

more easily repaired. The German wheel is 4 ft. 6 in. in diameter, is built entirely of metal, and from the nature of its construction is of marked rigidity. Thus any sudden shock it encounters is transmitted direct to the axle-tree without cushioning, and the result (as we shall presently point out) is fracture of the axle. It is built up of a tubular steel rim joined to a central cast steel nave or hub, by steel tubular spokes, and if a spoke breaks the whole wheel must be taken to pieces before it can be mended. Such repairs can only be carried out by skilled mechanics, and experience has shown that the Boer siege guns (of French origin) which were fitted with metal wheels were continually being put out of action by injuries to their wheels. It may be remarked that these steel wheels are almost identical in weight (about $1\frac{1}{2}$ cwt.) with the wooden English pattern, so that in spite of the smaller diameter no saving of weight is effected, but the employment of such material does effect an enormous saving in the time of manufacture, as Mr. Brodrick's advisers should have been candid enough to tell him.

As regards workmanship the foreign carriage admits of no comparison with the English; the difference is amazing, and apparent to the most casual observer. The German equipment entirely lacks the precision and finish which we are accustomed to associate with military work, and in general appearance suggests an agricultural implement rather than a gun carriage.

Turning from questions of design to practical results, we shall find, and shall not be surprised to find, that a veil is discreetly drawn over the performances of the German material in England. But facts are gradually transpiring. Only a small number of the guns and carriages have been issued to the service, and of these a terribly serious percentage (probably more than 50 per cent.) have broken down under peace conditions. No "trials" in the ordinary sense of that word have as yet been carried out, and the accidents (and those of the gravest nature) have happened in the routine of the barrack