

ENGINEERING DEPARTMENT.

INCREASED USE OF FARM MACHINERY.

FACTS are being presented to us every day which show the important part that machinery is now taking in performing the labor upon our farms. And not only is it an important, but it is an extensive work they are doing. Before the war, when there was an abundance of workmen to be obtained at ordinary prices, farm machinery was looked upon with decided favor, from the fact that the hardest part of the labor could be performed by machines and animal power, while manual labor could be profitably turned into other channels of industry. Now, with a gigantic rebellion upon us, carrying away to the field of strife those who have heretofore worked in the fields of peaceful labor, we feel the importance of farm machinery to be greater than ever, and are brought to place our greatest reliance upon it. What could be done in planting and hoeing on a large scale without the aid of the seed-sowers and planters, and horse-hoes? How could our hay crop be secured were it not for mowers, horse-rakes and mammoth pitch-forks, elevating several hundred pounds weight of hay at once by horse-power—or the immense grain crops of the West if the reapers, headers and binders were not brought into requisition? Machines are, in fact, at the present time, absolutely indispensable, for by their agency farmers are enabled to perform the work usually accomplished by manual labor, not only in a better manner, but at a more favorable season. Without their aid, in the present scarcity of laborers, it would be almost impossible to plant and cultivate the usual crops, and quite so to secure them in good order at the time of harvesting. Now, with machines taking the place of human hands, and performing the labor with an intelligence scarcely inferior—we had almost said superior—to that performed by men, we may, by the blessing of Providence, reasonably expect a bountiful harvest. The breadth of land devoted to farm crops throughout the State, we believe to be as extensive as in previous years, and the prospects are encouraging. Grass is in advance of former years, the late wet weather being decidedly in its favor.

The war has not only caused an unusual demand for all approved farm machines,

but has given an increased impetus to the inventive genius of our people, and many new machines for performing farm labor have recently been patented. Within a few weeks the *Scientific American* has contained illustrations and descriptions of a stone-lifting machine; a machine for loading hay; one for spreading manure from a waggon or cart; one for tilling the soil—a sort of rotary spader; and one for crushing and harrowing. Not all these may prove successful, but it shows the demand for such machines to be great, and leads to the hope that something entirely practicable will, at no distant time, be found to perform many branches of farm labor now done by hand. The more complete substitution of machine over hand labor in working our farms, the invention and use of which will grow out of the present scarcity of farm labor caused by the war, will be among the blessings the war will bring after it, when peace shall once more be restored.

It is too late in the season to speak of machines for planting and sowing seed. We have heretofore alluded to the potato planter, invented by J. L. True, of Garland, which will hereafter be generally used by our farmers as its merits become better known. Chandler's horse-hoe has stood the test of experimental trial for two seasons, and is regarded as a most useful implement. It is not too late to procure one, for it hoes potatoes, (and corn the second time), performing as well in this operation as in that of covering. We have before us a letter from a correspondent in Knox, in which he says: "I planted last year three acres of potatoes with one of Chandler's horse-hoes, from which I raised one thousand bushels. One half day with myself and horse for covering, and one day in hoeing, was all the work I spent on them, and it was done as well as it could be done by hand."

Mowing-machines, horse-rakes, &c., will be more largely used the present season than ever before. All farmers who have a considerable amount of hay to cut should by all means procure a mower, if they have not already done so. Neighboring farmers or districts can club together, purchase a machine, and perform their work in turns. It is a plan having many disadvantages, but in these times is the best course that in certain cases can be adopted.