

he liked. So he fixed it up to suit himself and made it spin awhile until he was satisfied it was working properly and then started for the field. He got about a hundred yards when one cylinder refused to work and on examination one of the cams that works the intake valve was found broken. He waited two weeks for a new cam and the cam and gasoline came the same day.

Then we disced and dragged about 300 acres at the rate of 60 acres per day. Double disced and dragged at one operation. Then we melted out a crank box. The crank boxes in a Flour City are babbitted. We, however, couldn't find the cause. We finished discing and then started to wait for the plow, waited about a week and the plow came. The stubble bottoms only came with the plow. We only had a few acres of stubble to plow, so I concluded after we got home to look into the trouble with the "cranks." We couldn't get an expert and there was nobody else in the neighborhood that knew as much about the engine as I did. I found out in about half a day. The oil pipe in the sight feed circulation was clogged. The wonder was we didn't melt out all the cranks. That stopped the crank trouble.

I hitched to the plow then and started into a piece of stubble ground. But I couldn't get the power out of the engine to pull more than eight plows and packer. It would run slow and hang up on the grades. I couldn't get an expert. Well, I finished the stubble and then waited for the breaker bottoms. It was nearly June before they came. Then I hitched to the plow and began to break. The same trouble, short of power. However, I plowed about 200 acres with the engine running poorly, when I began to get desperate and thinking possibly the valves were the cause of all the trouble, I concluded I would find out. I set all the valves to my notion and started up. Wonder of wonders, it went off with eight plows as if there was nothing behind. We went around the field as my plowman said "like a scared rabbit."

The next day I pulled the eight fourteen-inch plows a half mile with the plows six inches deep in the sod. We plowed in all about 375 acres, double disced and dragged nearly 500 acres and when harvest came I got four Hansman binder hitches and cut about 600 acres of wheat, drawing four binders.

When discing sod I used two drags, pulling 16 x 16 discs and five section lever harrow behind and one five section drag teeth up behind that again. That makes a splendid combination and when we got through the ground was nearly as smooth as old land. The discing and harvesting was very light work for the engine. I can pull six binders easily I am sure.

When discing we used about 40 gallons of gasoline to each sixty acres; harvesting, about 40 gallons to 50 acres and breaking

prairie 2 1/4 gallons per acre; stubble plowing with packer behind about the same. I didn't keep as close tab on fuel when we were summer following.

I have a ten-bottom John Deere engine gang and I must say the work done is excellent, either breaking or stubble. I have a 12 foot Fulton sub-surface packer that I hang on behind for stubble plowing. When I get through the field looks like a garden and is firm. Once over with the drag and you can't tell where the furrows lay.

It takes two men to operate the engine and plows. I ran the engine alone part of the time when discing, but it is best to have two along I find. We used from two to four barrels of water a day and one hour a day with man and team providing the gasoline takes care of the fuel and water problem.

Operating expenses plowing 20 acres per day are as follows:—

45 gallons of gasoline at 28c.	\$12.60
Engineer	4.00
Plowman	2.00
Hauling fuel and water	1.00
Oil and grease	1.75
Board	2.00

\$23.35

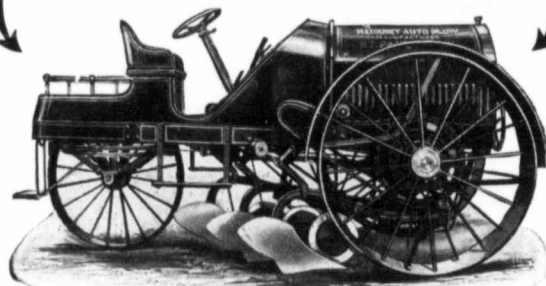
That makes \$1.15 1/8 per acre. I am not figuring depreciation, as I have no idea how long the engine would last. The discing would figure out about 36 1/2 c. per acre, using the same figures as above with the exception of our using only 40 gallons of gasoline instead of 45 per day.

The binder hitches worked very well. We could handle the short grain this year about as well with the engine as we could with horses.

We bought an Aultman & Taylor 36 x 64 separator and did some threshing. I must say the engine did its work very well. There are a few minor improvements that might be made and I understand the company is putting most of them on this year.

As for hitches. The Flour City people furnish a bar nine feet long, but that in itself is not much use for hitching on any number of implements. I took a 4 x 6 plank 18 feet long and bolted strap iron on the front side to strengthen it, then bolted the nine foot iron bar, furnished with the engine, to that and bolted it to the engine. Then attach three discs with short tongue to the plank and two discs with long tongue midway between the outer and inside disc hitch at each end. Use eye bolts through the draw bar and clevis in end of tongue. I used short tongue discs behind and bolted one inch iron rods for tongues to reach to the draw bar, so that if they caught on the front discs in turning they would not break and they were bent many times too. It is an easy matter to catch them with a pry and straighten them again. To hitch drags behind I used two

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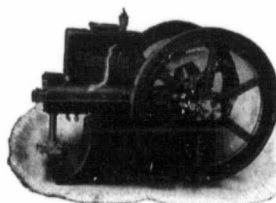
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