

APPENDIX X.

FRONT WHEELS.

To take off Front Wheels and Bearings

(ordinary wooden type). NEAR SIDE:- Screw off hub cap (right-hand thread) ; take out split pin and screw off castellated nut (left-hand thread) from the end of the stub axle. The wheel can now be drawn off complete with its ball-bearings. The outer or smaller ball-bearing is then free, but if it is desired to remove the inner (or larger) ball-bearing, the locking plate (which is fixed under two of the hub-flange bolts) must first be removed, after which the large brass caps can be unscrewed (left-hand thread), and the bearing withdrawn.

OFF SIDE:- Follow the above instructions except that the threads are of different hands, viz., the hub cap has a left-hand thread, the castellated nut has a right-hand thread, and the large brass cap (holding the large ball-bearing) has a right-hand thread.

BACK WHEELS

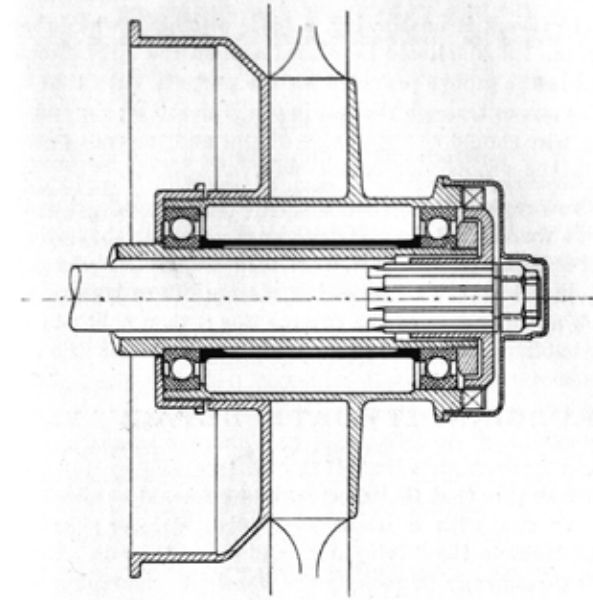
To take off Back Wheels and Bearings

(ordinary wooden type). NEAR SIDE:- Screw off hub-cap (right-hand thread) ; take out split pin and screw off castellated nut (right-hand thread) from the end of the live axle, then slide off the driving dog.

Take off the wire which will be found in a groove around the large circular nut which is screwed on the axle tube (the object of this wire is to lock the grub screw), then take out the small grub screw on the periphery of the large nut, and remove the large nut (left-hand thread).

The wheel is now free and can be drawn off the axle. The outer ball-bearing can also be withdrawn and the distance sleeve taken out.

To remove the inner ball-bearing it is necessary to unscrew the large brass cap (left-hand thread) from the inner end of the hub ; before this can be done the locking plate must be removed, which is held on by a special stud and nut. " OFF " SIDE :- Repeat the same process except that the threads are of different hands, viz.:- Hub cap, left-hand thread, castellated nut has a left-hand thread, large nut on axle tube, right-hand thread ; inner bearing cap, right-hand thread.



REAR HUB

Fig. 72.

To replace Back Wheels and Bearings

(ordinary wooden type) :- The inner ball-bearing (the inner and outer ball-bearings in rear wheels are interchangeable) should first be placed in position such that when a " straight-edge " is placed across the end of the hub there should be 1/16 in. clearance between it (the straight-edge) and the ball-bearing. The large brass cap should then be put on (**the fibre washer being in position**), screwed up dead tight, and locked with the locking plate provided for the purpose.

Place the wheel on the axle and insert the sleeve or distance sleeve (shown black in Fig. 72) after which the outer ball-bearing may be put on the axle and inside the hub, the two ball-bearings being " distanced " from one another by the distance sleeve previously inserted ; then screw on the large circular nut on the axle tube, using the special fork spanner or key provided, fairly tight until the radial marks on the nut and sleeve coincide, and the small hole for the grub screw appears opposite the corresponding hole in the axle tube ; the grub screw should now be inserted, care being taken to see that the end of the screw passes through the hole in the axle tube. In order to lock this grub screw

and prevent it unscrewing, a piece of copper wire (about 1/16 in. thick) should be placed around the large circular nut in the groove provided for the purpose, such that the wire passes through the slot in the grub screw ; the ends of the wire should then be twisted tight and the ends pushed into the groove out of the way.

Now replace the driving dog on to the live axle, then the plain washer and the castellated nut, screw up the latter to the shoulder on the shaft, when there should be about 1/32 to 1/64 in. clearance between the bottom of the jaws on the hub and the face of the driving dog ; then split pin the castellated nut in this position and screw on the hub cap.

RUDGE-WHITWORTH DETACHABLE WHEELS.

Make sure that the wheel is right home, after changing. Never run with a wheel even slightly loose ; this is disastrous to the driving dogs and screw threads. Check this periodically by rocking the wheel and tightening with a spanner if loose. These precautions are necessary, because it may occur that grit and dirt are gripped between the fitting surfaces when the wheel is replaced, and this dirt gradually grinds away, leaving the wheel loose.

In tightening a wheel always force the spanner forward to make the automatic pawl show “ safe ”, never ease it back.

Messrs. Rudge-Whitworth will supply any further information in connection with their detachable wheels, which is not provided in this book.