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# Fitting Instructions

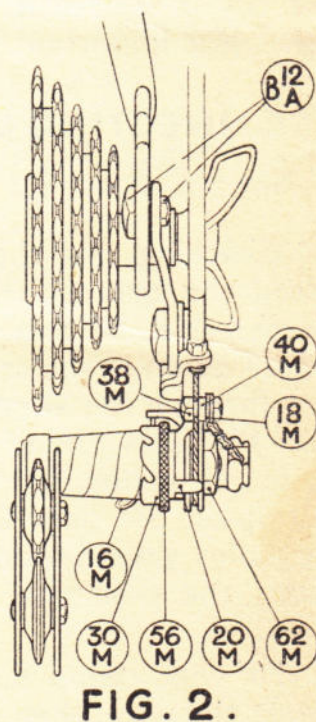
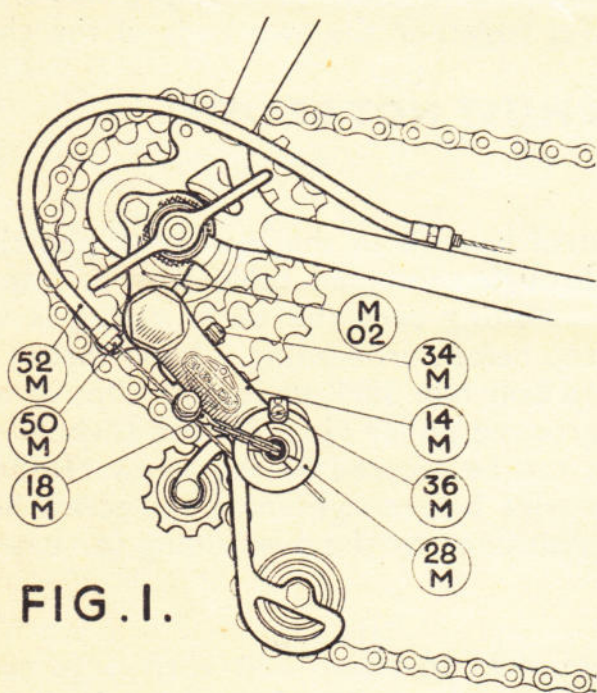
for the

## BENELUX

## Mark 12 Gear

(Pat. Appd.)

### Automatic Chain Tension Derailleur Gear



Remove the rear wheel and fit the multiple freewheel selected, replace wheel in fork ends, and check for chain line. (Correct chain line is when the chain wheel is in line with the centre cog of three and five speed freewheels and midway between the second and third cogs on a four speed freewheel). Adjustments will not be necessary if the wheel is correctly dished, and a hub specially designed for a derailleur gear is used.

Place the arm bracket M.02 on the rear fork end, secure with the screw and nut No. B.12a. The nut being fitted inside the fork end, with the shoulder engaging the slot, replace the rear wheel.

Line up nine tooth jockey sprocket with low gear cog of freewheel by means of hexagon adjusting nut No. 62M and knurled adjusting collar No. 56M. Check carefully for errors in alignment, making sure that the derailing cage is parallel with the freewheel. It is important that the gear does not appear bent or twisted.

Tension gear approximately by moving the trigger end of the spring No. 16M clockwise into the notches in the slotted spring cup No. 30M.

Fit the chain into cage as illustrated in Fig. 1, and around the chainwheel. Set position of gear arm No. 14M by means of adjusting screw No. 34M, so that when chain is assembled it will give you one complete link (i.e., three rivets) from where the chain leaves the low gear cog to where it meets the nine tooth jockey sprocket of the gear. It is important to rivet together the two ends of the chain.

### **A CONNECTING LINK MUST NOT BE USED.**

Checking that the control lever is in the **low gear position**, thread the control wire through combined cable stop and speed selector, No. 50 and 52M. Making sure the outer casing is well bedded down in the cable stop before proceeding. Next thread the wire through the wire clamp bolt No. 38M, under the clips of wire guide No. 20M, round the grooved pulley No. 28M and through the eye in the pulley, so that it can be secured by the screw No. 36M; take up all the slack in the wire before tightening the screw 36M. The pulley should then be positioned by the over riding bar bearing against the gear arm.

Fit wire clamp bush No. 40M to clamp bolt with large collar against the wire, then onto the smaller collar of the wire clamp bush fit swing link No. 18M which is rivetted to the toggle chain. (Note toggle chain must be free to rotate, if tight release one turn anti-clockwise), finally fit washer and nut. Before tightening the nut make sure the **mechanism has not moved**.

The tension of the chain should now be finally checked.

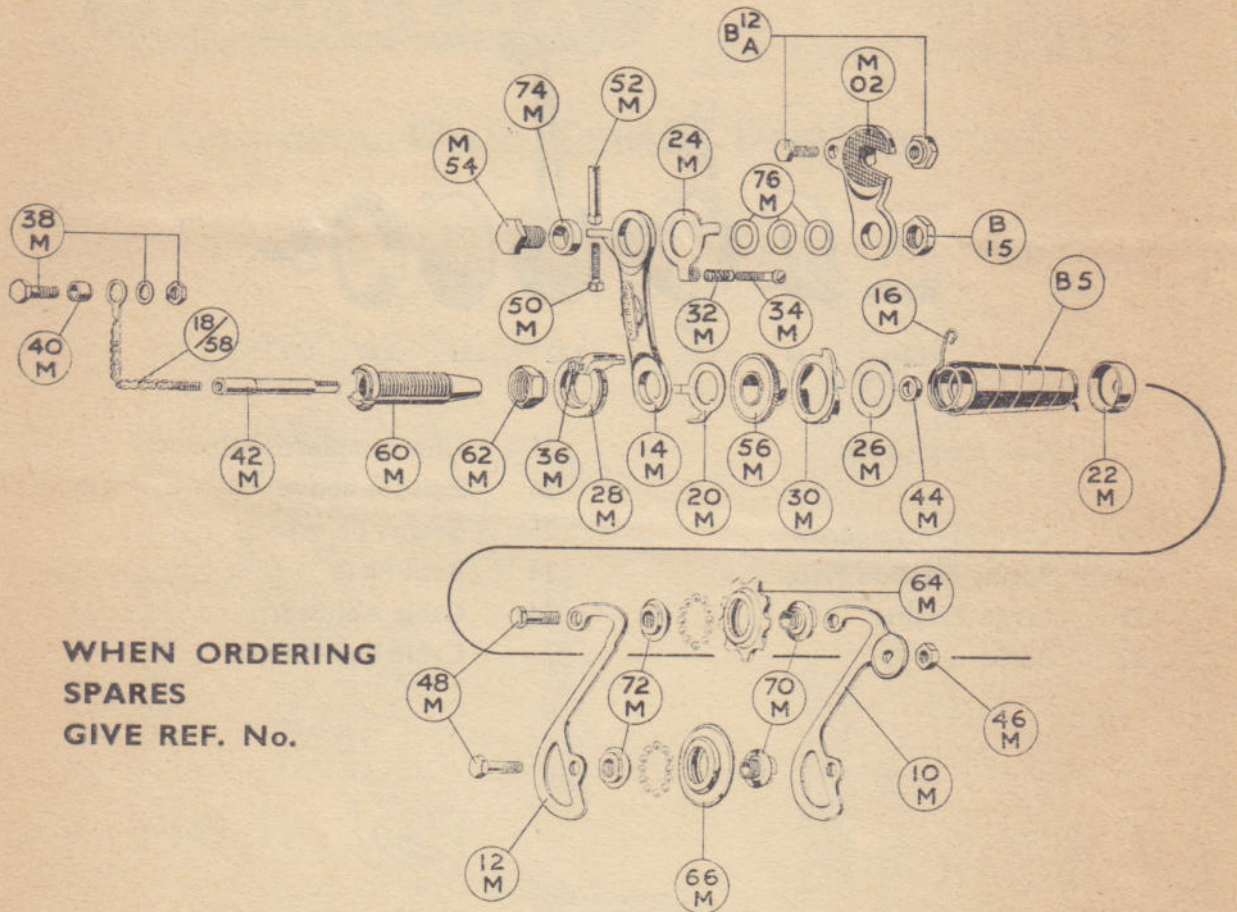
### **PATENTED SPEED SELECTOR**

Adjustment of this selector will not be necessary if using a five speed  $\frac{3}{32}$ " or a four speed  $\frac{1}{8}$ ". To set for a four speed  $\frac{3}{32}$ " or a three speed  $\frac{1}{8}$ " first derail chain into the top sprocket, then unscrew selector screw No. 50M until it abuts against the swing link No. 18M; lock in position with selector lock nut No. 52M.

# BENELUX

# Mark 12

## Spare Parts



**WHEN ORDERING  
SPARES  
GIVE REF. No.**

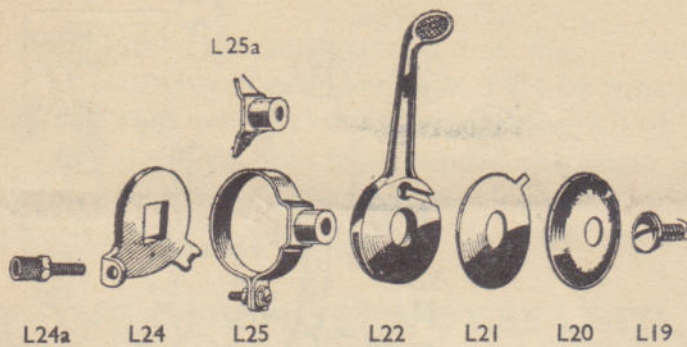
Ref. Nos.

- 10M Rear Guide Plate
- 12 Front Guide Plate
- 14 Gear Arm
- 16 Spring
- 20 Control Wire Guide
- 22 Small Spring Ret. Cup
- 24 Adjustable Stop
- 26 Thrust Washer
- 28 Tension Control Pulley
- 30 Spring Tension Cup
- 32 Friction Spring
- 34 Adjusting Stop Screw
- 36 Clamp Screw
- 38 Wire Clamp Bolt
- 40 Wire Clamp Bush
- 42 Operating Shaft
- 44 Spring Locating Bush

Ref. Nos.

- 46M Shaft Nut
- 48 Pulley Pin
- 50 Selector Screw
- 52 Selector Lock Nut
- 54 Swivel Pin
- 56 Adjusting Collar
- 60 Adjusting Sleeve
- 62 Adjusting Nut
- 64 9T. Jockey Pulley
- 66 Tension Pulley
- 70 Screwed Cone
- 72 Tap Cone
- 74 Spacing Bush
- 76 Shims
- 18/58 Toggle Chain Assembly
- B.12a Rosa Stop Guide and Pin
- M.02 Arm Bracket
- B.5 Volute Spring

# Lever Spare Parts



	Complete Lever	25	Clip complete with Boss
		26	Bolt for above
19	Lever Centre Screw	25a	Brazed on type
20	Spring Friction Plate	24	Back Plate
21	Large Washer	24a	Cable Adjuster
22	Banjo		Cable Bell Ferrule

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