

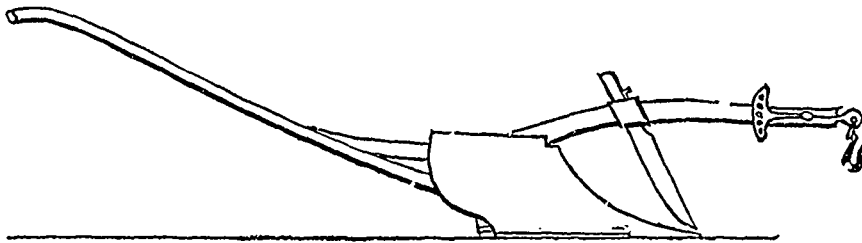
pital, who, in order to secure their investments, are willing to learn farming as a business occupation. Our advice to such is not to invest a cent in farming,—beyond the necessary outlay, in learning their business—until they have acquired the knowledge necessary to make it profitable. Such men would thus cease to be *outsiders*, and they need have no fear. They will most likely find that no business can give a greater guarantee for their capital, more real satisfaction, and a surer return.

10. This is not likely.—Trade always *seems* to offer quick, and even golden returns, with little or no hard work.—Not so with farming, which has, besides slow returns and no great fortunes, a fair proportion of hard, back-breaking work. It is very true that the golden expectations are, oftener than otherwise, changed into sad disappointments. Still as the glitter remains, and the golden returns turn true sometimes, the capitalist, and would be capitalist, will most likely continue to crowd into the city, with the full determination to avoid, any way, the hard, back-breaking farm labour.

11. However satisfactory the *tabulated statements* asked for might appear, a good look into the books of our best

farmers, in the various departments of agriculture, should be much more useful. Unfortunately, most farmers in this country,—amongst the best as well,—do not give sufficient attention to book-keeping. This is a great pity. It explains why so many questions are raised,—respecting the profits of farming, amongst *outsiders* especially.—It explains also why so many doubts remain, even of things the benefits of which are clearly established both in farm accounts and in the mind's eye of our best farmers.

12. It is, indeed, very much to be regretted that the system of education pursued in this country; both elementary and classical,—should do so little for agriculture.—As a rule, the longer a boy attends school, college, or university, the more he seems to learn that the only road to fortune—the great desideratum now a days,—is through city business and professional pursuits. And if the poor fellow, ever hear any thing said of farming,—in ninety-nine cases out of a hundred, at least,—it is that *farming does not pay*. Why it does not, however, is a question very seldom looked into,—if ever dreamed of—amongst our so-called educated men, of all classes, in this especially agricultural country.



Tweeddale Plough.—(Furrow side.)

ON FALLOWING.

The great Baron Liebig, in his "Chemistry applied to Agriculture," defines a fallow in these words: "Fallow in its most extended sense, means that period of culture during which a soil is exposed to the action of the weather for the purpose of enriching it in certain soluble ingredients. In a more confined sense, the time of fallow may be limited to the intervals in the cultivation of cereal plants; for a magazine of soluble silicates, and alkalies, is an essential condition to the existence of such plants. The cultivation of turnips, during the interval, will not impair the fertility of the land for the cereals which are to succeed, because the former plants do not require any of the silica necessary for the latter. It follows then from the preceding observations, that the mechanical operations of the field are the simplest and most economical means of rendering accessible to plants the nutritious matters of the soil."

Fallows are of three kinds.—Summer fallows; where the land enjoys at least a twelvemonth's rest, as when wheat is sown in autumn; or even 18 months rest, as when barley or oats are sown in spring.—Fallows for roots; in which case the land which bore the wheat crop in August is sown, after suitable preparation, with turnips &c., the following spring.—Bastard fallow; when land which has borne grass during the last years of the shift is ploughed, and otherwise cultivated, during the summer after the grass has been mown or fed off in preparation for wheat in the autumn; or barley, or oats, in the spring. In this country, I believe the bastard fallow has never been tried, but, I think, it would be, in many cases, an excellent plan on soils where the usual one furrow system leaves the land too much consolidated in the sowing season.

The success of the *long*, or *summer* fallow depends greatly

on the first ploughing. We must always remember that the object of making a fallow at all is threefold; first to clean the land; secondly to mix the soil; thirdly to liberate, by exposure to the air, the rain, the heat and the frost, those substances, mineral chiefly in their nature, necessary to supply the food of the plants which exist in abundance in the land, but are bound up in inaccessible places, until the alternate action of plough and harrow, of grubber and roller expose them to the action of the elements, and enable them to perform the duties which are the necessary sequel to their existence.

Immediately after the crop is carried home the work should be begun for the fallow. Autumn cleaning of stubbles is the foundation of all good, clean cultivation. In England I have often seen it practised before the grain is carted—the Ducie drag, or the Bentall's scarifier, worked between the rows of wheat shocks, the space where they stood being done afterwards. Then the implements cross the former work; the harrows quickly follow, and, dragging out all the root weeds, leave them exposed to the August sun to their intense mortification. But this cannot as a rule be done on the heavier class of soils; there, the plough must perform the work, and it is thus that our tough soils will eventually be treated.

The first furrow, for a fallow of any sort which is to be manured and sown ultimately with anything but a grain crop, should be as deep a one as the strength of the team employed on the farm can manage.

There are various modes of securing this deep furrow. The plough in general use is, from its construction, but ill adapted to this part of the work, not being able to go deeper than, at the utmost, eight inches. For some years past a plough invented by the late Marquess of Tweeddale, of Yester Mains, Scotland, has been coming into notice. Formed by