

The Rumely 15-30 Kerosene Tractor and a Rumely 6-bottom Engine Gang.

BRAKE TEST (150).

	Internal Combustion Engines	Steam Engines
Horse power hours per unit of fuel used	100	100
Water used per hour, gals. per cent. of capacity	15	10
Efficiency, as taken from mean effective pressure	15	10
Steadiness of running, vibration, condition of engine	20	10
Horse power hours per 100 gals of water		20
	150	150

MAXIMUM TEST (50)

Economical load compared with maximum	20	20
Condition of engine	30	30
	50	50

PLOWING TEST (200)

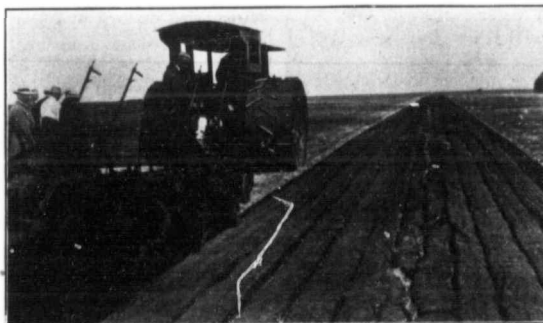
Fuel used per draw bar horse power hour	100	100
Water used per drawbar horse power hour	20	20
Acres plowed per hour per brake horse power	20	20
Quality of plowing ..	20	20
Distance travelled without replenishing fuel	15	15
Condition of engine, stops, etc.	25	25
	200	200

DESIGN AND CONSTRUCTION (100).

Protection of working parts	20	20
Accessibility	20	20
Variation of speed ..	20	20
Easy manipulation ..	20	20
Design, materials of construction	20	20
	100	100

Prior to the opening of the competition, the judges held several meetings and decided upon the following scoring rules:

(a) Scoring for horse power hours per unit of fuel used shall be on the basis of 100 per cent. of full score to best record for each kind of fuel, and all other records rated proportionately.



The 1 H C 45 h.p. Kerosene Tractor pulling an Oliver Engine Gang. Can You Beat The Furrow.

(b) Scoring for water used per hour gal. of capacity substantially on the basis cited above.

(c) Scoring for efficiency as taken from the mean effective pressure shall be as follows:

The M.E.P. shall be calculated from the B.H.P. developed in brake test; the highest record so secured shall be scored 100 per cent. or full score, and all other records scored proportionately.

(d) Horse power hours per 100 gal. water same as (a).

(e) It is understood that the maximum tests shall represent the maximum continuous power output without change of speed and shall be determined by the judges.

(f) The scoring of economical load compared with maximum shall be as follows:

H.P. per 100 cu. in. of piston displacement	12
Maximum test in excess of economy test	5
Fuel consumption	3

Total for both int. comb. and steam

(g) The score for condition of engine in maximum test shall be decided as follows:

Steadiness of running	2
Vibration	3
Loose parts	10
Bearings	10
Cleanliness and excessive lubrication	5

Total for both int. comb. and steam

The 20 points allotted to the three features for two-hour brake test were distributed as follows:

	Internal Combustion	Steam
Steadiness of running	10	5
Vibration	5	2½
Condition of engine ..	5	2½

All of the brake tests were finished by Saturday, July 15th, and on Monday the various engines repaired to the plowing grounds which were about seven miles north of the city and made ready for their plowing stunts, and here was where the trouble began.

The previous three contests that have been held enjoyed a very favorable plowing field. The field last year was im-

arrived on the plowing field all right and some others mired before they got there. As one competitor expressed it, the field was composed of an India rubber surface with a very thin bottomless pudding underneath. Once an engine went through the top surface it went down and in some cases it went down to stay for a considerable time. It was learned after the competition was over that the field had been secured from a real estate firm in Winnipeg by the name of Dangerfield & Doolittle, and, while no pun was intended, the names of the owners explained to a considerable extent.

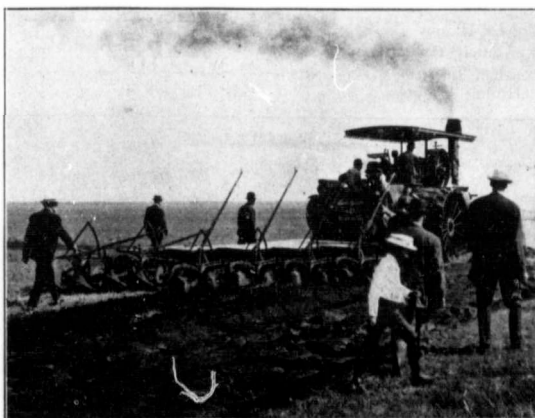
Practically every engine gang on the market was represented in the Winnipeg Motor Competition, the well known makes of Cockshutt, Deere, P. & O. Moline and Rumely and Oliver being very much in evidence.

In these plowing competitions the plowmen get rather the worst of the deal. It would not be possible to hold such a competition without the use of engine gangs, and yet no points are provided whereby the manufacturer gets anything whatsoever out of it. The heads of the various plow manufacturers, however, were very much in evidence which would indicate that they rather enjoy the game.

It is needless to say that all the plows did good work. Some pulled heavier than others as is shown by the draw-bar pull. Yet in all the competitions that have been held we have never seen as nicely turned furrows as that which the 1911 competition produced, despite the fact that the condition of the plowing field itself was not conducive to the best results.

Deere, P. & O. and Oliver were in the majority and the Cockshutt would have been well up in the list if the J. I. Case Company had not withdrawn from the competition as they were to have pulled Cockshutt plows.

The 1911 plowing fields, however, showed up one thing that none of the other competition fields have. It showed up the engines working under conditions that are often met with upon the



The Gaar-Scott 33 h.p. Steam Tractor pulling an 8 bottom John Deere Engine Gang (Bronze Medal Winner in Steam Class).