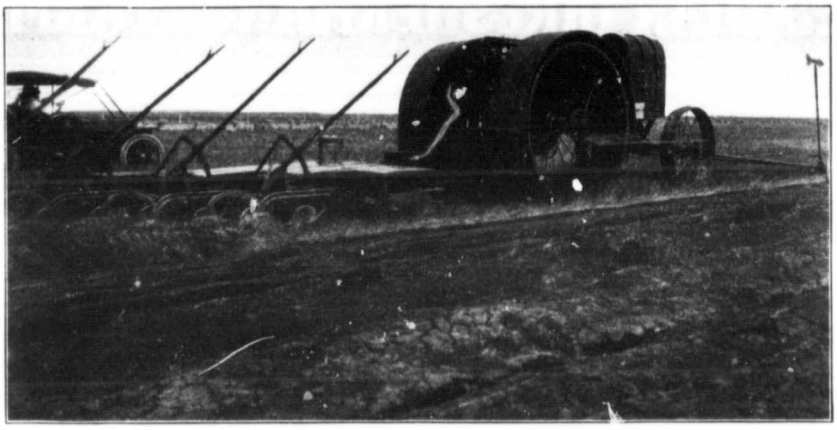
others in the "also ran" class and forget them. Each and every engine entered in the contest must be reckoned with in dealing with the farm power problem of the present and future. They will all be heard from and their records will be by no means such as to make their builder and designer blush.

A motor contest is not designed so much to bring out gold medal winners as it is to bring out the good and strong points of each engine entered. In fact, the real purpose of any such contest is to prove the suitability of any or all motors for general farm work. The first contest held in Winnipeg used weight as the basis of classification, the idea being that only the small motor was adapted for general farm use and that the large sized tractors, both steam and gasoline, were too heavy, too expensive, and too unwieldy for general farm work. This hardly seemed fair as it shut out practically all of the steam tractors and a great many of the gas tractors as well. Three years ago it did not matter so much, as it really only barred one gas tractor at that time but a maximum weight of 14000 lbs. (the maximum weight used in the contest held in 1908) would bar the greater number of gas tractors built today, to say nothing about the steam tractors. This matter of classification is a serious one. In regulating a motor contest, it is almost an impossibility to so group the motors that there will be any equality in power or size. If horse power be taken as the basis of classification it permits of advantages to some engines and disadvantages to others. For example: In the contest just held at Winnipeg, the classes for internal combustion engines ranged as follows: Class A, 20 brake horse power and under; Class B, 21 to 30 brake horse power; Class C, all engines over 30 brake horse power. We will suppose that an engine in Class A through an exceptional run on the brake developed 21 horse power. It is to all intents and purposes thrown into Class B with engines developing 28 or 30 horse power. The engines in this class are differently constructed and are designed to do a different class of work than engines developing 15 to 18 horse power under ordinary circumstances and the engine that crept up out of its real class is seriously handicapped by virtue of its shifted position and its test is scarcely fair. The same thing holds true with any of the other classes either steam or gasoline. It has also happened with the horse power basis of classification that an engine from a lower class has crept up into an upper class and beaten out some of the engines in that class through more or less of a fluke. Such things convey a wrong impression to the farmer, the real user of the goods, and at the same time it results in little that is of value to the manufacturer.



The Gas Traction 30 H.P. Gas Tractor Pulling an 8-Bottom 14-Inch John Deere Engine Gang.

Another thing with reference to this horse power method of classification. How are the judges to detrmine the real horse power of an engine? Can they take the manufacturer's rating? Most decidedly no, for no two manufacturers have the same method of rating their engines. In the case of gas engines it is possible to make use of piston displacement as a basis for classification but in case of steam engines the matter of pressures is so irregular in the case of the different makes that it would not be at all practicable, and it is not possible to compel all steam engines to carry the same pressure on account of the differences that exist in boiler design and construction. One other way is left, and it is by no means satisfactory, which is to rate the engines after their various performances on the brake. This again is hardly fair owing to the large amount of jockeying that can be done. It is not said that this was done but any engineer knows that it can be done and doubtless, so that the engines are placed in the classes by their makers that they are most likely to make the best showing in regardless of where they really belong.

From the foregoing it will be seen that classification in a motor contest is an all-important thing and can and does give rise to no small amount of dissatisfaction on the part of the various contestants. Now, why is it really necessary in a motor contest, to have any classification at all? As stated before the purpose of a motor contest is not to brand gold medal winners so much as it is to bring out the merits and demerits of the various engines entered. This being true why not enter each engine as an individual, put it through its various tests and give it its rating, the same being in the nature of a certificate from the body or organization under whose auspices the contest is held. Let each contestant classify his own engine so to speak and from the points given proclaim his own record. As the matter stands at present and as it has stood in the past, only three engines in any one class are awarded prizes and even though all of the others entered in that class may come very near the winners, they receive little or no recognition. Let there be no classes in any contests that may be held in the future but let each engine be judged wholly and solely on its merits and not on the merits or demerits of its competitors. It is true that it would require a more carefully worked out system of rules and a more detailed score sheet than any of those which have been used at previous contests but this would be a blessing rather than a crime. If any criticism is to be offered regarding the contests that have been held it is that the rules and regulations have not been definite enough neither have they been always adhered to throughout the test. There has been too much of a tendency to make rules to suit the occasion and while this sort of thing has resulted in little, if any, hardship to any manufacturer it nevertheless leaves far too many loopholes open.

The I.H.C. 45 HP Gas Tractor Pulling a 10-Bottom 14-Inch P.&O. Mogul Engine Gang.

It is of the utmost importance to every manufacturer of traction engines who enters a contest that he know a considerable time beforehand just what sort of a proposition he is up against, otherwise he does not come prepared to give his machine the best test of which it is capable. Indefiniteness and uncertainty even on the smallest detail also has a tendency to keep many manufacturers away who would get into the game, did they know just what it was.

When the first contest was held in Winnipeg and even the second, it was rather an impossibility for the judges to so design a set of rules that they would cover everything but the entries of the past three years have so shown up types and designs that there should be no difficulty in this respect as regards any future contest. The rules