

INVENTION AND THE FARM.

Prof. W. J. Hammond, of Colorado Agricultural College, outlines the development of agricultural machinery as follows:

Through the developing and marketing of modern farm machinery and implements the occupation of agriculture has been lifted from a round of drudgery to one full of rich possibilities that call into constant requisition both intelligence and reason. A century ago agricultural machinery was almost as primitive as it was 1,000 years ago. Now we have steam plows, combined harvesters and thrashers, auto-mowers, etc. And although they have come into comparatively recent use they are changing all our national life, commercial and industrial, in addition to their direct effect upon the farmer.

All the great crops are now planted, and all except cotton are gathered, by machinery. The old-time plowman has given place to one who rides on a comfortable spring seat, and who has plows adapted to his various needs; or the modern plowman may even be one who plows by steam or motor and guides a many-horse power engine across his lands. Fertilizers, instead of being spread by hand, may now be machine spread, and with greater evenness and economy. Seeds are planted by machinery, from grain and grass to corn and beans. Tomatoes, cabbage, lettuce, celery, etc., when ready for transplanting from the cold frames, may be set out by the plant setting machines, handling each sprout tenderly, gathering earth around its roots and watering it well. The potato planter picks up potatoes, cuts them into desired number of parts, separates the eyes, removes the seed ends, and plants the potatoes at desired distances apart, then covering and fertilizing them and marking off the next row.

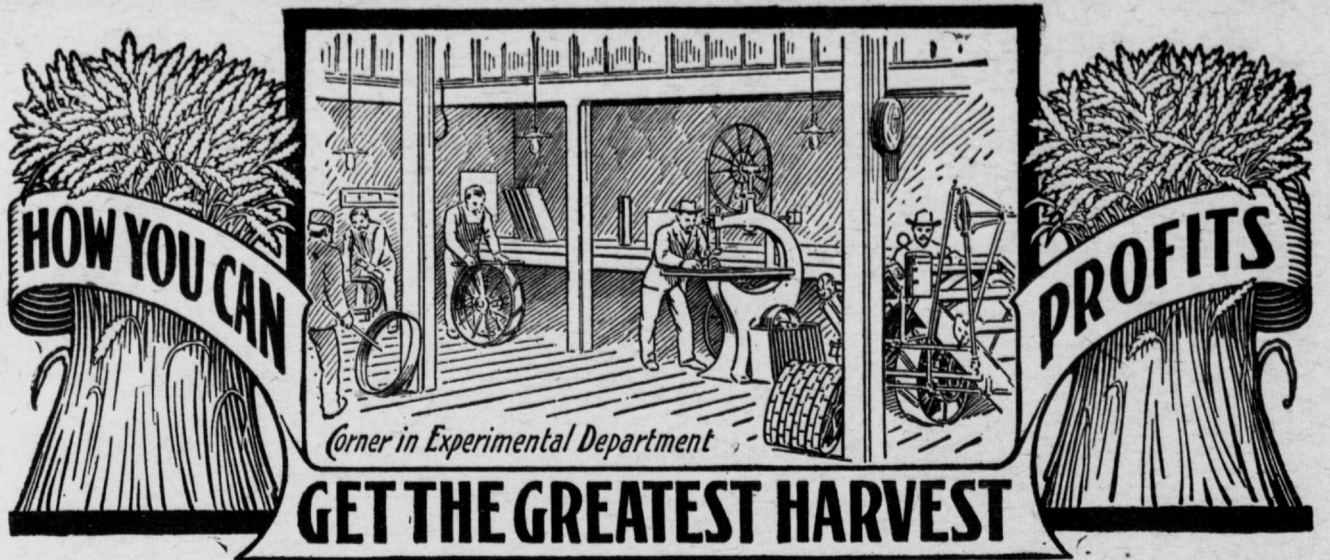
For harvesting there are still other products of mechanical invention to aid the farmer in his work. For hay harvesting there is the mower, the horse rake, the hay gatherer and stacker, and the hay press. For wheat and corn harvesting there is the self-binder and header. And occasionally we even see a combined harvester and thrasher which cuts the grain on the one side and on the other drops sacks of grain. For corn we have the corn-binder, cutting corn and binding it in bundles. It may even be shocked, husked and thrashed by machinery, and the stalks made available for fodder. And then the steam sheller will carry on the work by shelling one bushel of corn per minute, taking only one-one-hundredth of the time needed for the work by hand.

In doing the lesser work of the farm, improved implements and machinery play no smaller part. Skinning pans have given way to the cream separator, and the incubator is outdoing the hen. Potato and other bugs are now taken care of by spraying machines, and shearing machines take their product from the sheep. Even the cow cannot escape from the path of progress in farm machinery, for she is now being milked by machinery.

By means of water power many farmers now generate electricity for their use, and not only light their houses and barns, but saw wood, churn butter, cut up feed for cattle, or drive a thrashing machine by electric power. They may, if they will, even use it to plow their lands. Or, if the farmer prefers to use steam power, he may do with it almost equally marvelous things.

For practically every agricultural purpose there is now a labor-saving machine. Farming of the future is destined to be a very different thing from that of the past. Much of what the farmer has hitherto spent in hire of labor he will give to the purchase of machinery. He will farm with his head more than by mere physical strength. He will make machinery do his work and give him comfort and leisure as well as profit.

Utah claims to have been the first state to supply scientific culture to dry farming. A colony of Scandinavian settlers in Bear River City determined to keep the water off their wheat land in 1869 because it carried too much salt, and their wheat grew and thrived and ripened, thus establishing the practice. Nearly 200,000 acres of wheat were grown in Utah in 1907 without irrigation.



RIPE grain waits for no man. The loss of golden hours in the field means the loss of golden grain and the loss of golden profits. So the profits that you make from your grain depend upon your harvesting machines.

Trouble and tinkering, breakdowns and delays through unreliable machines would mean the loss of time and money—would mean needless expense and worry.

You cannot afford to risk your profits on doubtful harvesting machines.

And there is no reason why you should.

Because you know the machines you can always depend upon.

Since the click of the first reaper—more than two hundred concerns have offered harvesting machines to the farmers.

Out of these two hundred and odd, over one hundred and ninety, up to the present time, have disappeared because their machines were not right.

This means that thousands of farmers tried such machines, lost money through them and condemned them.

Through these years of "testing" the farmers found the best and placed their greatest confidence in six machines.

You know the machines that have earned first place through this test of time.

And you know that the

**Champion, McCormick, Osborne,
Deering, Milwaukee, Plano,
Harvesting Machines**

hold their undisputedly supreme position today—

- Because they are right—
- Because they have always done the best work—
- Because they have always satisfied their users—

Because they have proved by many years of use that they can always be depended upon.

That is the reason (there can be no other) they have earned the approval of the farmers.

This means that they have withstood all the tests of all conditions of harvest fields everywhere.

It means that they are built on the right principles.

It means that, of the numberless types of harvesting machines put out in the years past, these embody the ideas that have been most successful in actual work.

It means that they are the net result of all the good that has been developed in a half century's experience and experiment and that there is no feature about them that is untried or experimental.

WESTERN GENERAL AGENCIES: Denver, Colo., Portland, Ore., Salt Lake City, Utah, Helena, Mont., Spokane, Wash., San Francisco, Cal.

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(INCORPORATED)

Chicago,

U. S. A.

International Line:—Binders, Reapers, Headers, Header-Binders, Corn Binders, Corn Shockers, Corn Pickers, Huskers and Shredders, Corn Shellers, Mowers, Hay Tedders, Hay Rakes, Sweep Rakes, Hay Loaders, Hay Stackers, Hay Balers, Feed Grinders, Knife Grinders, Cream Separators, Gasoline Engines, Pumping Jacks, Manure Spreaders, Weber Wagons, Columbus Wagons, New Bettendorf Wagons and Steel King Wagons, and Binder Twine.



THE HOME BEAUTIFUL

For the past four or five months, the Federal Paint & Wallpaper Co., of 1314 First Ave., Seattle, has been advertising in The Ranch in an effort to get in touch with the farming people who would like to have the advantage of a large and well equipped city home decorating house to decorate their homes.

They have gone to a heavy expense to so systematize their business as to enable them to give the farm home just as careful and detailed attention as they do the city home. A complete art department is in charge and every condition surrounding the farm home

is carefully studied. When an inquiry for their booklet on wallpaper is received, the booklet, together with a question blank is mailed to the inquirer with the request that the blank be carefully filled out and returned. The ordinary person might perhaps think that a lot of the questions asked are unnecessary, but those who have studied the business of decorating a home, say that it is a fact that north or south lighting, surrounding shade trees and a lot of other little things very seriously affect the best result unless considered before papering or tinting.

Upon the receipt of the question blank, properly filled out, the art de-

partment concentrates upon that individual home and very carefully selects two, three or four sets of papers and colors in tinting; samples are sent the farmer and then it is up to him to make his choice.

The question of saving money is a considerable factor, as a large city house, especially equipped to do this work, carries so much more stock and buys everything in so much larger quantities that they are in position to sell at prices considerably lower than any small dealer.

It would be well for all Ranch readers to get their booklet which is sent free for the asking.