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VICTORIES

CHAMPIONSHIP

of the World
 of France
 of Italy
 of Belgium
 of Switzerland
 of Holland
 of Luxemburg
 Olympic Games

THE TOUR

of France
 of Italy
 of Britain
 of Belgium
 of Switzerland
 of Holland
 of Luxemburg
 of Portugal
 of Spain
 of Mexico
 of Morocco
 of Tunisia
 of Six Provinces
 Grand Prix des Nations
 World Championship of
 Cyclocross
 Bordeaux-Nice
 Paris-Nice
 Paris-Saint-Etienne
 Paris-Brest-Paris
 Rome-Naples-Rome
 Milan-San Remo

THE CHAMPIONS

who won Them

FAUSTO COPPI
 FERDI KUBLER
 JEAN ROBIC
 VAN STEENBERGEN
 F. MAGNI
 STAN OCKERS
 HASSENFORDER
 SCHAER
 RONDEAUX
 MALLÉJAC
 ANQUETIL
 DUFRAISSE
 FORESTIER
 ANASTASI
 GEMINIANI
 MARINELLI
 DARRIGADE
 MIRANDO
 LAUREDI
 L. TEISSEIRE
 M. DIOT
 IMPANIS

WHEN BETTER GEARS ARE MADE



WILL MAKE THEM

FREE SERVICING.

THERE IS A SIMPLEX SERVICE DEPOT IN EVERY PART OF EUROPE...

In Great-Britain, every good dealer will service your Simplex gear. In addition, we operate a SIMPLEX Central Service Depot at London, where Simplex equipment requiring servicing or repair may be sent with an indication of the adjustment required. With the exception of a standard charge of 2/6 d, to cover packing and return postage, gears will be serviced ABSOLUTELY FREE OF CHARGE. Only replacements parts if fitted being charged in accordance with our Official Spares Price List.

Simplex products are covered by British and Foreign Patents, and by Registered designs in Britain and other Parts of the World.

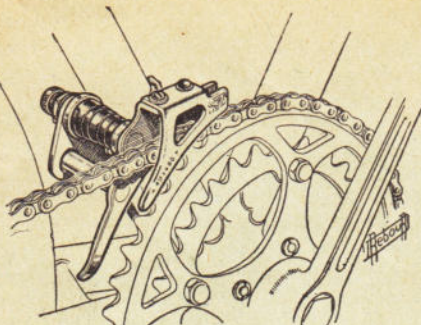
« SIMPLEX » and « JUY » are registered Trade Marks property of this Company.

HEAD OFFICE

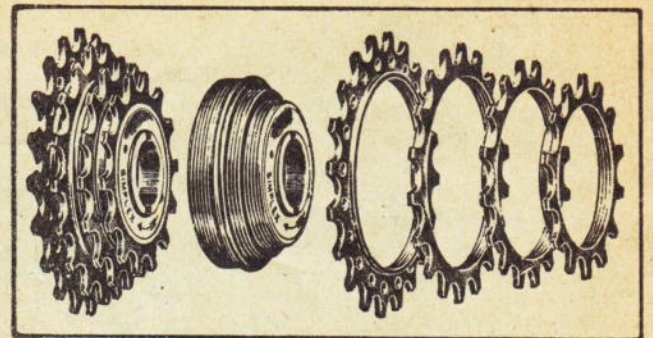
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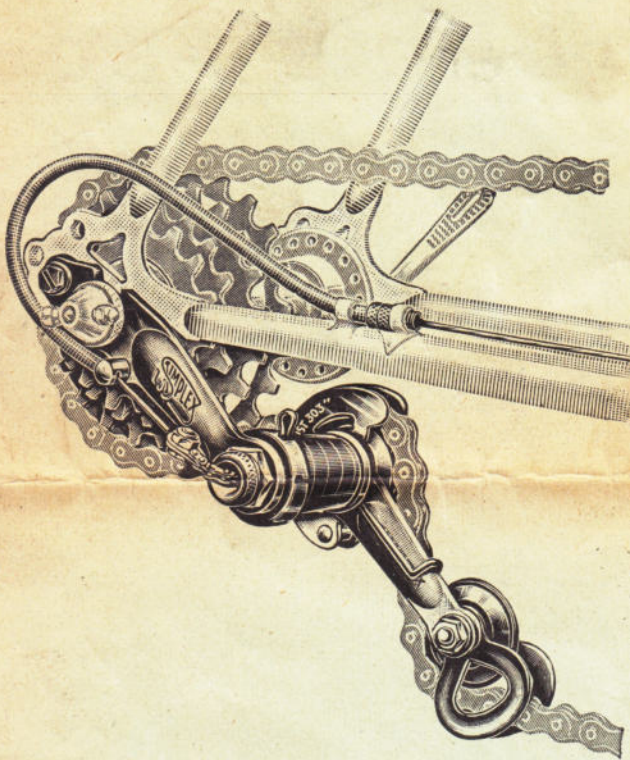
9 DRAPERS GARDENS - THROGMORTON AVENUE

LONDON. EC2 - ENGLAND



JUY-56





Type "303-TOURIST"

The Simplex « 303 TOURIST » has been designed to accommodate the requirements of the Touring man for a gear with the following features:

EASY TO FIT AND TO REMOVE. The « 303 TOURIST » hooks onto standard rear fork ends and is secured by one screw. The gear can be removed simply by slipping off the chain.

GEAR RANGE. Overall capacity 30 teeth front and rear with a maximum obtainable range of 34 teeth. Maximum freewheel range, any combination from 14 to 28 teeth. Front not to exceed 20 teeth variation.

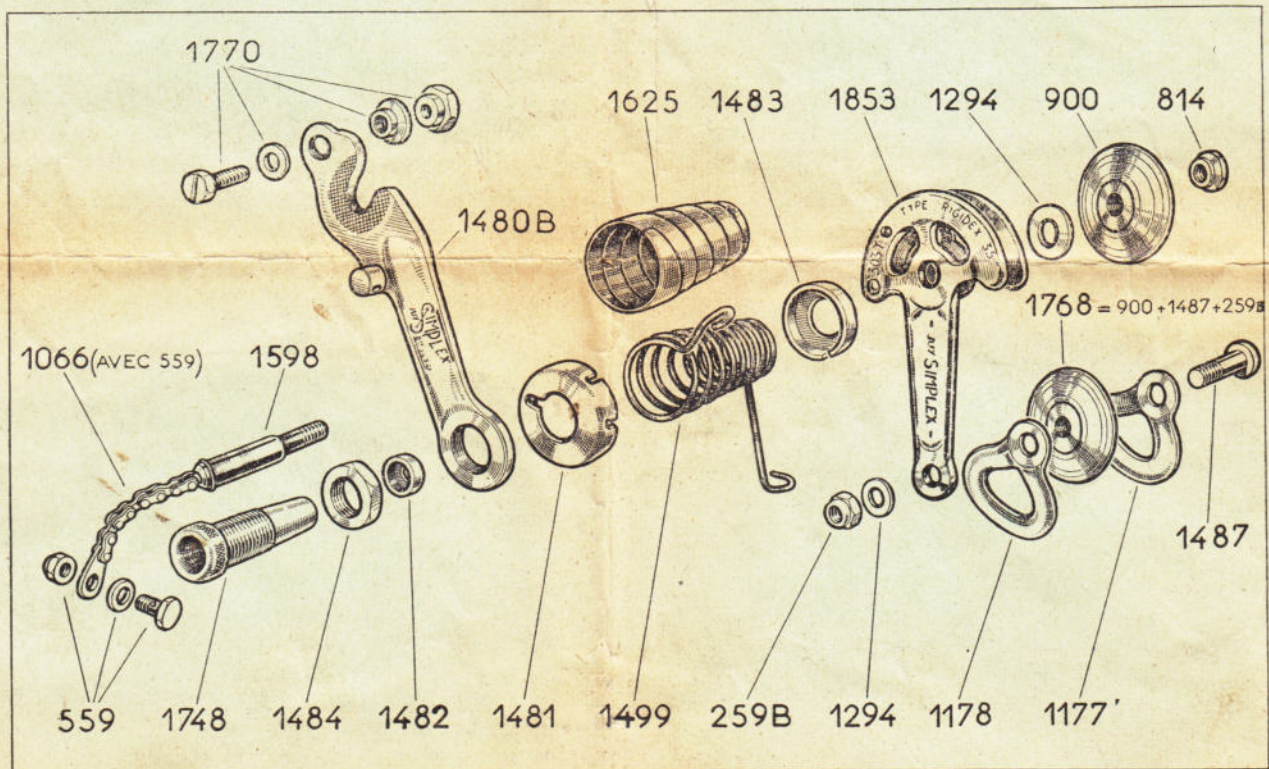
EASY WHEEL REMOVAL. The arm designed to swivel to the rear leaving a free passage for removal of the wheel.

TRANSMISSION. Cable and « clip-on » lever for 1 1/8" tube are supplied with the gear.

EASY TO OPERATE. This new gear will give excellent all weather operation.

TYPES AVAILABLE. The « 303 TOURIST » gear is available in 3 and 4 speed 1/8" chain and 4 and 5 speed for 3/32" chain.

WEIGHT
COMPLETE :
15. oz



When ordering spare parts, give reference numbers and state if required for 3 speed 1/8", or 4 speed 1/8", or 4 speed 3/32" or, 5 speed 3/32".

A « Tourist » Gear — Theory and practice

What is a « Tourist » Gear? The word in itself is technically meaningless except that it describes a gear that will be used primarily by Cyclists who want « to go places ».

The Touring Cyclist will usually have a much varied course for his roaming and his cycle must take him with the least pedalling effort, and this means a gear with the widest possible range.

For this reason we have designed a gear with a 30 Teeth « cruising » variation and a maximum of 34 teeth.

The « Tourist 303 » will accommodate a freewheel with any sprocket size from 14 to 28 Teeth and up to 20 teeth variation at the Double chainwheel.

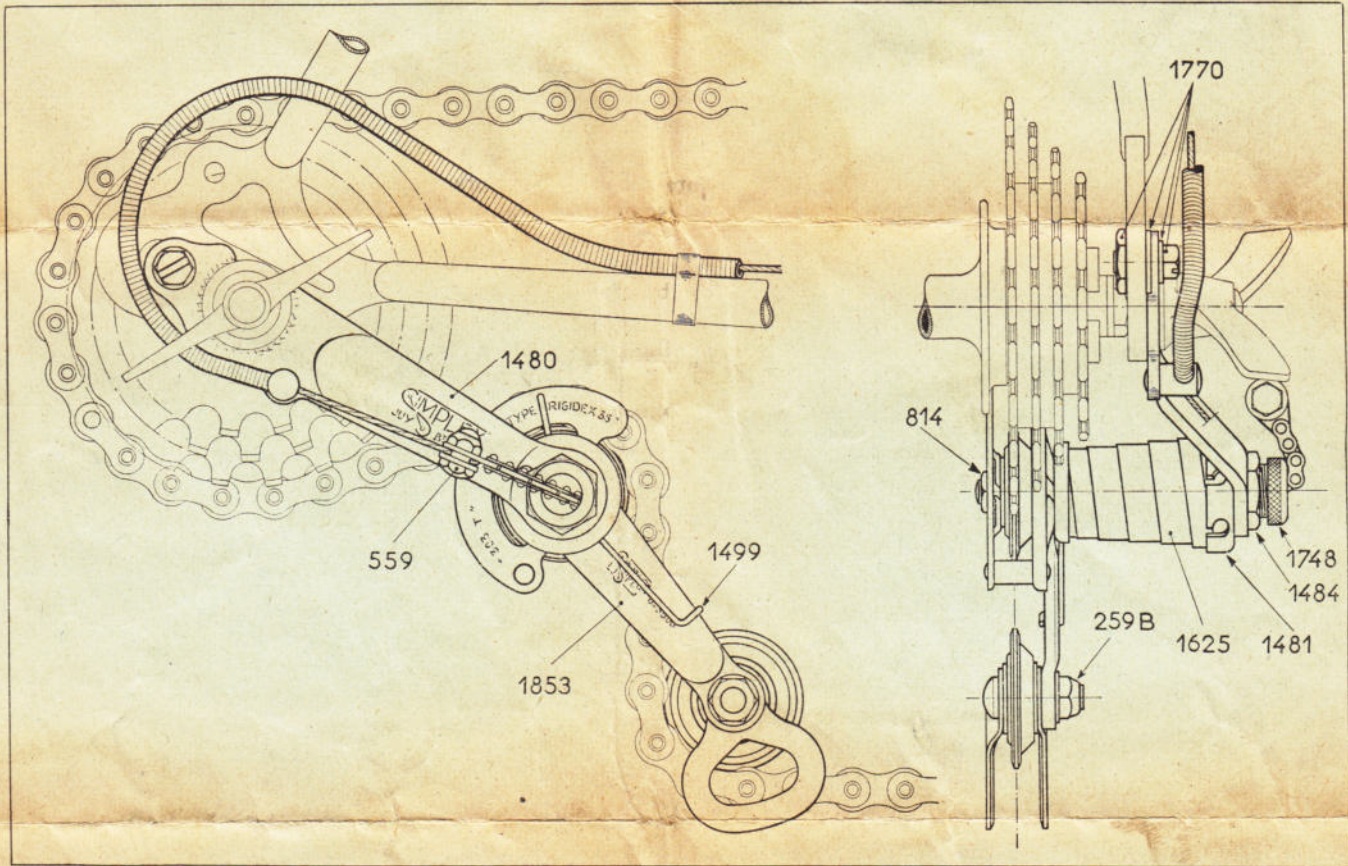
A « Tourist » Gear must be robust, it must have a powerful chain moving ability to negotiate the large jumps imposed upon it (up to 20 Teeth at the Double Chainwheel) and yet the chain must at all times remain at the correct tension. This is by no means an easy problem, but the « Tourist 303 » does all this efficiently and smoothly.

To avoid damage in transport we have made it possible to withdraw the gear completely off the bicycle simply by unfastening one screw and nut.

Cyclists will find this an invaluable feature.



"TOURIST-303" Derailleur Gear FITTING INSTRUCTIONS



Remove the rear wheel and fit the multiple freewheel selected, using a spacing washer on the hub if the chain fails to clear the spokes when the low gear sprocket is engaged. Next ensure sufficient clearance for the smallest sprocket, adding additional washers or locknuts to the hub spindle if the chain fouls the seatstay. This will necessitate dishing the rear wheel BUT THESE ADJUSTMENTS WILL NOT BE NECESSARY IF A HUB SPECIALLY DESIGNED FOR A DERAILLEUR GEAR IS USED. Note that correct chain line is on the centre cog of three and five speed freewheels and midway between the second and third cogs on a four speed freewheel.

Make sure that the freewheel you fit is of the same chain width and the same size as the gear, i.e., use a 3-speed 1/8" freewheel with a 3-speed 1/8" gear and so on.

FITTING THE GEAR. Loosen bolt and nut 1770 on carrying arm 1480, and slide the Pivot Bolt assembly 1770 into the slot of the right hand rear fork end. Replace the rear wheel and swing Arm 1480 fully forward so that the slot on Arm 1480 slides into the Hub Axle. Lock Pivot Bolt Assembly 1770 and tighten nuts on Hub Axle thus securing the wheel and the carrying Arm 1480.

ALIGNING THE GEAR. Loosen Lock nut 1484. Turn knurled sleeve 1748 to align the gear rollers with the largest sprocket. Do not lock nut 1484 at this stage. Make sure the gear is parallel to the chainwheel and not bent or twisted.

FITTING THE CHAIN. Fit a good quality derailleur type chain. Fit the chain on the largest sprocket of the freewheel, and on the largest chainring if a double chainwheel is used. Pass the chain through the rollers as shown on illustration, and determine correct length of chain, by allowing only sufficient length for it to mount and dismount the sprocket without forcing the mechanism.

RIVET TOGETHER the two ends of the chain, a spring link or Bolt and nut **must not** be used.

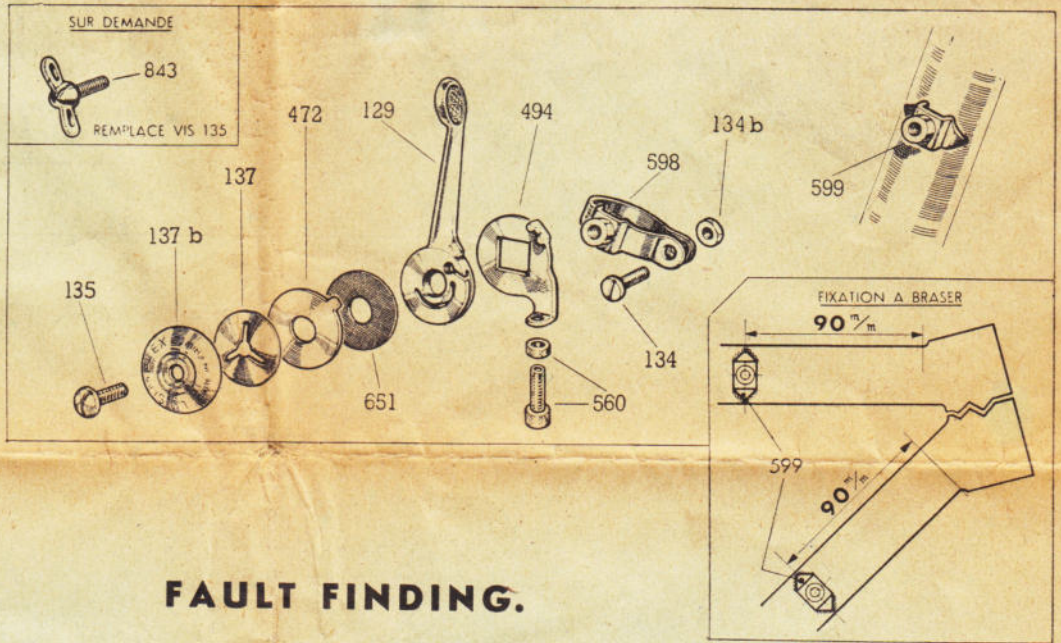
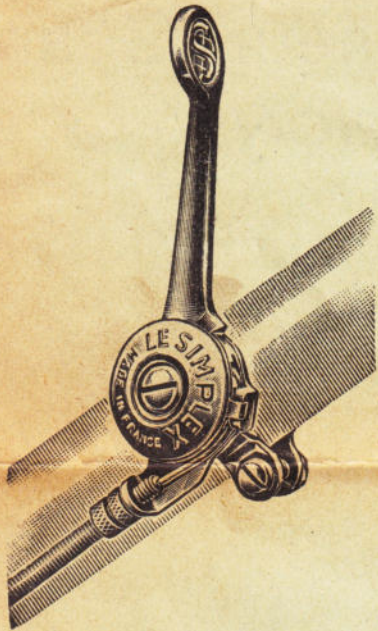
GEAR TENSION ADJUSTMENT. Hook the long arm of the tension spring 1499 on the tension arm Ref. 1853. Adjust the tension of Spring 1499 by moving the trigger end of this spring into the notches of Cup 1481. This operation «winds» the spring and care must be taken to avoid excessive «winding».

CONTROL TRANSMISSION. Fit the lever on the down tube and run the cable along this tube and along the right hand chain stay, avoiding sharp bends or twisting of the cable. Pass the inner wire through the cable stop on the carrying arm and through the eyebolt Ref. 559. Pull the cable tight without moving the gear cage, and tighten eyebolt assembly Ref. 559.

FINAL ADJUSTMENTS

Operate gear through the lever and carry out final alignment by turning slightly sleeve 1748 so that the cage is not driven beyond the largest sprocket when the control lever is operated to its extreme position on low gear.

When this adjustment is completed, tighten lock nut 1484 making sure that sleeve 1748 does not move in the process.



FAULT FINDING.

First make sure your gear mechanism is suitable for the freewheel block you propose using—a three speed system will not cover the width of a four speed freewheel ; a 3/32" system is of no use with 1/8" sprockets, etc. The chain cage side plate of a Simplex gear is stamped according to type. For example, « 4 vit. chaine 2,38" indicates 4 speed 3/32" chain, « 4 Vit. Chain 3" indicates 4 Speed x 1/8" » chain.

If your gear fails to operate satisfactorily, see that the system is not bent or twisted and proceed as follows :

Chain fails to engage top gear easily.

Chain attempts to climb from bottom gear into the spokes.

Loosen nut 1484, turn the knurled sleeve 1784 to the left to correct. Lock when correctly adjusted by tightening nut 1484.

Chain fails to engage bottom gear easily.

Chain tends to derail in top.

Loosen nut 1484, turn the knurled sleeve 1784 to the right to correct. Lock when correctly adjusted by tightening the nut 1484.

Chain derails at chainwheel.

This may occur if the chain is too long or if the tension spring 1499 needs adjustment. (See fitting instructions). If the chain derails frequently on top or bottom gear, however, an error in chain line is usually indicated. No derailleur gear will operate smoothly unless the chainring is directly in line with the centre of the sprocket assembly (where a double chainwheel is used chain line is calculated from a point midway between the two chainwheels). If an error exists it must be corrected by re-positioning the freewheel on the hub, setting the chainwheel, or in extreme cases by changing the bracket axle.

Chain « jumps » under pedalling pressure.

Providing the gear changes properly from one cog to another and the chain length and tension are approximately correct the gear is not at fault and the adjustment should not be meddled with. Chain « jumping » is usually more pronounced on the higher ratios and is due to the chain failing to mesh with the cogs. If the « jump » is regular check the chain for tight links, paying particular attention to the rivetted joint. Slight or occasional chain « jumping » when hill climbing may occur with a new transmission but will disappear after a few miles as the chain beds down. Well worn cogs rarely operate satisfactorily with a new chain or with a worn chain previously used with other cogs and similarly, a well worn chain will tend to jump if used with new cogs. It is better to start with a completely new transmission.

MAINTENANCE

From time to time check the following :

- 1) That Nuts and Bolts are not loose, especially Nuts Ref. 814, 259 b, and 1484.
- 2) Lubricate inside the spiral spring 1625, also control chain passage, roller cones and control cable. Lubricate control lever between the friction washers.
- 3) IMPORTANT. Before giving your gear a road test, and also from time to time. Make sure that when you operate the lever to go into low ratio (largest sprocket), your mechanism does not go further. If you do not take this precaution you run the risk of damaging your gear, and your wheel as the cage is driven to its extreme course beyond your largest sprocket and into the wheel spokes.

The same checking operation to be carried out with the highest ratio (smallest sprocket). When the gear is properly adjusted, the cage will move from the smallest sprocket to the largest, NO FURTHER EITHER WAY.

If the cage does go further either way, the gear requires adjustment and this must be effected at once.