



## The Field.

### Combined Roller and Clod Crusher.

The implement of which we give an engraving, will, if it performs its work effectually, supply an important desideratum on many of our farm lands. Clod-crushers have been for some time in use in the old country, and are found to work admirably, especially on stiff clay soils. By this operation, the land is often brought into fine condition; and fields which would otherwise have to wait for the slower processes of atmospheric influence, or be repeatedly gone over by less effective implements, and perhaps after all receive the seed in a very unfavorable state, are thus speedily and thoroughly prepared, and rendered fit for sowing; much precious time and vexatious labour being thereby saved. The accompanying cut represents an implement manufactured by Mr. Abell, of Woodbridge, for rolling or crushing the soil. It is made upon the principle of W. C. Cambridge's improved patent double acting press wheel rollers and clod-crushers, which have obtained deserved notoriety in England. Mr. Abell's contrivance is composed of a number of Cambridge's old patent plain wheels with their cutting edges. A serrated, or notched wheel of peculiar construction is placed between each plain wheel, by which arrangement the effective action of the best clod-crusher and wheel roller is here combined. This implement, we understand, will work effectually in preparing land for turnips and mangold, also for rolling fallow lands, barley, grass, and especially for wheat when the wire worm has made its appearance in it. A prize was awarded this machine at the last Provincial Exhibition, as the best roller then shown.

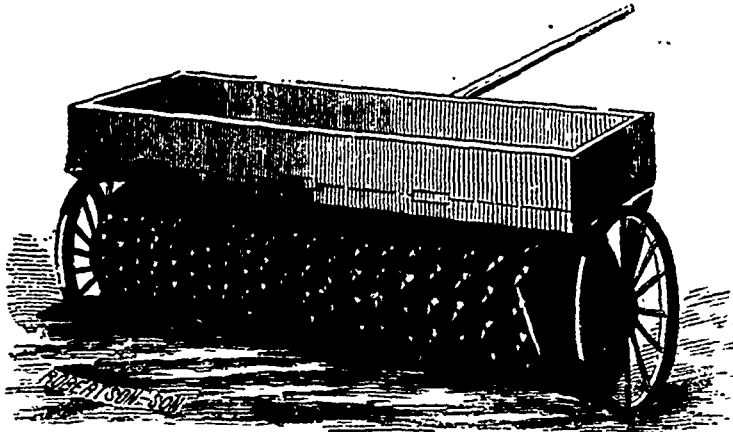
### Professor Voelcker on Manures.

Our attention has been called by an eminent amateur agriculturist and horticulturist, to an article which appeared in the *Gardener's Chronicle and Agricultural Gazette* of the 15th of December last, it being a synopsis of a lecture delivered by Professor Voelcker before the London Farmers' Club, on the 10th December, on the subject of manures and the best method and time of applying them; and as there is much in the article alluded to which is interesting, we have much pleasure in entering on the subject.

Professor Voelcker is so eminent a man, not only as a philosopher, but as a lecturer to the practical farmer, and his opinions are so extensively received

and almost revered by that class of persons in England, that we cannot for a moment doubt his facts; we may differ in opinion, but even in doing so we should differ with great respect and with considerable hesitation.

The lecturer set out by remarking several new facts, or rather new doctrines founded on well-known facts, with respect to farm yard manure; he asserts that the farm yard manure may be considered a perfect manure, as it combines within itself all the elements which are to be found in the various kinds of artificial manure; but it is in the use of, and time of applying it, that he differs from what have been received opinions. He says that farm yard manure possesses within itself the means of fixing its own ammonia; that provided there is sufficiency of vegetable fibre, such as straw, &c., the animal portion of the manure, whether solid or fluid, will not part with its ammonia in a volatile state, but that the two substances work together to form a perfect manure: the animal portions liquid and solid, ferment and putrefy, and the straw and fibre by such



act of fermentation, resolve themselves into natural fixors of the ammonia, so evolved, and retain it in the shape of a soluble compound exactly fitted for the food of plants. He insists that for this kind of manure we have not to dread exposure to the air, or even to the hottest sun, but that rain in large quantities is fatal to its usefulness; unless the rain falls upon it when it is spread on the ground which it is intended to enrich; and that the entire of the leachings of manure in the farm yard are lost, either by running away with the surface water, or by sinking into the ground. He says that the benefits to be derived from the rotting of the manure in the farm yard, are more than compensated by the losses sustained by the action of the rain and the dissolving in a wrong place of the soluble portions of the manure. He therefore recommends that so soon as the manure of the farm yard can be said to be manure at all, and before leaching from rains has extensively taken

place, the manure should be taken to the ground on which it is to be applied and there spread abroad; so that whatever leaching takes place shall go at once into the surface soil and be absorbed where it is wanted, and where it will do good—he declares that all manure so applied possesses within itself sufficient elements of decomposition to render it efficacious, and that when so applied the ammonia as formed is dissolved, and fertilizes the soil in the best possible manner.

He does not for a moment object to ploughing in manure where it can be done most conveniently, but he says that ploughing in is not essential to its efficacy, and that provided it is spread abroad when applied it may be ploughed in at one time as well as at another, and it is this point that is most interesting to us in Canada.

Our seasons are so short and hurry each other so much that it is impossible to carry out in the spring all the manure made in the winter. Spring, and the growth of spring grain, demand every moment of the farmer's time and all his attention; he wants to plough at the earliest moment so as to get in his crops before the spring rains commence—but he has not time both to manure and plough, and consequently the ploughing is done, and the manuring is too often neglected—but if he could have done his manuring during the winter on the snow, or during the latter part of the winter before the frost is out of the ground, the difficulty would be met, and the manure spread on the ground at those times would be on the land ready to be ploughed in at the time of the cultivation for the spring crops.

According to received ideas, manure is comparatively useless until rotted, and reduced to a short grained mass, it then is not only most easily moved and conveyed, but is in the most popular state for fertilization; to get the manure into this state it must remain in the farm yard for many months, it must be turned up together, at least once, and is then believed to be in the best possible condition—but it what Mr. Voelcker says is true, we have by these operations lost some of the best and most fertilizing elements contained in it, all that can pass off by leaching has passed off, and we have a much less useful matter to apply to the soil than we should have had if we had used it earlier, and where all the leaching would have taken place on the soil to which it was applied—instead of in the farm yard. He also recommends that the farm yard manure should be applied to grass lands, clover leys, &c., as top dressings, and that artificial manures should be reserved for the root crops.

Now much of this argument may be applied most