may be used to greatest advantage when the surface of the soil may have become so hard, either from frost or dry weather, as to render it impracticable to accomplish the cutting of drains by manual labour. The utility of this implement, when it is required to cut drains on clover lands in the course for wheat crops, and from which the first crop has been taken, is clearly seen; as the clay or marl from being immediately spread upon the surface, becomes thoroughly pulverized, and enters into immediate operation for the succeeding crop. We know not the expense of the implement, but from the brief description that has come under our notice, we should be inclined to think that it might be suitable to the heavy worn out land of this country. There is frequently much virtue in the sub-soil, and which only requires to be moved.

Smithfield Cattle Show.—The annual exhibition of this well known society took place as usual in London on December 10th, 11th and 12th, and was numerously attended; not less than 20,000 persons, including a large number of ladies, passed through the bazaar during the first day. In live stock, one fifth more entries were made than on any previous occasion; and the quality is said to have been of a very superior description. The Prince Consort as usual was a pretty extensive exhibitor, and three prizes appear to have fallen to the lot of His Royal Highness. The Duke of Richmond,—the president of the society, and the firm and consistent friend of agriculture,—the marquis of Exeter, Earls Leicester, Fitzwilliam, Radnor, and other noblemen, were more or less successful. The great bulk of the prizes, however, we are glad to see were carried off by tenant farmers, several of whom were for the first time winners."

The implement department was unusually crowded with almost every variety of the most valuable machines in use on the farm, and which fully maintained the reputation of the makers generally, in the quality and style of material and workmanship. Amongst the novelties were the "Royal Albert Scarifier," made (under the direction of general Wemyss, Prince Albert's farm steward,) by Mr. Smith of Uxbridge. Messrs. Clayton and Shuttleworth, of Lincoln, and Messrs. Barrett, Exall & Co., of Reading, each exhibited a portable steam engine, for agricultural purposes.

Irish Agricultural School.—A meeting, attended by Sir R. Kane, the president of the Queen's College, Mr. Fagan, M. P., colonel Chatterton, the High Sheriff, and several other gentlemen of distinction, was held in Cork lately, for the purpose of establishing an agricultural school of industry, in Munster, in connection with the provincial college, "by the formation of an agricultural garden and experimental farm; and also a museum of materials connected with these important subjects, so as to secure to this locality the appropriation of the £5000, as set forth in the second section of the 11th and 12th Vic., chap. 115." The necessary steps to carry out the objects of the meeting were unanimously adopted.

ON VARIETIES OF PLOUGHS AND PLOUGHING MATCHES.

The following communication from one more accustomed to handle the plough than the pen, was sent us some months back, and got mislaid. It refers to a subject of great importance in practical agriculture; and whether a ploughing match between Canada and the state of New York take place or not, we feel disposed to give our readers an opportunity of forming their own opinion on our correspondent's views and suggestions in reference to that subject.

To the Editors of the Agriculturist.

Gentlemen,—I send you a few thoughts on the subject of ploughing, after a six-and-twenty years' experience in that operation. I was first set to plough, or rather to annoy the soil, with an old one handle hog-plough, and from that to this, with very few exceptions, I have had opportunities of using all our different Canadian improved ploughs. On a careful examination, I find that our Canadian plough makers appear to have had but one chief object in view, that is, to see who can make the best plough for all kinds of work. Here lies the mistake. We should have, I think, not less than five different ploughs, to perform the work which one is often made to do. There should be a plough constructed for turning the green sod for a crop; another for summer ploughing when the ground is dry and hard; one for cross ploughing; one for deeply moving the loose soil; and another for making the seed furrow. Ploughing is a mechanical operation, and requires mechanical skill to manage properly. I would ask, where is the joiner that can do all his planing with one plane, and turn off work with speed and profit? Where is the smith that can split the heavy bar and weld the small rod with the same hammer, and turn off work advantageously? Where is the farmer that can plough the hard, heavy, green sod, and stir the loose, mellow fallow with one and the same plough, and turn off good work with speed and profit? The profit or advantage of mechanical operations depends on speed, the speed depends on the quality and suitableness of the tools employed. Perhaps some farmers may think, that to purchase a set of five ploughs, would be to incur a great and useless expense. But what says experience? I have an iron Scotch plough, which in ploughing twelve acres of hard stiff sward, will pay its own cost, from the perfect work it performs, and the greater crop which follows, compared with the imperfect work of the short handle, broad heel plough. But now I must lay it aside, with its long handles and all its other charms. On the other hand, the short handle broad heel plough will pay itself, in preference to the iron plough, in crossing twelve acres three times, counting speed and cutting the roots of thistles and weeds. For in a country like Canada, where the surface of the ground is confined by frost for one-third of the year, the ploughing season short, drought frequently severe, and wages high, it is evident that *speed* should be regarded as of first importance, as