

soil necessary in order to the production of good crops, and in every country, we must adopt what is necessary or we shall not produce good crops.

TO THE EDITOR OF THE HULL ADVERTISER.

SIR,—I do not expect that I should so soon trespass again on your columns, but having, since the date of my last letter, visited the model farm of William Marshall Esq., M. P., for Cumberland, at Enholme, some account of it will be probably interesting to the readers of the *Hull Advertiser*. As the entire farm cannot be removed to the great exhibition of 1851, surely a model of it might be made and exhibited there. It would open the eyes of all nations to the imperfections of ordinary husbandry, and present, in a palpable form, the advantage that would accrue from the union of agriculture and science.

My attention was directed, in the first place, to the stock and crops. There was a forest of stacks in the stack-yard, the arable land having this harvest yielded more than six qrs. of wheat per acre. The stalled oxen were in excellent condition, as were also the calves; and the piggery was really beautiful. And then what magnificent draught-horses in the stable! They reminded me of the dray-horses in London. A ride round the farm presented land which would have rejoiced the heart of Jethro Tull, had he been living, the soil being reduced to the condition of garden-ground, by two magnificent specimens of Crosskill's clod-crusher—an instrument of which the manager speaks most highly. The pastures were remarkably clear of weeds, and a large field of Italian rye-grass was growing to the height of an ordinary meadow, after the removal of two crops of grass, the annual produce being forty tons per acre.

Having feasted my eyes with the produce of the farm, and being perfectly satisfied with the results of Mr. Marshall's husbandry, I was desirous to ascertain the nature of the processes by which such surprising results could be obtained. To acquire which important information I next proceeded to inspect the machinery of this great bread and meat manufactory; and goat was my satisfaction to find nothing extravagant or fantastical, but a severe simplicity and wise economy in all the arrangements. Nothing was wanting, and yet there was nothing superfluous: and the several contrivances having a relation to each other, and to one great motive power, gave a unity to the whole concern that was really captivating. If, indeed, a poet were to make it the subject of a Georgic, he might parody the first line of the *Æneid* of Virgil, and begin with—

"Steam and its works I sing!"

This was a result I was not prepared to expect from the reports of farmers, whose

unhappy prejudices too often darken their understandings, and harden their hearts against all improvements. I expected to find a parade of instruments made for show rather than use, instead of unity, simplicity, and economy in all the arrangements. Excepting the actual tillage of the land, almost every thing seemed to be effected by steam.

The steam engine, which is a dapper little Briareus, of only eight-horse power, is here at work all day long, and looks as cheerful as if it had no work to do, although it has a hand in almost every thing. The cattle, calves, pigs, and horses are all supplied with food and drink by this provident little creature. The former it chops or crushes, and the latter it fetches from a reservoir of water—there being no wells on the farm—at the distance of half a mile, and preserves in a tank at the top of the building. The food being put into baskets is carried on a truck from the house where it is prepared, by means of Crosskill's portable railway, to every stall fed animal, while by a self adjusting apparatus, the water from the tank fills every trough. The rapidity with which the feeding is effected baffles conception, and gives to the entire process the air of a miracle. The necessary work of providing provender for the cattle does not for a moment interrupt the other labours of our industrious little Briareus, which is occasionally busy in thrashing and winnowing the corn, at the rate of a hundred quarters in twelve hours, to accomplish which useful task it is furnished with a contrivance which at first sight looks like a mangle. Some three or four girls, under the direction of one man, deposit sheaf after sheaf upon this mangle, a revolving cylinder drawing the sheaves one after another into its capacious mouth, and the grain being instantly extracted from the ears, falls into a reservoir beneath, from which it is licked up by a series of revolving little pans, which separate the chaff from the grain, and deposit the latter into the heap. Meanwhile the straw makes its escape on the other side of the cylinder, and comes dancing forth on an upward inclined shaking-plane, as if it was electrified. This flings it without ceremony on a plane inclined downward, which again casts it on the floor. And what is equally surprising, the little elf of an engine is at the same time crushing beans, grinding corn, and performing many other operations it would be tedious to enumerate.

These, however, are not the only labours of this hundred handed little Briareus. Its attention to the duties we have already enumerated does not for a moment divert it from the farm. By its exertions the fluid excrement of the horses is conveyed to and sprinkled on the manure heap. This, which is supplied with the compost formed by the litter and dung of the horses, is deposited in a great pit, under shelter, and covered with