

at all in the bars, is so long in the gearing that it is sure to draw heavily. On the other hand, the buckboard combines strength and lightness to a remarkable extent, and as the centre of gravity is very low, it is almost impossible to upset it. I will now endeavour to describe as nearly as I can the sort of waggon that I think most suitable for a trip through the North-West. The forward wheels should be as large as the hind wheels of an ordinary buggy, and the hind wheels only a trifle larger. The felloes should be shallow, but very wide, and covered with a steel tire three inches in width. The kingbolt should be fully double the strength of an ordinary one, and the axles and arms should be extra strong. Instead of a circle for the forward gearing, it should be provided with hounds such as are used in common lumber waggons. The reach should be short, and to counterbalance this, the box should be made deep enough to afford space for stowage. Thorough brace springs would, I think, be better than any others for this purpose; some modification of the long elliptical end spring might be made to answer the purpose. The boxes and arms should be of the best quality and finish, and they should have plenty of play. The wheels should be rather more "dished" than ordinary ones, so that they will not turn wrong-side out, nor spring at the spoke shoulders when the waggon lurches from side to side, as it is apt to do very violently when the trail is honeycombed by badger holes. An efficient brake is almost indispensable.

The harness should be strong, made with large well-padded hames, collars, and breeching, with no back-bands, or "saddles" as they are sometimes called.

There should not be less than four ponies for one waggon; the traveller will find it to his advantage to take with him as large a herd as practicable, as the more frequently he changes, the longer his animals will last. Should he start, for example, with twelve ponies, each pair will run light for four hitches for every one that they work, and this will allow him two saddle ponies with which to do his herding. Worked in this way his ponies would gain in flesh in crossing the prairies, and he would have no occasion to carry grain of any kind. His ponies would at the end of August, at any post about the eastern portion of the plains or at the end of the track, bring considerably more per head than they cost him, and the profit on the herd would go a long way towards covering the other expenses of the journey. At that time he would meet with many travellers about to take short trips on the plains, and the few ponies to be had thereabouts would in all probability be out on surveys.

As regards other portions of the outfit, of course much would depend upon the size of the party and the rate at which they desired to travel. The ordinary square-end, high-walled tents of the American pattern are but poor affairs on the prairie, though they are very useful and comfortable for camping in the timber. If the party is a large one, a bell tent will be found convenient, or, what is still better, a buffalo hide teepee (which can be bought at Fort Benton for some \$35 or \$40). In the teepee no stove is necessary, and the ventilation is good. A fire can be built in the centre, and the smoke escapes