requiring three or four horses, and at the same time they have materially lengthened the life of the machines by reducing friction on the wearing parts. In all the Canadian mowers and binders shown in the exhibit, roller and ball bearings are used. The proper application of these bearings has been a problem that has taken years of experimenting to solve. At first they were used on the binder only for the bearings of the main driving-wheel, then they were put in a small grain-wheel and the main gear-shaft, and latterly they have been applied to the crank-shaft and to the bearings of the apron rollers. After a certain amount of experience it has been found that on the crank-shaft they can be applied only at the gear end. At the connecting-rod end, the constant jarring caused by the rapid vibratory motion of the knife renders them impracticable, as the strongest cage is soon shaken to pieces, so at this place a renewable brass wearing bushing is used. Their use on the apron rollers has not proved a success, as the extremely small cages and rollers necessitated soon become clogged with oil and dust, so in a majority of the machines self-aligning metal bearings are used. The roller bearings are made of hardened steel rollers of $\frac{3}{8}$ to $\frac{5}{8}$-inch diameter, so set in a malleable iron cage that they are free to turn with little or no friction on the ends of the cage, and at the same time will not come out of place when the cage is removed for cleaning.

On the mower, rollers are used for the bearings of the drive-wheels and the intermediate gearing, and renewable brass bushings on the cross-shaft.

Ball bearings are used to take up the end thrust on shafts due to the bevel gear. On some of the machines provision is also made for taking up the wear in the bevel wheels, thus keeping them always in perfect mesh, and allowing the machine to work as evenly after years of use as when new.

The use of steel for the framework and platform of the binder is now universal. Formerly the platform was made of wood, some of the braces of wood, and some of iron, giving the machine a heavy and cumbersome appearance. With the reduced price of steel caused by the erection of a number of steel works in Canada, its use