

# Cyclo Gear



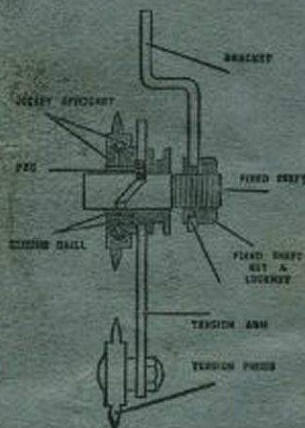
- Care
- Maintenance and
- Fitting  
Instructions

PRICE 2<sup>d</sup>

Contrary to usual practice, it is our earnest desire to impart to "CYCLO" users all we know. "CYCLO" like all good engineering products is designed to give the utmost satisfaction with minimum cost of upkeep, and with this in view we trust that this folder will enable you to derive the 100 per cent. satisfaction that only "CYCLO" as a variable gear can give you.

## "CYCLO"— HOW IT WORKS AND HOW TO USE IT

The "CYCLO" Derailleur Gear consists of a Freewheel with two or three sprockets, a mechanism for moving the chain into line with the respective Freewheel sprockets, controlled by a double cable and lever from the top tube of the cycle, or Handlebar Twist Grip Control, and a spring to take up the excess of chain between the smallest and the largest sprocket.



Any movement of the control lever or twist grip control, through the double cable, imparts a rotary movement to a quick-thread on which the actuating sprocket is mounted, and this moves laterally into line with the cog selected. Providing the adjustment and gear-changing are correct, the cog takes up the chain without any suspicion of snatch or noise, but gear changing is to a great extent a matter of practice and the expert is distinguishable from the novice by the absence of noise.

Changing gear must be done while pedalling and when this is done at the exact moment that the chain is taking up on the next cog, and the drive taken up once again at just the right time, changing will be practically noiseless. This is all a question of practice.

### UNFAIR JUDGMENT OF DERAILLEUR GEARING.

*An admission by one of  
the leading Press critics  
of the Cycle Trade.*

"Too many firms make no reasonable endeavour to adapt the gears to their machine. More than once I have heard derailleurs condemned on account of alleged inability to run a month without giving trouble.

I have always challenged these statements and where my challenge has been taken up I have corrected the faults and proved the allegation to be unjustified. Until every fitter understands their adaptation the errors of application will always result in an unfair judgment of the derailleur principle."

**Moral.**—Give your order for your new mount to manufacturers who do make endeavours to adapt the gear correctly to their machines. "CYCLO" is bound to give you satisfaction if correctly fitted.

# HOW TO SELECT YOUR GEAR RATIO

## SOLO TYPE

If your manufacturer gives in his catalogue option of different size Chain Wheels always select the smaller size. Small Chain Wheels means lower gear ratio, smaller sprockets, shorter chain lengths and reduction in weight.

## TANDEM TYPE

Too much drop between sprockets is bad. Gear ratios must be selected according to rider's requirements; Lady back partner should be considered when selecting your gear ratios. Cycling at its best is to ride with the least exertion, this cannot be achieved if you are over geared. Your pedalling efforts are unevenly transmitted to the freewheel and working parts have to withstand the errors of your pedalling action.

Manufacturers, unless advised by you, will always fit standard sprockets sizes such as 23 x 18 x 14th or 24 x 18 x 14th. If you wish to select your own gear ratio find out what is the listed standard size Chain Wheel from which depends the selection of the triple freewheel. As an example with a 52th Chain Wheel Lady back Tandem the following would be recommended: 28 x 20 x 16th or 26 x 18 x 15th. With a 46th Chain Wheel 25 or 24 x 18 x 15th.

## MAINTENANCE

### AND CARE

Curiosity still brings trouble to many people, and in the case of the derailleur gear, other peoples' curiosity often brings trouble to the cyclist. When training with a derailleur fitted bicycle it is advisable to put the lever into low ratio and fasten it down. This precaution may easily save you a dirty job.

## " CYCLO DON'TS "

- ★ DON'T forget that the transmission is provided with two cable adjusters to take up cable stretch, PLEASE USE THEM otherwise you will find difficulty in getting your Top gear.
- DON'T strain the cable unnecessarily by moving the control lever when the machine is at rest, and even when pedalling don't move the lever except with a definite purpose.
- DON'T remove your back wheel before noting the position of the spindle in drop-out. This is necessary in order to replace it in exactly the same place. It is a good plan to make a small file-mark on the drop-out, as this will form a permanent guide. Better still invest in a pair of " ROSA " stops (9d.).
- DON'T leave your cycle where the "village mechanical idiot" can interfere with the control lever, otherwise your chain may jump off when you re-mount. Always see that the control lever is in the correct position before mounting.
- DON'T expect your cable to last indefinitely without proper treatment. The exposed cable should be kept well oiled, and don't forget the gear end.
- DON'T leave your machine in top gear when coming to a standstill; but change into bottom gear. You will find it easier to re-start.
- DON'T wrench or bend the tension arm if your gear seems out of adjustment. The spindle nut and locknut are provided to give all lateral adjustment needed. Line up with the lever in the forward horizontal position and the jockey-sprocket level with the bottom gear cog. Then tighten up the locknut again keeping the slot on the fixed spindle as shown.
- DON'T expect the bearings of the change action to lubricate themselves. Use good quality cycle lubricating oil. Any bearing adjustment in good time will save wear.
- DON'T simply grumble if your gear goes wrong and condemn it out of hand. WRITE TO US. We are here to help you.

# POINTERS

## REMOVING REAR WHEEL SLOW CHANGING

Run the chain on to the small (A). It allows more room for removing the chain from the jockey and tension cogs. This is caused by the support being too far from the cogs. To remedy this, move the rear wheels as far forward as safely possible in the fork ends. If the support is of the clip-on type the support may require moving to the rear. If the support is brazed on and the wheel well forward, fitting a combination of larger sprockets will usually effect an improvement.

## IMPORTANT CHAIN POINTERS

There is a general tendency on the part of certain manufacturers to send out machines with the chain far too long, causing insufficient spring tension and in the long run excessive chain wear. The chain length varies in accordance with the size of sprockets. To test this your best plan is to place your gear on LOW, and if the chain is of the correct length the tension arm should be up as far as possible towards the spring. (See centre page). Usually an additional six links to existing chain length is sufficient. Correct spring tension means minimum chain wear, makes chain jumping off tension arm almost impossible, besides giving the machine a neater appearance. Make it your business to see that your chain length is right and we shall be as happy as you will. See that the spring hook end is fitted outwards and closed up leaving nothing to catch the chain.

The best way to keep your chain working under respectable conditions, as grease plastering is quite useless and dirty, is to soak it over night in paraffin, dry it with clean rag and give it an oil-bath to allow a good soaking. The oil will get into the rollers and remain there. Drain the chain, and dry up again, wiping off all excess oil. The chain will be then in condition for a thousand miles or so when another clean can be given. The life of your chain and sprockets can be greatly increased by reversing the chain every 1,000 miles or so. If properly fitted, the chain will not jump off when on top gear. Where no consideration will be given to this, we recommend the tension pulley type in place of the tension cog to eliminate jumping caused by rough riding.

**CHAIN WEAR** (See first paragraph "IMPORTANT CHAIN POINTER.") It is granted that the chain will not last for ever, and sometime or other will want replacing. The wear and lasting properties depend much upon the conditions and use of cycle or tandem. Usually on a solo machine the chain will last twice as long as on a tandem.

The bigger the drop between low, middle and top, the more chain strain is to be expected. For example, 28 x 17 x 13 would be bad owing to slackness of chain when riding on middle or top. See "CYCLO" Booklet—testimonials dealing with chain wear performances of "CYCLO" users.

The fitting of a new chain will cause a crackling noise usually on top gear sprocket, caused by the new chain riding over the hooked sprocket. One is apt to recognise the want of a new chain, and not appreciate that in time the sprockets, in particular the top, which is the smallest and likely to wear quicker, causes the teeth to be slightly out of pitch on a new chain. The remedy is to effect replacement of the top gear sprocket (price 1/9), or if not too badly hooked to only use the gear on middle and low for a few hundred miles to allow the chain to stretch.

## TRANSMISSION POINTERS

If a cable breaks it is nearly always at the nipple No. 32 and is almost invariably caused by incorrect assembling or adjustment, the wire being bent sharply and strained by the nipple being carried too far around.

On a three-speed the nipple MUST NOT travel upwards further on either side than to a level with the centre of the spindle (C) (See page 7).

## CABLE STRETCH

★ Cable stretch should be taken up by means of the knurled adjusters placed near the control.

Special length transmission supplied to requirements.

N.B.—When requiring special length transmission always give measurements from end to end of OUTER CASING.

## "ROSA" SPROCKET REMOVER



## REMOVAL OF 2-SPEED FREE-WHEEL AND SPROCKET

## REMOVAL OF LOW GEAR SPROCKET



# FREEWHEEL CARE

In wet weather the free wheel should be kept well oiled and occasionally cleaned with paraffin. An efficient way of oiling the inside is to place the machine on its side and fill the cluster centre of the three sprockets with good quality oil revolving the wheel gently.

Excessive side-play in freewheels is detrimental if allowed to remain and get worse; the remedy is to remove the middle gear sprocket (R.H. thread) and take off one of the shim washers after removing the locking plate (L.H. thread)—quite simple and worth while doing.

## REMOVAL OF TRIPLE FREEWHEEL AND SPROCKETS.

1. Soak the Freewheel over night in paraffin. Freewheels which have been in position for some time are often tight and difficult to remove.

2. Place an old chain round the largest sprocket and get someone else to hold it while the top and middle sprockets are removed. Two Cog Removers may be used in opposite directions, but failing these we suggest the use of a soft chisel. Tap on each tooth alternately while the largest sprocket is held firm. You will find that the top gear sprocket and the middle cog will be easy to remove. Both these cogs are right-hand thread.

1. Soak in paraffin over night.

2. Place a two-peg remover in freewheel slots, locking tightly into position by means of the spindle nut.

3. Place the remover in a vice and turn the wheel in an anti-clockwise direction to unlock the freewheel. Unscrew the spindle nut a little and repeat the operation. The freewheel should then come off quite easily.

1. Place a piece of chain round the top-gear sprocket (freewheel) then lock in a vice, taking care not to damage the teeth.

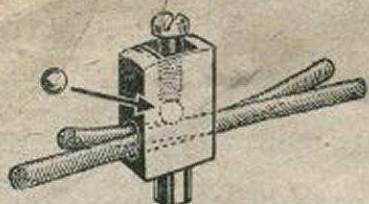
2. Use a cog remover or, if not available, tap the teeth one after another with a soft chisel. As the cog is a left-hand thread, tap in a clockwise direction.

## SYSTEM

Side play of the tension arm is normal and required therefore, this does not need attention. Side play (if any) in the Tension 10th Sprocket or Pulley is taken up by adjusting the cone bearing. In the jockey Sprocket adjustment is effected by taking off one or two of the shim washers making it possible to screw the outside race No. 9 further.



Should "CYCLO" users at the end of riding season send to us the complete system for re-adjustment this will be done per return of post. The same remarks apply to any 3 other parts.



Patent Connecting Nipple No. 32.

## "Cyclo" Patent CONNECTION JOINT

With this latest improvement, the inner wire may be replaced by the roadside. No soldering—no tools—and yet the repair can be carried out quickly, satisfactorily and permanently.

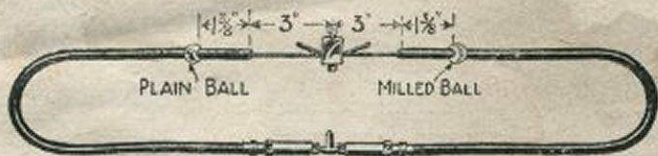
Inner wire only with No. 30 nipple, each 10d.

Full length of best quality 14-strand, non-fray wire complete with connecting joint. Cycle or Tandem length, each 1/3. Connection Joint No. 32 only, each 5d.

**N.B.**—The Standard Length supplied must be cut to requirements.

### CABLE DETAILS

Sketch giving measurements for cable replacement of Two or Three-Speed transmissions.



Distance 8 1/2 in. between stop balls.

### STOP BALLS

Milled ball *must* be on left hand side. Both stop balls *must* be exactly 1 1/8" from the cable ends. Should this length (1 1/8") be exceeded (caused by hard usage) it is imperative to locate the ball in its original position.

When a cable breaks it is nearly always at the nipple (No. 32 in illustration of replacement parts), and this is almost invariably caused by incorrect assembling or adjustment, the wire being bent sharply and strained by the nipple being carried too far round.

On a Three-Speed, the nipple *must* not travel upwards on either side beyond a point level with the centre of the spindle (C). See page 9, Figs. 6 and 7.

### TRANSMISSION REPAIR SERVICE

Any appointed "CYCLO" agent will exchange your old cycle or tandem transmissions for re-conditioned ones, for a fixed charge of 2/-. If there is no agent in your district, send your old transmission to the Works with a remittance of 2/- and it will be replaced by return of post.

# "CYCLO" FITTING INSTRUCTIONS

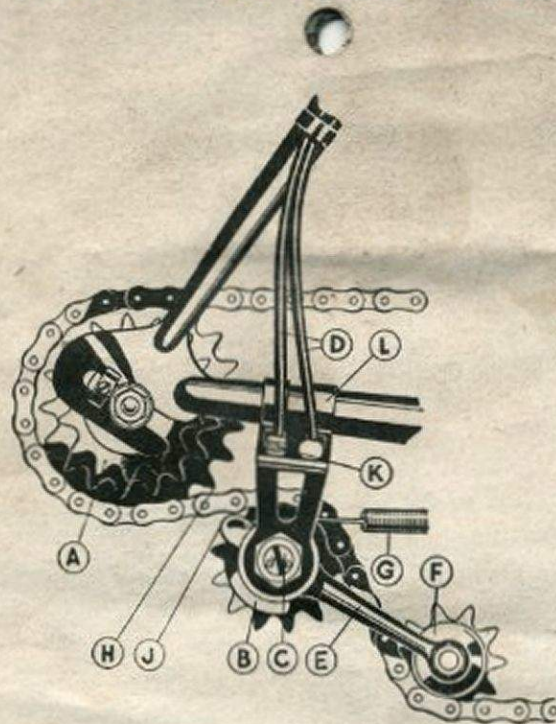


FIG. 1.

- A—Top Gear Sprocket.
- B—Jockey Sprocket.
- C—Fixed slotted Actuating Spindle.
- D—Transmission Cable.
- E—Tension Arm.
- F—Tension Sprocket.
- G—Tension Spring.
- H—J—The closer the Low Gear Sprocket is towards the Jockey B, the better.
- K—Milled Ball on left-hand side.
- L—Clip-on Bracket fitted close up to give correct clearance between H and J.



FIG. 2.

The slot of the Spindle C must be shown.

The alignment of the Jockey Sprocket B is effected by the recessed adjusting nut fitting behind the support L.

★ NOTICE THAT MILLED BALL K IS ON LEFT-HAND SIDE.

N.B.—Fit Tension Spring Clip behind Chain Stay Bridge. Close up Hook outward to top of Tension Arm E.

If fitted correctly the control lever will move freely when gear changing, which must only be attempted while pedalling.

When the control lever is in the forward position the cogs B and F should be aligned with the large sprocket, and the cable nipple should be to the rear and level with the centre of the slotted spindle (C). Fig. 2.

## ★ Fig. 2.—Showing correct alignment of Actuating Spindle (C)

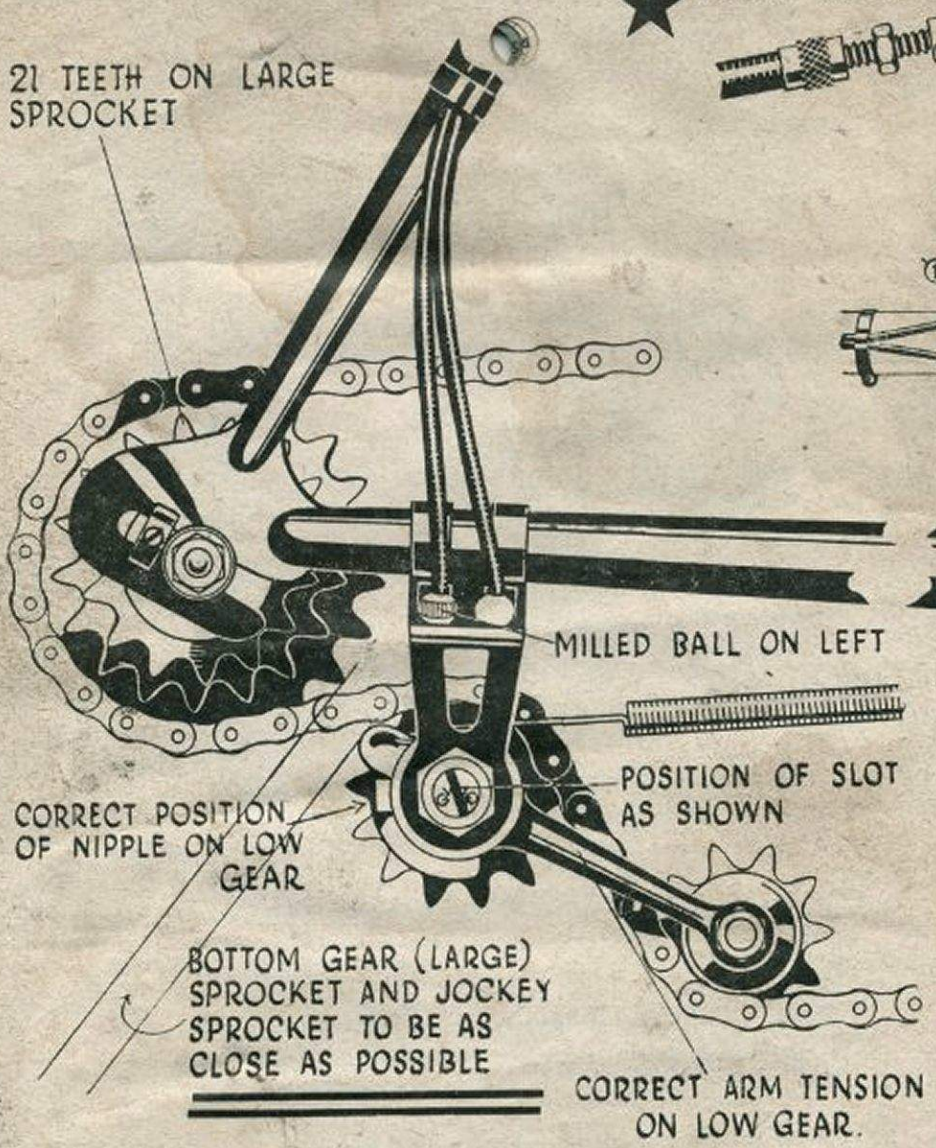
This is illustrated in Fig. 2, the cogs mentioned are in line from A to B. When the control lever is approximately vertical the cable nipple will be at the bottom of the groove and the cogs B and F will be in line with the middle sprocket.

Similarly, when the control lever is carried to the rear, the cogs B and F are in line with the small sprocket, and the nipple is carried forward and upward until it is again level with the centre of the slotted spindle (C).



CABLE ADJUSTMENT

21 TEETH ON LARGE SPROCKET



CORRECT POSITION OF NIPPLE ON LOW GEAR

MILLED BALL ON LEFT

POSITION OF SLOT AS SHOWN

BOTTOM GEAR (LARGE) SPROCKET AND JOCKEY SPROCKET TO BE AS CLOSE AS POSSIBLE

CORRECT ARM TENSION ON LOW GEAR.

# CYCLE GEAR CO. LTD.

POTTERS HILL, ASTON, BIRMINGHAM. G.

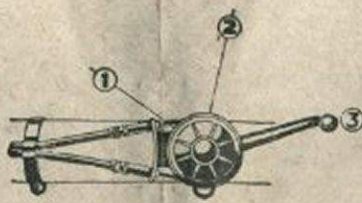
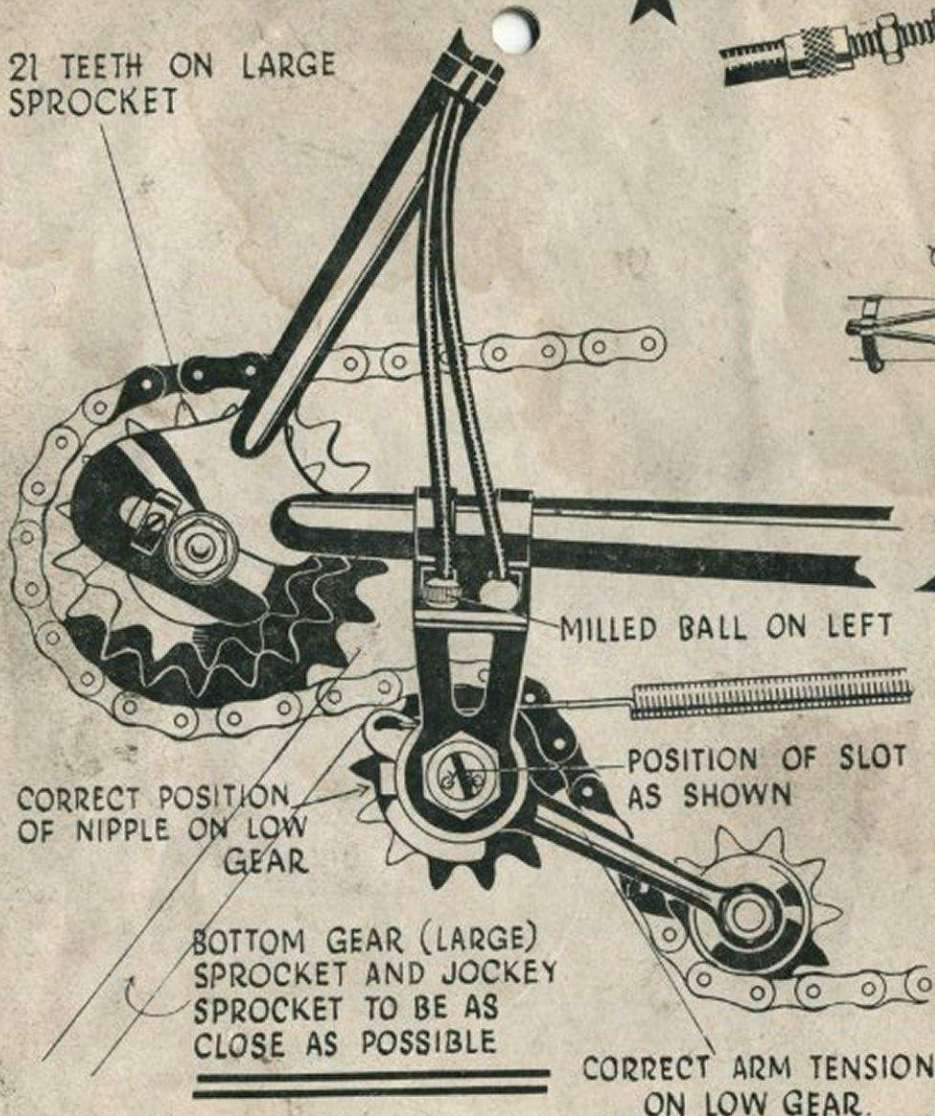
ASSEMBLY AND FITTING INSTRUCTIONS - 2 AND 3 SPEED G

21 TEETH ON LARGE SPROCKET

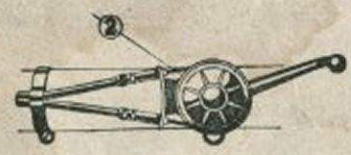
★ CABLE ADJUSTMENT



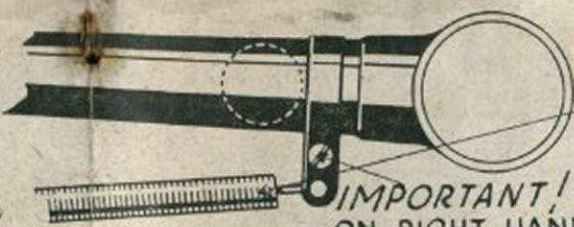
CORRECT CHAIN ALIGNMENT ON EACH GEAR IS DEPENDANT ON THE CONTROL LEVER POSITION



3 SPEED

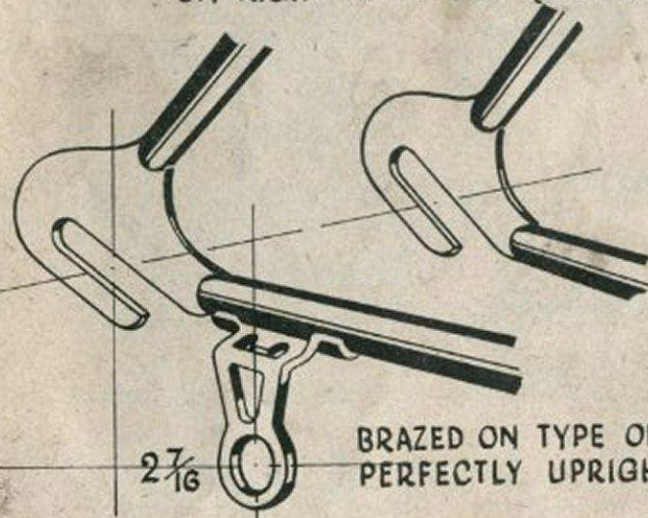


2 SPEED



WHEN USED ON SHORT WHEEL BASE MACHINES, THE SPRING MUST BE SHORTENED FROM THIS END ONLY.

IMPORTANT! THIS CLIP MUST BE SECURED ON RIGHT HAND SIDE (BRACKET SIDE) OF BRIDGE



2 7/16" BRAZED ON TYPE OF BRACKET PERFECTLY UPRIGHT.

# CYCLO GEAR CO. LTD.

POTTERS HILL, ASTON, BIRMINGHAM. 6.

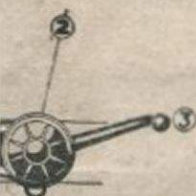
ASSEMBLY AND FITTING INSTRUCTIONS - 2 AND 3 SPEED GEARS

MEASUREMENTS OF THE CORRECT POSITION OF "V" BRAZED-ON BRACKET WHEN FITTED ARE GIVEN BELOW

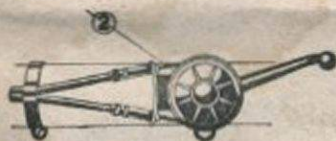
The correct distances from centre of slotted spindle (C) to centre of hub spindle are as follows:-

When largest sprocket is	18	19-20	21	22	23	24	26	28th
Correct distance is	2 1/8"	2 1/4"	2 7/16"	2 1/2"	2 9/16"	2 3/8"	2 1/2"	2 7/8"

CORRECT CHAIN ALIGNMENT ON EACH GEAR IS DEPENDANT ON THE CONTROL LEVER POSITION



1 SPEED

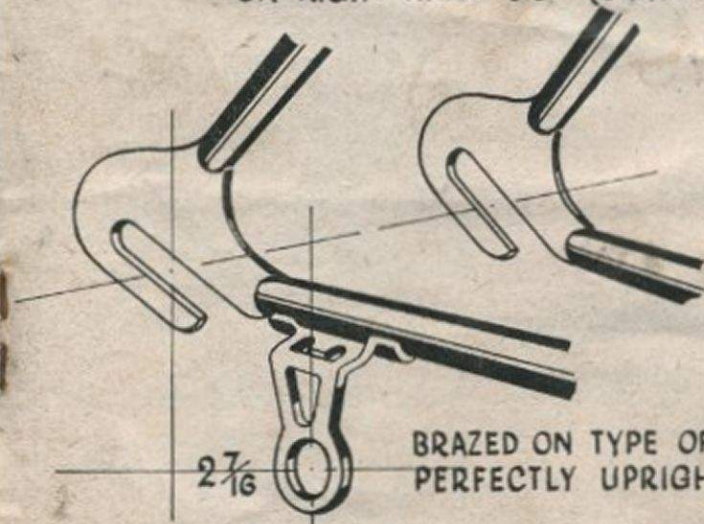


2 SPEED



WHEN USED ON SHORT WHEEL BASE MACHINES, THE SPRING MUST BE SHORTENED FROM THIS END ONLY.

**IMPORTANT!** THIS CLIP MUST BE SECURED ON RIGHT HAND SIDE (BRACKET SIDE) OF BRIDGE



$2\frac{7}{16}$

BRAZED ON TYPE OF BRACKET PERFECTLY UPRIGHT.

MEASUREMENTS OF THE CORRECT POSITION OF "V" BRAZED-ON BRACKET WHEN FITTED ARE GIVEN BELOW

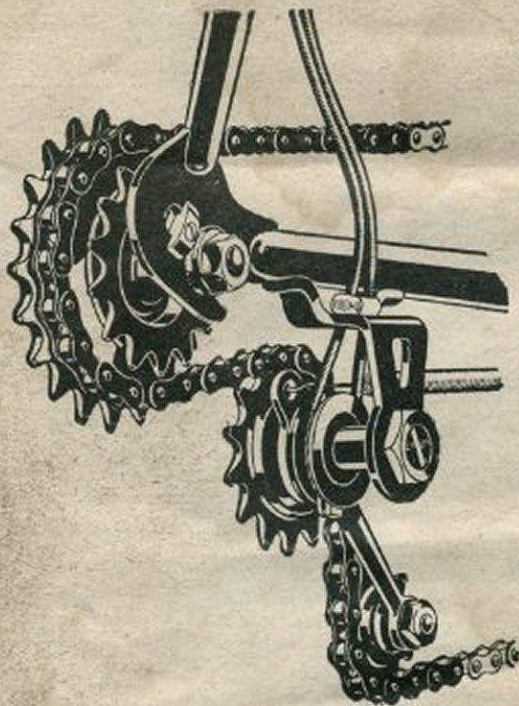
The correct distances from centre of slotted spindle (C) to centre of hub spindle are as follows :-

When largest sprocket is 18	19-20	21	22	23	24	26	28th
Correct distance is $2\frac{1}{8}$ "	$2\frac{1}{4}$ "	$2\frac{7}{16}$ "	$2\frac{1}{2}$ "	$2\frac{9}{16}$ "	$2\frac{3}{4}$ "	$2\frac{1}{2}$ "	$2\frac{1}{4}$ "

ARS

# "CYCLO" THREE-SPEED GEAR

## FITTING INSTRUCTIONS



1. When screwing the TRIPLE freewheel to hub not designed for derailleur gear, it is wise to fit an extra long spindle (these are supplied by us complete with long cones and suitable packing pieces).

2. In order to make the wheel fit quite centrally between the stays it is necessary when effecting such conversion to dish or re-true the rim centrally over packing pieces.

3. Make sure that the rear fork-ends are not less than  $\frac{4}{16}$  in. wide; if it is necessary to widen them, each stay must be opened an equal distance.

See that the rim is central between the out-sides of the cones or cone locknuts. Place wheel in frame with the "CYCLO" triple freewheel set screwed on, and with the spindle as far forward as safely possible.

Tighten the spindle nuts.

Run chain over chain wheel and the small sprocket (A) to make sure that the chain clears the seat stay, paying particular attention to the clearance of the joint.

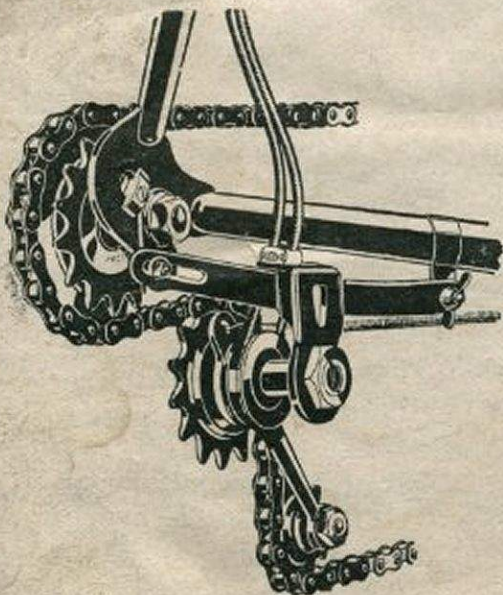
If it fails to clear, the spindle may be packed out with a washer, but in order to preserve the chain-line, a washer of equal thickness should be placed on the other side.

"CYCLO" or other hubs made specially for derailleur gears will not require this.

4. Fix support (L) to the chainstay. It is of the utmost importance that the lower part of the support shall be vertical as shown in Fig. 2, so that when the outside and inside nuts of the slotted spindle (C) are tightened the spindle slot will be as shown.

This spindle must also be parallel to the hub spindle, but as the original setting may vary according to differences in chainstays, the vertical portion of the support (L) may be "set" to bring the flat side parallel to the chainwheel.

Where the clip-on type of support (L) is used, place the support well to the rear, with just sufficient clearance to allow for wheel removal when forward opening drop-out is concerned, or if the fork-ends are rear-opening with sufficient clearance between H and J (Fig. 1). When the chain is running on the big sprocket and the hub spindle is in its proper place at the front of the fork-end slots, the clearance between the low gear sprocket and the jockey cog must be as close as possible, the correct distance of the slotted spindle (C) depends upon the size of the largest sprocket. (See centre page).



## Two-Speed Gear

The "CYCLO" Two-Speed can be fitted on any standard hub without alterations. Follow the instructions mentioned above and, on page 9, as far as the fitting up of the gear and transmission are concerned, and also recommendations mentioned.

Fig. 8 shows correct fitting and correct position of tension arm on low gear, with the control lever right down.

The bracket shown on the Two-Speed Model is the Universal type.

FOR FULL LAY OUT SEE CENTRE PAGE

## FITTING INSTRUCTIONS

5. Thread the square nipple end of the cable (D) down through the slots in the supports, keeping the knurled ball (K) to the rear.

Pass the slotted end of spindle (C) through the loop in the wire, and insert end of spindle in support, keeping the shouldered nut inside.

Secure the spindle loosely in position with the slot as shown.

Insert the nipple in the hole provided in the groove of the pulley.

Keeping the nipple at the bottom of the pulley and equally distant from both ends of the outer casing, manipulate the spindle nuts until the jockey sprocket (B) is directly in line with the low sprocket of the free wheel.

6. Fig. 3 shows operator locating the slot of spindle C into correct position with the outside locking nut STILL LOOSE place lever into LOW Gear position before attempting to place the transmission adjuster into place (see Fig. 4).

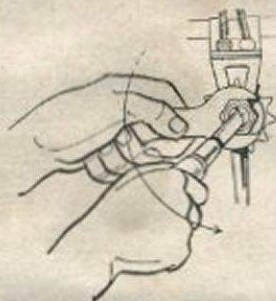


Fig. 3

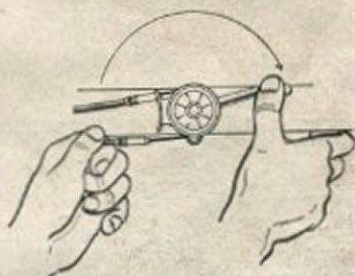


Fig. 4

Tighten spindle nuts and make sure that the slot is still as shown.

The low sprocket, jockey sprocket (B) and tension pulley or cog (F) should now be in alignment.

Next fit the cable to the control carrying the rear wire (K) to the top of the control. Insert flat end of top sleeve in the slot of the control plate, and the nipple in its hole in the groove of pulley. Pull back the bottom sleeve until the inner wire slips through the bottom slot, using the lever to assist.

Work the control lever and see that the jockey (B) and tension (F) cogs are in line with each of the three sprockets in turn (see Fig. 2.)

Fix tension spring (G) to chain stay (see centre page).

Next test the chain for tight links by running it over the fingers (see Fig. 5).

With the control lever in the rear position run the chain around the small sprocket (A) over the jockey cog (B), under the tension cog (F) and around the chain wheel, and join the ends.

### CHAIN WHEEL.

When new make sure that the teeth are quite free from any burr to be removed with a file.

### SPRING TENSION.

On short wheel base machines, the standard length spring as supplied can be shortened up to 1/4 in. at the dip end but NOT at the hook end.

The chain must be of the spring fastening type—Nut and Bolt is unsuitable.



Fig. 5.  
Showing chain testing.

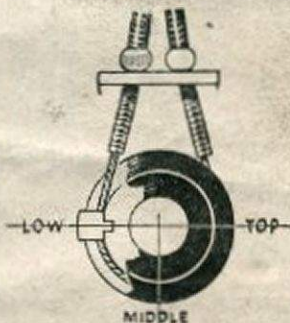
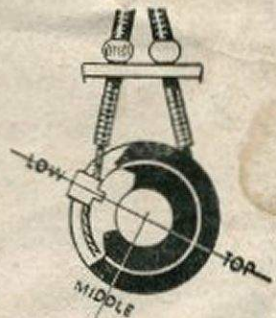


Fig. 6  
CORRECT NIPPLE SETTINGS



INCORRECT NIPPLE SETTINGS

Fig. 7

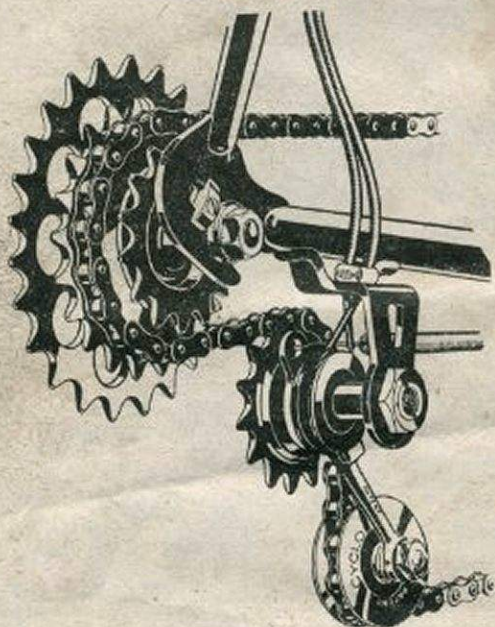
SYMBOL LETTERS mentioned in these instructions are shown on page 5.

# "CYCLO" FOUR-SPEED GEAR

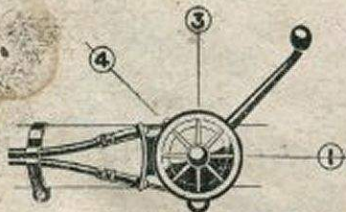
## PULLEY TYPE

N.B.—For this type of gear a Cyclo hub and special V Brazed on Bracket are required.

Fig. 12.



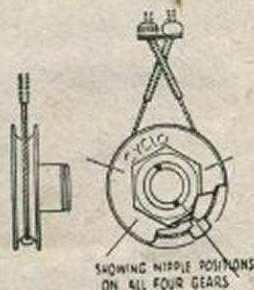
Showing the new type in 4 speed transmission.



Showing the position of the control in the 2nd Gear.

In the "CYCLO" Four-Speed the chain-line is measured to half the distance between the 2nd and 3rd cogs. The cog assembly, control and cable are different from the Three-Speed, but in fitting proceed as directed for Three-Speed except with regard to cable.

The Four-Speed jockey cog requires greater lateral movement, and the pulley which actuates it must describe more than the half-circle required by the Three-Speed. Therefore, give the inner wire one complete turn around the pulley (see Fig. 13), the stud in this case being at the top of the groove when the jockey cog is central between the 2nd and 3rd cogs and the control lever is approximately upright.



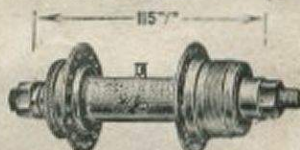
New type transmission are now supplied giving the action required by crossing the cable as shown and a single turn round the pulley. This new type is interchangeable with the old type.

# WHEEL BUILDING INFORMATION

## "Cyclo" HUBS, SPINDLES, WHEELS

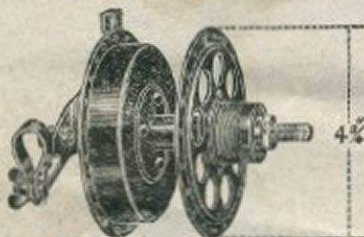
"CYCLO" hubs are preferable in all cases where the three-speed is needed. They are threaded to give full support to triple freewheel, and the chain line is arranged so as to give perfect results on all gears. When using our hubs ("CYCLO" or "CYCLO" Hub Brakes), the rim must be trued centre over the cones and not over hub flanges. When other hubs are used, an extra long spindle with suitable long cones is usually fitted instead of inserting packing pieces. This practice is not recommended owing to the fact that ordinary hubs do not fully support the triple freewheel. Further, by this method, it is necessary to open out the back stays to suit. It is necessary when effecting such a conversion to re-true the rim centrally over the cones, in order to make the wheel fit quite centrally between the stays.

### "CYCLO" Standard Type.



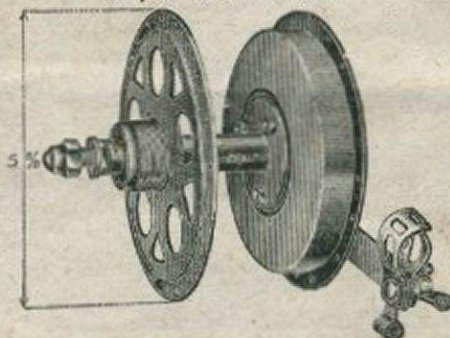
Width over Packing Washers ... 4 1/2 ins.

### "CYCLO" Ideal Expander.



Width over Packing Washers ... (Cycle) 4 1/2 ins.  
 " " " " (Tandem) 5 ins.

### Super Ideal Tandem.



Width over Packing Washers ... 5 ins.

### IMPORTANT NOTICE TO EXPANDING HUB BRAKE USERS.

Our own Expanding Hub Brakes have no lubricator and must not be lubricated with thin oil. Bearings are running in grease retaining cups to last a season's riding, when they should be dismantled, cleaned and re-greased and shoes relined.

To get the maximum satisfaction please note the following points:—

- 1.—See that Cable has no sharp bends.
- 2.—Fix Cable Lever and Anchor Arms securely.
- 3.—The Hubs are packed with grease at works, enough for many months. Re-pack with grease when required. Don't use thin oil.
- 4.—Use thin oil for Cable.
- 5.—For greasy liners, a good way is to boil the whole in strong soda water.
- 6.—The Drums or Liners must not be roughened. On no account use paraffin or petrol.

### Standard Spoke Lengths for Standard "CYCLO" Hub, not EXPANDER.

The lacing for these hubs should be over 3. The Gear side should be laced first and pulled down for requirements to build over cones or packing washers.

#### Cycle — 14G.

26 x 1 1/4" Rear 11 1/4"  
 26 x 1 1/4" Rear 11"

#### Tandem — 13G.

26 x 1 1/4" Rear 11 3/8"  
 26 x 1 1/4" Rear 11 1/2"

### "CYCLO" Ideal Expanding Hub Brakes (Cycle).

26 x 1 1/4" Rear 10 1/4" Drum Side and Gear Side  
 Front 11" " " " Off "  
 26 x 1 1/4" Rear 10 3/8" " " " Gear "  
 Front 10 1/2" " " " Off "  
 14G Spokes — laced over 3.

### "CYCLO" Ideal Expanding Hub Brakes (Tandem).

26 x 1 1/4" Rear 9 3/4" Drum Side — 9 1/2" Gear Side, laced over 2.  
 Front, 10 3/8". Both sides for equal flange type laced over 3.  
 26 x 1 1/4" Rear 10" Drum Side, 9 3/4" Gear Side, laced over 2.  
 Front 10 1/2". Both sides for equal flange type, laced over 3.

13G Spokes.

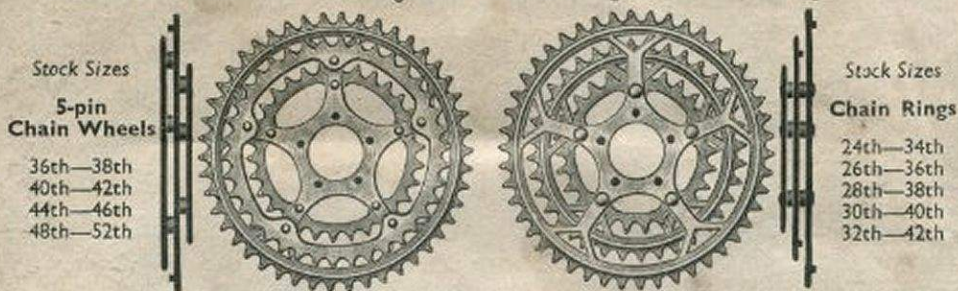
### Tandem Super Ideal Expanding Hub Brakes.

26 x 1 1/4" Rear 9 3/8" Drum Side 9 1/2" Gear Side  
 Front 9 3/8" " " 10 1/2" Off "  
 26 x 1 1/4" Rear 9 1/2" " " 9 1/2" Gear "  
 Front 9 3/8" " " 10 1/2" Off "  
 13G Spokes — laced over 2.

All the above for Endrick or Westwood. For 28" Wheels 1" longer than the above sizes.

## " ROSA " DOUBLE CHAIN WHEELS

The use of a Double Chain Wheel immediately doubles the number of ratios available, and is advised in all cases where a two-speed gear is used. Chain rings may be rivetted to customer's own Chain Wheels in 5-pin pattern only, and providing the design is of a suitable type. Double Chain Wheel can also be fitted to Tandems with cross-over drive. There must be at least eight teeth difference between the two rings to allow for rivetting and correct working.



In fitting a " CYCLO " double chainwheel to increase the gears given by the freewheel group, replace the bottom bracket axle with one giving gearcase clearance. Fit the " CYCLO " double chainwheel and crank in the usual manner. Measure up the chain-line of the bracket by taking the distance from the seat tube to a point half-way between the two chain wheels and adding half the diameter of the seat tube. Assuming this chain-line to be  $1\frac{1}{2}$  in. and the chain-line of the hub and cogs to be  $1\frac{1}{4}$  in., correct the latter to  $1\frac{1}{2}$  in. by adding  $\frac{1}{4}$  in. distance peice to the near side of the hub axle. It will be necessary to re-centre the rim if the wheel is already built. TRIPLE CHAIN WHEELS giving double rear drive on tandems with both chains on off-side are fitted in the same manner as double chain wheels, but a SPECIAL AXLE IS NECESSARY. For chain-line measure to halfway between centre and outside chain wheel and add half the diameter of seat tube.

Fig. 10.

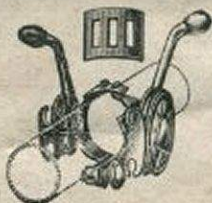


Illustration showing " ROSA " lever coupling of c/w derailer to " CYCLO " Gear Control.

## CHAINWHEEL DERAILLEUR

Specially designed for  
Double and Treble Chain Wheel users.

Place chain on the larger chain wheel and the small cog. Unscrew outside plate of the chain guide. Clip the device to the seat tube, just sufficiently above the bracket for the chain guide to clear the larger chain wheel by  $\frac{1}{2}$  in. Turn the pulley until the chain lies in the middle of the chain guide. Loosen rear screw holding guide, and set front and rear bars on guide an equal distance from the chain wheel, and then tighten screw. Screw on the outside plate. Next set small cam (at top left corner of moving plate) to prevent the plate sliding further to the off-side. Fit the cable in the same way as a " CYCLO " cable, placing the longer end on the outside of the pulley. The control lever can be fitted to the " CYCLO " control clip by removing the half-clip of the latter and using a connecting strap as shown in the illustration.

When the drop from the larger to the smaller chain wheel exceeds 14th a small hanger plate should be provided to allow the chain guard end to reach the chain when on the smallest chain wheel.

N.B.—For tandem direct drive we can supply extra long axle, price 2/9.

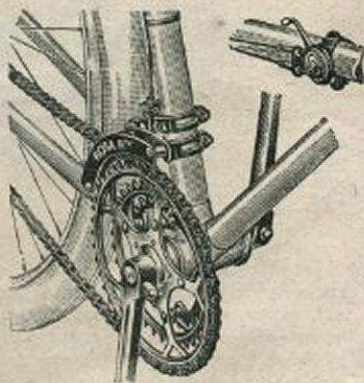


Fig. 11.

Illustration showing " ROSA " Chain Wheel Derailleur.

## NOTES AND RULES WHEN ORDERING SPARES.

1. Parts sent as patterns should be marked with sender's name and address, or advice enclosed from senders with the necessary instructions, this will ensure immediate attention.
2. Prices do not include cost of postage or passenger charges unless otherwise quoted.
3. As far as possible we give illustrations of spares, number and description; we recommend when in doubt, however, to return the old part, and as far as possible state on the advice enclosed with the parts the description such as: pawls, screw, spring, brake cam, etc.
4. Customers having no account with us are requested to remit when sending the order including postage. If the remittance exceeds the cost of the parts the balance will be immediately refunded when sending our invoice and receipt.

---

● We invite all "CYCLO" users to write to us for any information required which cannot be found in this booklet, as we are only too delighted at all times to give customers our advice and the benefit of our experience.

---

## **TRANSMISSION REPAIR SERVICE**

Any appointed "CYCLO" agent will exchange your old cycle or tandem transmissions for re-conditioned ones, for a fixed charge of 2/-. If there is no agent in your district, send your old transmission to the Works with a remittance of 2/- and it will be replaced by return of post.

**N.B.—**When ordering Freewheel spares it is advisable to send old patterns.

## **24 HOURS SERVICE ALWAYS**

We overhaul freewheels at a standard charge of 2/6 inclusive of all replacement parts, excluding worn sprockets.

*For complete Freewheels and Sprockets see "Cyclo" Catalogue.*

- CORRECT FITTING MEANS  
CORRECT WORKING . . .

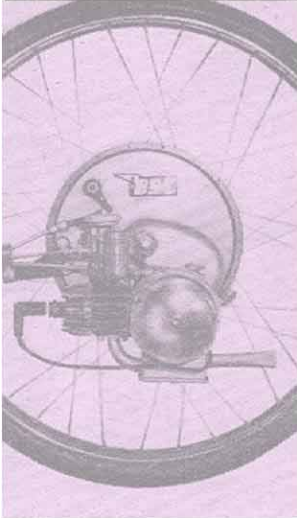
*A correctly fitted "CYCLO"*  
is bound to give entire  
satisfaction to the user.

DESCRIPTIVE BOOKLET FREE  
ON REQUEST.



CYCLO GEAR CO. L<sup>TD</sup>  
POTTER'S HILL · ASTON  
BIRMINGHAM · 6  
ENGLAND

# IceniCAM Information Service



[www.icenicam.org.uk](http://www.icenicam.org.uk)