much more thorough and deeper stirring up than can ever be effected by means of a plough.

Agricultural Machinery.

Prof Fawcett, in his able paper on Wealth and Wages in Great Britain, says:—Numerous instances may also be given of the extent to which employers are induced to economize labor by the introduction of improved industrial processes when trade is unfavorably affected by any such circumstances as a deficiency of raw material or a scarcity of labor. Thus it is said: "In their gallant struggles in the difficult times following the war in America, our manufacturers developed the resources of machinery to a greater extent than had ever been attempted before, and they succeeded in making a considerable reduction in the amount of labor employed." In consequence of the extremely high wages which are prevalent in the United States, Americans are far more interested than Englishmen in applying machinery with the view of saving labor. Machinery is not only far more largely used in agriculture in the United States

than it is in England, but many of the improvements which we have introduced into agricultural implements have been obtained from America. I find it stated that in the United States the application of labor-saving machinery to agricultural operations is increasing every year. The number of patents issued for agricultural implements was, in 1847, 43; in 1863, 390; in 1864, 503; in 1865, 1,778, and in 1867, 1,800. It can scarcely be doubted that even the comparatively small rise which has taken place in the wages of English agricultural laborers since the formation of agricultural unions, has already acted as a stimulus to many farmers to adopt various means of economizing labor, such as the employment of more machinery. If the supply of agricultural labor should be diminished, as seems not improbable, by a large emigration of agricultural laborers, it cannot be doubted that the farmers would be prompted to make still greater efforts to economize labor, and thus the rise in wages, which would naturally result from a diminution in the supply of labor, would be to a considerable extent counteracted.

Character of a Good Plough.

Every good plough should possess two important qualifications. The first relates to its working. It should be easily drawn through the soil, and run with uniform depth and steadiness. The second refers to the character of the work when completed. The inversion of the sod, especially if encumbered with vegetable growth, should be complete and perfect; and the mass of earth thus inverted should be left as thoroughly pulverized as practicable, instead of being laid over in a solid unmoved mass. This is of the greatest importance on heavy soils, and is highly useful on those of a lighter character, except, it may be, clear sand or the lightest gravel. The harrow at best is an imperfect loosener; it pulverizes the surface, but its weight and that of the team press down the mass below. Whatever loosening can therefore be accomplished in ploughing is a gain of vital importance. The ploughshare or point should in the first place be kept sharp, and where stones or other obstructions exist in the soil, the line of the cutting edge should form an acute angle with the land-side; in other words, it should form a sharp wedge. The point of the mouldboard should be long and acute, so shaped as to begin to raise the left side of the sod the moment it is cut, and before the right side is yet reached by the cutting edge. The various qualities may be summed up thus: 1st, Pulverizing power; 2nd, Non-liability to choke in stubble; 3rd, Lightness of draught considered in connection with pulverizing power; 4th, Ease of holding; 5th, Durability; 6th, Cheapness; 7th, Excellence of mechanical work; 8th, Excellence of material; 9th, Thorough inversion and burial of weeds; 10th, Even distribution of wear; and 11th, Regularity or truthness of turning and carrying the furrow-slice in soil.

Chilled Iron Mould Boards.

An excellent judge on all subjects connected with agriculture and agricultural mechanics, Mr. James Giddes, of Onondaga, has called our attention to a new process of chilling iron for plough castings and other purposes, lately patented by John S. Robinson, of Canadawaga. The object of course is to secure the advantages of a steel plough at a greatly reduced cost. An account of the invention, handed us by Mr. G., together with a sample of the chilled iron it produces, contains the following:

The particles of molten iron are susceptible to the most delicate external influences, and if turned upon a piece of cold metal, or "chiller," the process of chilling or hardening instantly takes place, and the surface coming in contact with the chiller becomes as the best cast steel. But this process—heretofore of little practical benefit from the tendency of chilled castings to warp and crack by the rapid contraction of the chilled side of the casting—is utilized by this invention, and this difficulty overcome by the improved process of manufacture secured by this patent.

The fact is established beyond question, that this process of chilling and carbonizing cast iron imparts to the mould board or other parts of a plough all the desirable qualities of hardness, flexibility, strength and durability combined, possessed by the best steel ploughs, and at a price but little in advance of the ordinary cast iron plough.—*Rural Home*.