

need to describe, as far as I can, the differences between any machines and those above mentioned.

These self-delivering machines are worked by means of a pole, with a pair of horses, like an ordinary carriage. In Bell's case the poll is behind, and the horses, to all appearance, push the machine forward; but, in fact the bars being attached to the end of the pole, the traction of the horses upon these propel the machine. In the case of one horse works in shafts with an outer gear, affording greater command over the machine for turning and backing. The plan for raising and depressing the cutters is simple. The draught of the machine light—not harder to draw for a pair of horses, if so hard, as ploughing. When the corn is standing, one man and a pair of horses cut down with ease one imperial acre per hour. When the corn is laid, it is less, it may be necessary to take the grain either in the face or sideways, in which case the machine can only work one way, returning only. The delivery of the grain is by means of bands passing over a smooth surface, similar to Bell's. These are more easily driven than the rollers, and, as I have said, are better adapted to a heavy crop. My machine, if well made, works well after season, requiring little or no repair. The advantages of cutting by machinery with a self-delivery are these:—First, a saving of expense, and frequently also of a great portion of the crop; secondly, less risk of shaking out the grain; and thirdly, independence from the necessity of obtaining extra hands, in many places difficult to procure, and attended with many

A man and a pair of horses, allowing a two hours' rest, can, unassisted, easily cut down 10 imperial acres per day; but it would be more advantageous to work the machine the entire day without stoppage, by means of relays of men and horses. The grain may lay till it is either fit for carrying, or the binders are ready to enter the field.

I have endeavored to comply with your request and I have also endeavored to state, as impartially as I can, my opinion of the different machines which have come under my notice. It is, perhaps, natural that I should have a bias in favor of my own; and my long experience of its merits may excuse the preference. I believe it would have been more generally used in Scotland, had not the maker, to whom I entrusted it, after the blacksmith to whom I alluded, turned out some very imperfectly made machines. However, I trust that you and your friends may have the opportunity of judging of its merits, such as they are, at Leeds.

I am fully convinced that no new invention can be brought out without a series of trials and disappointments. Improvements may very possibly be still made; but, at any rate, I have no doubt that, before many years, reaping machines will be considered as necessary an adjunct to every farm as any other implement now in use."

Irrigation as a Fertilizer of Grass Lands.

We take the following Report of Mr. J. Stanton Gould from the July number of the *Journal of the New York State Agricultural Society*. It refers to the farm of Mr. Clift, who appears to have carried out a system of irrigation with much benefit and success. There are many places in Canada where irrigation might be beneficially practised, and would doubtless very much add to the value of our grass lands, which, as a general thing, are too much neglected. The increased value of farm stock, would justify more attention and the incurring of greater expenditure to the improvement of meadows and pasture land.

MR. CLIFT'S FARM.

Having learned that Leanord D. Clift, Esq., of Carmel, Putnam co., N.Y., had derived great benefit from this practice, I visited his farm on the 17th of June, for the purpose of studying his methods and verifying his statements respecting his increased production.

The farm lies upon the road from Croton Falls to Lake Mahopac, about two miles and a half from the former. It is intersected by a stream which forms the outlet of Mud Lake, situated in the vicinity of Lake Mahopac.

When the machine is used at a period when horses are not so much required, so that additional food is not outlayed, the farmer is put to, and the extra hands are reduced to the few required for putting up. Some seasons it is true that only one half of the crop can be cut by machinery—that which is standing or laid only one way; if much twisted, like last year, it can only be accomplished by hands. Granting, however, that half is cut by machinery, a great saving is then effected, for much grain is lost by being allowed to stand for want of hands. There are seasons when it ripens simultaneously, and consequently becomes over ripe and shakes out. In these seasons fields quite green in spring from this year. This the machine obviates completely. It is only that it is more expeditious, but it lays the grain down so gently that no grain is shaken out; from the mode of its deposition, the heads fall downwards, allowing the wet to run off, and the free circulation of air through the grain stalks, the grain is ready to be carried up, as the case may be, much sooner, and is not so liable to injury from wet weather as the old system. I saw the effect on a field of Barley which was subjected to a week's rain; and while the one half was uninjured, the other half which was tied up had sprouted.