



The Magic Flight of Thought

AGES ago, Thor, the champion of the Scandinavian gods, invaded Jotunheim, the land of the giants, and was challenged to feats of skill by Loki, the king.

Thor matched Thialfi, the swiftest of mortals, against Hugi in a footrace. Thrice they swept over the course, but each time Thialfi was hopelessly defeated by Loki's runner.

Loki confessed to Thor afterward that he had deceived the god by enchantments, saying, "Hugi was my thought, and what speed can ever equal his?"

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HOW IMPLEMENTS AND MACHINERY SAVE HUMAN LABOR

Some Changes in Our Agriculture Brought About by Their Use

VERY many farmers fail to realize the importance of the development of modern farm implements and farm machinery and its effect on the development of this country. These same farmers are mostly of the stay-at-home sort and have only a vague idea of what is going on in sections more or less distant from their own. They are apt to think that hard work with hands and feet, in the use of the few simple tools to which they and their fathers before them have been accustomed to use, is the mainspring of success. They are content to rely too much, if not exclusively, on brawn and muscle, and too little, or not at all, on the brain power in the form of inventive genius that has been so wonderfully successful in multiplying the results of manual labor.

Does the reader know that as late as 1845 (the writer remembers) the people of the United States did not raise enough wheat to supply them with bread, and that on many a farmer's table "flour bread" was something of a rarity? In that year the production of wheat was about four and one-third bushels per head, while in 1890—45 years later—it had risen to 10 bushels per head of total population. This gave twice as much as we could consume and the excess went to Europe. And yet the percentage of persons engaged in farming in 1890 had decreased to 80 per cent of the proportion so engaged 45 years before!

What made this possible? The answer is the advent of "patent plows" (as they were first called in derision), the self-binding harvester, and the steam threshing machine, to say nothing of the disk harrows, seed drills, etc. What would be our supply of wheat if we were suddenly deprived of all these machines and implements and were forced to rely on the methods of 1840?

The same remarks apply with more or less force to the production of most of the crops of the farm. Think of it! Less than 120 years ago there was not a cotton gin in existence, and we made (our great-grandfathers) less than 5,000 bales per annum at the beginning of the nineteenth century!

Many Machines to Select From

BUT it is hardly possible to even enumerate the great number of farm machines for house and field use, that are now used by up-to-date farmers and manufacturers dependent on farm products. The list is almost interminable.

It is true that machinery and implements for preparing the land, planting the seeds, cultivating the plants and harvesting the matured crops are those that are of the greatest value to farmers. Even these are almost confusing in their number and variety.

From a strictly practical point of view agricultural implements and machinery are valuable, chiefly because—

1. They enable the farmer to do better work.
2. To do more work in a day.
3. They enable him to plant and cultivate a larger area.
4. By their use he does not have to work so hard and such long hours.
5. The farmer is thereby enabled to get some useful and effective work out of his horses and mules.
6. He is also enabled to employ more mules and horses.

The more modern machines (motors) will soon enable the farmer to largely lay aside horse and mule power and substitute in their place gasoline and steam-driven traction motors, wherewith the power of two, four, six, and even up to 20 or more mules or horses may be utilized in

one compact motor-drawn gang of plows, harrows and smoothers. Think of a gang of ten 10-inch turn plows drawn by a 30 horsepower gasoline tractor and turning over 15 or 20 acres of sod in a day and doing it better than could be done with 20 horses and 20 one-horse plows, held and gripped and pushed by 20 men.

Of course not many farmers will, all at once, want to invest in such a huge machine. But there are two-horse plows, and three-horse disk plows, planting machines, one and two-horse cultivators that are within the reach and will meet the demands of the so-called one and two-horse farmer.

R. J. REDDING.

Griffin, Ga.

ABOUT THE SECTION HARROW

It is a Tool We Need to Know More About

THERE is no other instrument of so much importance in preparing a seed-bed and starting off a crop as is the section harrow.

Land that is broken in the spring should be harrowed behind the breaking plows before the clods have time to dry out, otherwise you will have to wait for a rain before they will pulverize. But by all means harrow until these clods are all broken up, for if you don't you are liable on some soils to have clods when you lay by. With the use of the section harrow you are enabled to get over much ground in a short time.

Whenever possible get a 90-tooth or three-section harrow. It will take three mules, but will enable one man to do a third more work than he would do with two sections; and, man labor is the thing on which we need to economize. With a good team one hand should easily go over 20 acres per day, and I know of no implement that will do so much of the same kind of work.

Then just after the crop is planted, before it comes up, is another time when the section harrow is very much needed. If there has come a hard, packing rain, which is so often the case, the harrow may save your stand by loosening up the crust, and it is only a few day's work going over the whole crop. You will also drag what trash there is to the middles where it will be out of your way in the early working of the little plants.

After the cotton and corn are up the section harrow is indispensable in starting off the crop and beginning the cultivation. Here is another time where quick action is needed, for the whole crop needs to be gone over in a few days. Go over your cotton and corn, crossing the rows diagonally, to keep the harrow level, with the teeth slanting back at an angle of about 45 degrees. In four or five days go over again in the opposite direction, harrow until you have all the ground broken, and your crop has started off to vigorous growing. You can harrow cotton until it has four or five leaves. At this time it does work in cotton that cannot be done with anything else. It breaks the crust between the little plants, thins them to some extent, and keeps them from running up long shanked as they will when left too thick, waiting for the hoes. A crop handled in this way will require from one-third to a half less hoeing, a saving of more man labor.

You cannot afford to be without a section harrow and go ahead the old slow way, "barring off, hoeing out, and sweeping up," for when you get to the other side of the field your crop is in about as bad shape where you began as it was at first.

J. W. WILLIS.

Grenada, Miss.

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