

nary blacksmith repair any part which might give way. The difficulty was that as it was impossible to postpone the cutting of the crop, there was not time for remedying any defect which might be discovered, and affording the opportunity of another experiment. At last, I resolved to make arrangements for a field of wheat to be kept for the purpose of experiments, and I believe the last portion was not cut till the beginning of November; but I was amply rewarded—the result being that I have got a most complete implement, and one which I have used constantly for the last three or four years; indeed I have four, as I consider that on a good sized farm, a couple of machines are of great use. I gained the first prize at two meetings of the Highland Society of Scotland, but did not exhibit at the English Society last year, though I intend to do so at Leeds this year. I will now proceed to give you my opinion, founded on considerable practical experience, on reaping with machinery, and on the different machines now in use,—of course my opinion can only be taken for what it is worth.

In the first place, I consider that a reaping machine without self-delivery is an imperfect implement, in so far, that it is no saving of expense, while one great advantage, that of corn being laid down lightly on one side, to which reference will hereafter be made, is lost. On the other hand, there is no doubt that where hands are scarce, or on small fields and very hilly ground, one with self-delivery may be used with advantage. A considerable number of these have been sold by different makers, and I suspect the cheaper rate at which such can be made, than the self-delivery machines, has been an inducement to farmers to purchase them, in spite of their requiring two men, one to drive, the other to take off, which last is not able to do a good day's work if the crop is heavy; and, indeed, even with a light crop of Wheat, no man can continue such work for a number of days consecutively, whatsoever he may do for a mere exhibition. There are, I know, several ingenious plans for assisting the raker, but nothing equals the self-delivery. It is difficult to form a fair estimate of the respective merits of machines seen only at shows, as on such occasions they are driven rapidly, which makes them cut better, but the fatigue consequent thereon to the horses makes this rate of speed impossible in practice. The self-delivery machines, however, which I am about to mention, do not require to be driven fast in order that their work may be performed well. I will only speak of those with which I am practically acquainted, namely, Wood's, Bell's Burgess & Key's, and my own. Wood's, combines mowing and reaping, a combination which, at first sight, appears advantageous, but which, I am satisfied, does not answer in practice. Wood's mowing-machine is a useful implement, but the bar is too weak—yields in passing over uneven ground, whereby the cutters are

impeded in their action, and some part must give way. The provision for rising and falling, according to the inequalities of the ground, is ingenious, and is in this respect superior to Burgess & Key's mowing machine, which is as tolerably effective. It is comparatively easy to cut seeds, but close meadow Grass presents greater difficulties to the action of machines. Wood's reaper, though light, is superior, in my opinion, to either of the other three above named, but will need several improvements before it comes into general use.

“Next, with regard to Bell's, this is a perfect reaper, which has gained many prizes and is extensively used by farmers. It has the great advantage of passing through gates easily; it also cuts out a breadth of the crop for its width, which in the case of all other machines, has to be done by the hand, or with the scythe, which is, in fact, no real objection in practice. A very ingenious plan has been devised by Bell for laying the corn, if required, in sheaves, considered by some as advisable, in which opinion I do not concur, as I believe it takes away from one of the benefits of reaping machines, which I shall refer later, that of the advantage derived from the mode of depositing the grain by self-delivery machines. My objection to this machine is, that it is heavier in draught than mine, and requires a driver of some little experience; but, nevertheless, it is a very good implement.

I now come to Burgess & Key's reaper. It is the most generally used self-delivery reaper any which has yet been invented. Like mine, it is an improvement on McCormick's, the livery being effected by means of revolving screens, and it does its work admirably. It is also driven in the same manner by a man sitting in front, who has complete command over working gear, as well as over the horses. The ploughman, with common intelligence, can be taught in a brief period of time to manage the machine driven from the front. It lays the straw very evenly, though, perhaps, not quite so well as Bell's, and, in some cases, appears better than mine; but it is only in appearance. The outside straws being caught by one of the revolving screws, are laid at right angles to the machine, covering the deposits beneath, which lie on or less obliquely. The external layer, however, looks well to the eye, and may tell at a glance, but it is no practical benefit. The objection to this machine is, that it is rather heavy to drive than mine, and that, with a heavy crop of Wheat, the screws do not catch the grain, stoppages are frequent. With mine, on the contrary, the heavier the crop the better it is cut, but, with regard to light Barley crops, Bell's & Key's machine has, I think, the advantage. Bell's I should say, has the merit of being efficient in both cases. I have endeavored to give, fairly, my own impressions on these machines with which I am acquainted. I will