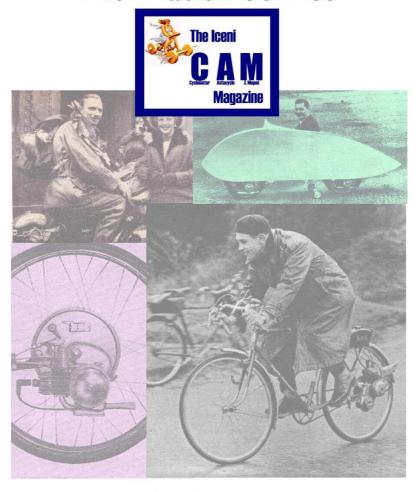
## IceniCAM Information Service



www.icenicam.org.uk

THOMAS M. CLARKE
WESTFIELD SCHOOL HUSSE
HATTIBLD

# "CYCLOTRACTEUR"

Can be readily fitted to any Bicycle.



SOLE CONCESSIONAIRE FOR THE BRITISH EMPIRE
BRITISH MOTOR CAB COMPANY, LIMITED,

THE

THE "CYCLOTRACTEUR" is a motor-attachment weighing about 23 lbs., which, mounted on an ordinary bicycle, provides sufficient power to propel the machine at a speed of 20 miles per hour. When fixed, the motor does not in any way prevent the normal use of the bicycle, and the power can be applied while the bicycle is in use.

THE TRANSMISSION OF POWER.—The transmission of power to the front wheel is by means of a pulley engaging with the tyre. Contrary to what might be supposed, the latter does not suffer from effect of friction, but as a matter of fact it is the pulley which wears sooner than the tyre, and when worn the pulley can be replaced at a very small cost.

A single cylinder motor is used, having a bore of 50 m/m, and a stroke of 55 m/m., and develops  $1\frac{1}{4}$  H.P. at 2,500 revolutions per minute. In actual test the motor has attained a speed of 3,600 revolutions per minute, and is exceptionally flexible, thanks to the proportions of the internal flywheels which take the place of an ordinary crankshaft.

LUBRICATION.—All bearings of the engine are lubricated by the combined pressure and splash system. The whole of the oil supply being perfectly automatic, relieves the cyclist from any anxiety in this respect.

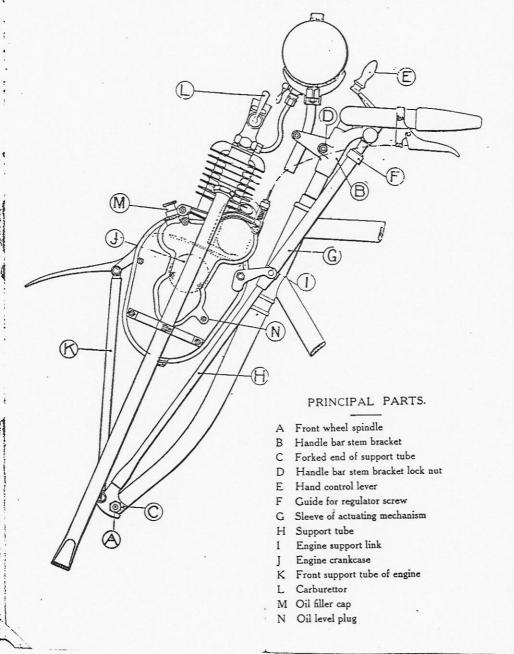
IGNITION. — A high-tension magneto with fixed control provides the spark for igniting the charge in the cylinder, and the sparking plug is arranged in a position which ensures of the maximum engine efficiency.

CARBURETTOR.—An automatic carburettor provides the mixture, and by means of varying the position of the throttle lever, the speed of the machine can be regulated between 5 and 20 miles an hour. The reservoir which is mounted upon the handle bars contains 1/3 of a gailon of petrol, which is sufficient for a distance of 50 miles.

By an ingenious control device, the whole engine can be moved relatively to the front wheel, and by operating a hand lever, conveniently mounted near the handle bars, the pulley of the engine is brought into contact with the tyre. When it is desired to disengage the engine, the hand lever is moved in the opposite direction, thus disconnecting the pulley with the tyre, so that the cycle can be pedalled without the assistance of the engine.

"CYCLOTRACTEUR" CAN BE READILY AFFIXED TO ANY BIC

GENERAL VIEW OF "CYCLOTRACTEUR UNIT.



### DIRECTIONS FOR FITTING "CYCLOTRACTEUR."

HE operation of fitting the "Cyclotracteur" to a standard pattern of bicycle is extremely simple, as the power unit is attached at two points only, viz, the spindle of the front wheel A and the handle bar stem B. After the latter B has been removed and the nuts of the spindle A have been slackened, the "Cyclotracteur" is placed in position, and held by the forked ends C. The stem of the handlebar is now passed through the bracket of the engine, and on being adjusted to the required height is secured by the headclip in the usual manner.

The final adjustment is made by tightening the wheel spindle nuts, thus securing the power unit firmly into place.

An exhaust valve lifter, operated by a Bowden wire, regulates the speed of the engine, and the hand control is easily fixed to the handlebar in a convenient position on the opposite to the rear brakelever, so as not to interfere with the control of the machine.

The whole work of fitting the "Cyclotracteur" can be done with the aid of an ordinary bicycle tool kit, and involves no mechanical skill whatever; neither is there any need for a specially constructed machine to carry the power unit, which feature provides inestimable advantages.

#### NOTE re MAINTENANCE.

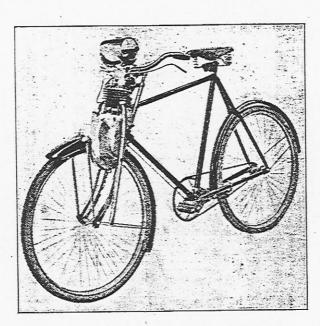
As the whole of the mechanism is designed on very simple lines, the engine will develop its full power for long periods with practically no attention. Users who have an elementary knowledge of internal combustion engines will find no difficulty in effecting those minor attentions which may be required from time to time.

Provided the oil level in the crank case is maintained at the correct height no trouble will be experienced with soot on the sparking plug, and the only other point to be mentioned is the need for cleaning the engine from time to time in order to prevent dust and mud from interfering with the action of the mechanism. The crank-case holds  $\frac{3}{4}$  of a pint of oil.

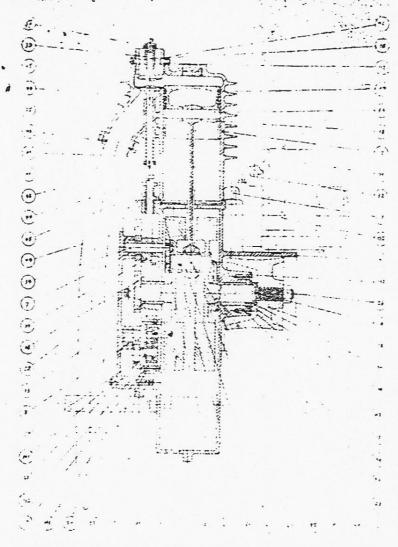
Before leaving the works every engine is submitted to exhaustive brake tests which ensure a degree of reliability equal to that possessed by the highest grade of automobile engine. All the results obtained by means of lengthy experiments have been incorparated in the design thus rendering the engine capable of working in an efficient manner even in adverse conditions.

### LIST OF SPARE PARTS.

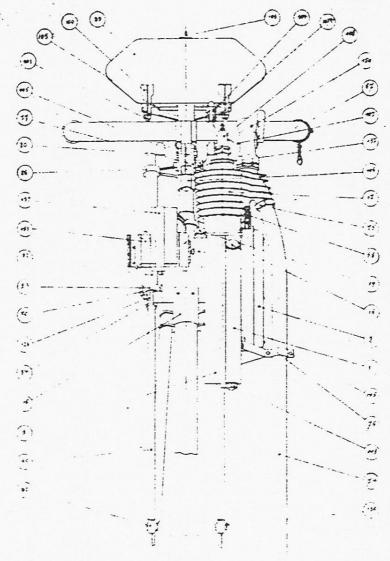
Valve (Inlet)	13	Crankshaft Pinion
	14	Camshaft Spindle
Cylinder	15	Camshaft Pinion
Piston	16	Tappet
Rings	17	Tappet Guide
Gudgeon Pin	18	Valve Spring
Connecting Rod	19	Valve Spring Cup
Crankshaft	20	Valve Spring Cotter
Crank Pin	21	Exhaust Pipe
Flywheel	22	Crankcase
Driving Pulley	23	Timing Wheel Cover
Oil Pump	24	Magneto
Oil Pump Pinion	25	Magneto Strap
	Piston Rings Gudgeon Pin Connecting Rod Crankshaft Crank Pin Flywheel Driving Pulley Oil Pump	Valve (Exhaust)       14         Cylinder       15         Piston       16         Rings       17         Gudgeon Pin       18         Connecting Rod       19         Crankshaft       20         Crank Pin       21         Flywheel       22         Driving Pulley       23         Oil Pump       24



"Cyclotracteur" fitted to Gent's | Roadster.



1. Demi carter, côte distribution. 2. Couvervie, cote distribution. 5. Tuyau d'aspiration d'huise.
7. Fourrure d'ave de came. 8. Fourrure d'ave de pompe à hulle. 9. Demi carter, côté magneto.
10. Couvsinet meteur gale. 13. Tupe rend a. 2. 15. Disque de servace pour fourre.
17. Cylindre. 18. Piston 19. Segment. 21. Ve ant droi - 21. Ve lant date he. 22. Ecrou practe moi ur distribution. 24. Let a carebe pour ave moi ur distribution. 24. Let a carebe pour ave moi ur distribution. 26. Let a carebe pour ave moi ur distribution. 30. Ecrou de Maneton. 32. Biçille. 33. Ave de nied de bielle. 34. Couverine de bielle. 35. Siège de soupape d'admission. 36. Soupape d'admission. 36. Soupape d'admission. 37. Ecrou de soupape d'admission. 38. Soupape d'admission. 39. Soupape d'admission. 30. Ecrou de soupape d'admission. 30. Ecrou d'echappement. 32. Eugenese de commande de pompe a huile. 32. Cource. 34. Ave d'engrenage came. 39. Pignon secondaire de pompe à huile. 31. Couverele de cousinet. 32. Eugenese d'en deux parties du tuvau d'echappement. 35. Eugenese d'en de reservoir. 37. Birde en deux parties du tuvau d'echappement. 35. Eugenese d'en de reservoir. 37. Distribution. 31. Joint de tuyau d'echappement. 31. Goulon de couverele de distribution. 31. Magneto. 35. E. Courtere d'attache pour magneto. 30. Joint de carter papier 2. 10. Joint de cylindre papier. 30. Joint de pompe a huile 30. Joint de cylindre papier.



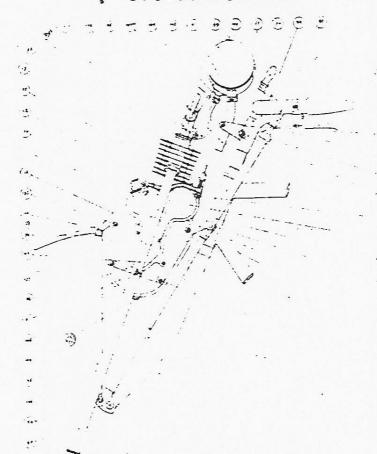
1. Demi carter, cote distribution. 7(2, l'Couverele, cote distribution. - 79. Demi carter, côte disgneto. - 14. Couverele du renultré. - 16. Pontanon de rempliés age. - 17. Cylindre. - 68. Ressort de décompresseur. - 67. Commande de Box den. - 70. Pattes symétriques de carter. - 74. Tuvan d'echappement. - 75. Eeron iont de tousu d'échappement. - 76. Rride en deux parties du tuvan d'échappement. - 77. Support de guides. - 80. Têtes de guides. - 82. Coulisseau de 16-18. - 80. Coulisseau support de carter. - 84. Fourtures intercures de coulisseau - 89. Triverse de commande 18. Haubans de 12-14. - 67. Pieds de haubans. - 99. Reservoir. - 100. Renfort de reservoir. - 101. Boulon de fixation du reservoir. - 103. Boulon chicane. - 104. Robinet d'alimentation. - 105. Support de reservoir. - 107. Tuvan d'arrivee d'essence. - 107 bis. Rescord atuyau d'arrivée d'essence. - 108. Boulon de letter de laubans. - 136. Boulon de pied de hauban. - 137. Boulon de serrage sur guidon. - 133. Vis niveau ou s'idange d'huile. - 145. Boulon de serrage du tube de rerervoir. - 146. Boulon superieur de bride de tuyau d'échappement. - 150. Carburateur. - 151. Magneto. - 152. Ceinture d'attache pour magneto.

### NOMENCLATURE

### PIÈCES DÉTACHÉES

DU

CYCLOTRACTEUR



1. Dem. carter, este distribution. - 10. Bouchen de remplistage. - 17. Cviindre. - 28 care d'en rainement - 35. Siege de soupape d'admission. - 62. Levier décompresseur. - 67. Carangair Bos den. - 88. Parte sintrée gauche de carter. - 74. Luyau d'echappement. - 75. Berou caire se sour d'echappement. - 75. Berou caire se sour d'echappement. - 75. Berou caire se sour d'echappement. - 75. Support se product de 12 14. - 79. Fieds de guides. - 80. Têtres de guides. - 82. Confesseur support de carter. - 84. Fe arrures inferieures de confesseur commande. - 87. Croisillon support de vis. - 80. Manueur - 88. Pougas de commande. - 87. Croisillon support de vis. - 80. Manueur - 88. Pougas de la commande. - 87. Croisillon support de vis. - 80. Manueur - 88. Pougas de la commande. - 107. Considera de la commande. - 88. Reverser - 88. Reverser - 88. Pougas de la commande. - 107. Tuyau d'arrived d'essence. - 107 no. Reverser - 108. Boulon s'example de usans d'arrived de la carter cose a carter de un de la cura d'arrived de la carter cose a carter de la cura d'arrived de decompresseur. - 130. Boulon d'arrivedants de secret presseur. - 131. Boulon de le lied de huber. - 137. Boulon de serrage de une de extremole - 132. Boulon de berde de bride ou vidange d'Indille. - 145. Boulon de serrage de une de extremole - 132. Accessore bride de tuyau d'echappement. - 150. Carburateur. - 184 Magnesse.

### CYCLOTRACTEUR DRIVING INSTRUCTIONS

Having satisfactorily completed the fitting of the set, the next item is the method of control.

1st.—Road License must be obtained from the local Licensing Authority, usually at the County Hall at the County Town. License amounts to 30f-yearly, or 8/3 quarterly. When applying for this, one also obtains Registration Log Book, Registration Numbers, and License Disc; this latter must be displayed on vehicle in a license holder of approved type (Price 2/-). Machine must not be used on the road until the numbers are fixed, and License correctly displayed.

2nd.—Fill up with good petrol (No. 1 or aviation), also fill up Crank Case with good oil to oil level. Turn on petrol, set Carburetter lever at 45 deg., mount cycle and pedal off. Next lower engine on to tyre, meanwhile holding exhaust lifter up. Having attained sufficient speed, about 8 m.p.h., drop exhaust lift and continue to pedal until engine fires, this it should do in a few yards. To increase speed to maximum, alter setting of Carburetter lever until it is vertical. Engine should not be overworked until it has been carefully run in. This will be after about 75 miles has been accomplished. Oil will last about 50 miles on one charge, but level should be watched. Excess of oil cannot do much harm, but lack of it can ruin the Engine.

GRIFFIN & SON, Cyclotracteur Specialists,

BRIDGE GARAGE, HINTON ROAD, HERNE HILL, S.E.24.

## INSTRUCTIONS FOR FITTING CYCLOTRACTEURS.

- Remove unit complete from forks by withdrawing front engine bolt and removing two nuts from back engine bearers. Telescopic action of long tubes should be present, if not, gently free, and oil same until they function easily.
- 2. Offer up the forks to Cycle to be fitted. The lower extremity should be slipped on to wheel spindle. The aluminium head clasp should now be flush on the Cycle head locking ring. If forks are found to be too long, remove handle and head of forks by extracting the two taper pins. Cut off equal parts of both tubes, so that the aluminium head just clears locking nut, refix head of forks by reinstating taper pins in holes provided.
- 3. Remove handlebars from Cycle, insert stem of handlebars through aluminium head of Cyclotracteur forks, refix cycle bars, taking care not to strain aluminium head, as although same is strong, it is brittle by nature, and liable to snap if undue strain is thrown upon it. Tighten up all nuts securely.
- 4. Refit engine unit. Extend forks to their limit in an upward direction by turning handle. If the driving pulley should be touching the tyre when the telescopic forks are extended fully, remedy this by slackening off back engine bearer brackets on forks, and tap same upwards equally until engine roller is free of tyre, i.e., cycle wheel should now be revolved without touching roller. In the event of the engine being too high off tyre when forks fully extended, the reverse operation will be necessary to ensure sufficient pressure on tyre when handle is lowered. In the case of the long tubes being shortened, it sometimes happens that the engine crankcase fouls the short front tubes (when the engine is free of the tyre). If this occurs it will be necessary to shorten the front tubes by the extent of one hole.

Fill up with B.B. air-cooled oil of good quality (Vacuum or Price's) through the smaller of the two aluminium caps on the top of crank case, until oil commences to run from brass plug hole (remove plug while filling). Maintain this level as much as possible. Use No. 1 Petrol, and with careful use, several years of satisfactory motoring should be enjoyed.

The larger of the two aluminium caps is the crank case compression release valve, and should not be touched.

GRIFFIN & SON, Cyclotracteur Specialists, BRIDGE GARAGE, HINTON ROAD, HERNE HILL, S.E.24.

### Cyclotracteur Spares Price List.

Subject to Revision without notice.

Cylinder	•••		1	15	0	Rubber Pipe	•••	0	1	3
Piston		•••	0	7	6	Unions	++4	0	0	- 6
Rings	***		0	1	3	Filler Cap	•••	. 0	0	9
Gudgeon Pir	1		0	2	6	T 1		- 0	7/>	0
Connecting F	od v		0	õ	0	Inlet Valve, complete in		-		0
Hlywheels, ea	ich .		0	10	0	Casing only	•••	0		
Crank Pin		***	0	3	6	Valve only	•••	0		
						Inlet Valve Spring	•••	0		100
Carburetter,	complete	•••	0	12	6	Vaive Nut	•••	. 0	0	2
Jets	:		U	0	9	Exhaust Valve		0	3	0
Float Pin			0	0	6			0		
Float Chambe	er Cap		()	0	6	0.11	•••	0		
Split Pin			0	0	1		•••	0		
Carburetter S	lide		0	3	0	Tappit Exhaust Cam Lever	•••	0		0
., В	ody		0	9	0		•••			
C & A Washe	r		0	0	1	Timing Wheels, each	•••	0	4	0
Slide Spring			0	()	3	Crank Case, timing side		0	15	0
						" " Driving side		0	10	0
Magneto, com	pletc	•••	1	10	()	Crankcase Breather Cap		0	2	6
Contact Break	ter, comple	te	.0	7	6	Oil Filler Cap		0		
Breaker Sprin		ntact			1396	Drain Plug		0		
Screw, et			()	3	6	Oil Level Plug		0	0	3
Armature, cor		•••		12	6	on bever 1 mg	•••			
Roller Bearing	-		()	2	0	Driving Roller		0	3	0
High Tension		•••	0	0	6	Roller Nut		0	O	2
Carbon Brush		r	()	2	6	Exhaust Lift, complete		0	2	6
Carbon Brush			0	0	9	Lever only		6	1	6
Magneto Cove			0	0	6	Tappit Lift	***	0	2	0
Magneto Coup	oling Dog	•••	0	()	9	Return Spring Support		. 0	0	9
Magneto Strap	p		0	1	0	Bowden, inner and outer		. 0	1	0
Tank, complet	te with bra	cket	0	12	()	Telescopic Forks, compl			12	6
Tank only	•••		()	5	0	Aluminium Handlebar C	lasp	0	7	6
Tank Support			0	4	6	Long Tubes, each	•••	0	4	0
Tap			0	1	9	Short Ditto, each	•••	0	1	6
Filters			0	2	0	Sparking Plugs		2/6	ىئ	5/-

GRIFFIN & SON, Cyclotracteur Specialists, Bridge Garage, Hinton Road, Herne Hill, S.E.24

Near Loughborough Junction.

### CYCLOTRACTEUR FAULTS. How to Trace and Remedy them.

. In the event of the engine failing to function properly, the following points may be at fault:

- 1st. MAGNETO. To ascertain if same is in order take hold of high tension lead in the fingers, if upon rotating engine a sharp electric shock is felt, the magneto is in order. Presuming no shock is felt, the following items should be checked: Contact points should be adjusted so that the thickness of a visiting card can be passed between them. Next see that carbon brush is clean and making contact with collector ring. Note that the contact breaker springs are not broken or adrift.
- 2nd. Sparking Plug should be tested by placing same on top of cylinder, rotating engine, and spark should occur. If it does not, try another plug (thin central electrode preferrable).
- 3rd. Engine compression must be present. If not see that exhaust valve is free in guide, and working easily. Inject a little paraffin to assist if it is sluggish in movement. Also make sure that exhaust valve is seating. Sometimes a stretch takes place, in which case the tappit will need adjustment to allow valve to seat.
- 4th. See that petrol flows freely (1) from petrol pipe, (2) to the jet. Jet stoppage may frequently cause trouble, owing to the extremely small hole in same. This should not under any circumstances be enlarged. Remove jet and clean.
- 5th. Don't forget to turn Petrol on. See that petrol tank filler cap has small hole in it, and keep same free. Don't forget to oil engine occasionally, otherwise seizure will result. Don't adjust friction wheel on to tyre TOO much, or too little. In wet weather slipping will take place, unless speed is reduced, and serrations in driving wheel kept free of mud
- Avoid cheap oils and cheap petrol. Do not allow any air leaks by carburetter, sparking plug, or inlet valve casing. When tightening up carburetter do not put on too great a pressure, otherwise the Inlet valve casing will break or possibly the lower portion of the carburetter. It is not advisable to inject petrol to ensure easy start, as there is a possibility of the cylinder blowing off.
- Do not make engine labour up hills. It is advisable to assist by pedalling. Even slight assistance will ensure longer life for engine, and extended satisfactory results.

#### GRIFFIN & SON, Cyclotracteur Specialists.

BRIDGE GARAGE, HINTON ROAD, HERNE HILL, S.E.24.

### Griffin & Son,

#### Automobile Specialists,

Telephone: Brixton 3880.

Business Hours: Daily 9 a.m. to 9 p.m.

## BRIDGE GARAGE, HINTON ROAD, LOUGHBOROUGH JUNCTION

The Cyclotracteur Motor Attachment is of French Manufacture throughout, and is priced by the makers at £21. Owing to the magnitude of our purchase for spot cash, the present low rate of exchange, and the fact that the contract was completed whilst the McKenna Duties were raised, enable us to offer the attachment at the really bargain price of Five Guineas. Such an opportunity cannot occur again, as the present Custom Duty is Three Guineas per set. A few shop-soiled sets available at £4 10s., Cash only.

#### The Cyclotracteur comprises:

One-and-a-half h.p. 4-stroke Engine, single lever automatic Carburetter, high tension Magneto, Petrol Tank, special forks for adapting to any cycle (any size Franc, ladies' or gent.'s). No alteration whatever is necessary to the Cycle, and no undue strain is thrown upon any part of the cycle. The oiling system is by internal automatic pump, a refinement of particular note.

We have an ample supply of spare parts at reasonable prices. This is positively the cheapest form of Motor Cycling, petrol consumption being 200 miles per gallon, and oil about 1,000 miles per gallon. Maximum speed 25 miles per hour.

The enclosed Photograph illustrates the simplicity of fitting, which can be done by any amateur in one hour.

A Clutch and free engine is incorporated in the design. The engine can be instantly raised from the wheel, enabling the cycle to be pedalled independently. Weight 32-lbs., easily lifted up stairways. No garage expenses.

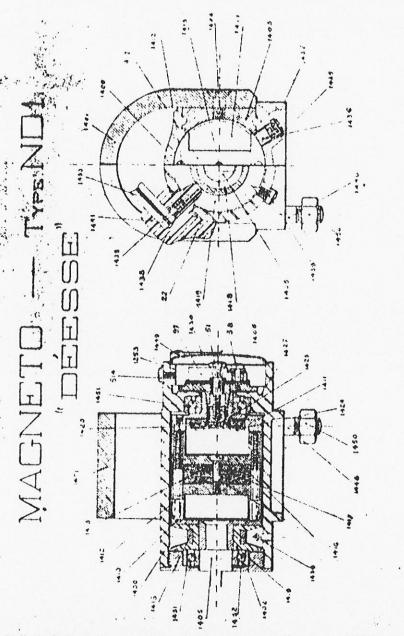
Goods are sent on approval against Cash, plus 7/6 Passenger Carriage, or 5/- London area; Ireland 10/-; Overseas 20/-

DEFERRED PAYMENTS.—£2 secures instant delivery, balance by four monthly payments of 20/-. No guarantors or insurance required. Strictly confidential deals.

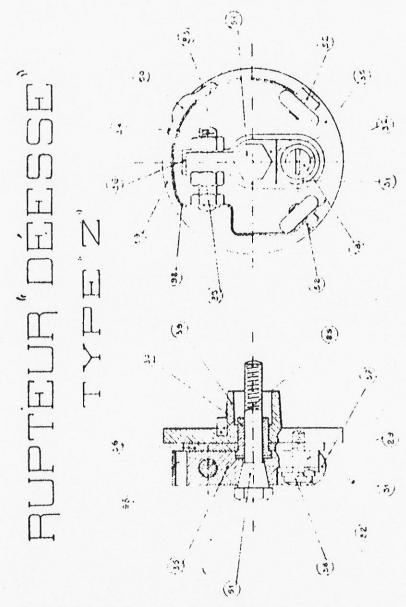
Our price includes free fitting (if desired), free petrol and oil, tools, license holder, number plates, spare Sparking Plug and leather wallet.

The Motoring Season is here. Purchase now and enjoy the delights of the open road. You cannot appreciate the countryside whilst exerting yourself by pedalling. Cyclotracteurs level all hills, and longer distances can be successfully attempted. Return runs to the coast are well within your reach. Order now.

CYCLE HERE. MOTOR-CYCLE AWAY.



RS. Vis de fixetion du bluc et sa rondelle. - Bl. Vis de fixetion (nez) du rupteur. - 97, Rupteur complet. - Bl4. Vis de fixetion d'aiment. - 1406. Couverele de rupteur. - 1419. Collecteur. - 1415. Douille pour charbon de masse, - 1406. Charbon de masse et son ressort. - 1439. Charbon de collecteur avec son ressort. - 1439. Vis parafoudre avec sa rondelle. - 1441. Porte charbon avec via pointeau. - 1440. Colonnette et ressort de fixetion de couvercle de rupteur. - 1439. Ecrou fixetion de socie. - 1431. Roulement complet 15 x 32 x 8.



29. Isolant de la vis du bloc rupteur. - 30. Isolant du plat de la vis de fivation du rupteur. - 31. Isolant du bloc rupteu et sa rondelle, - 36. Isolant du bloc plaque decouper. - 38. Vis de fivation du bloc et sa rondelle, - 51. Vis de fivation (nez) du rupteur. - 52 Vis du ressort de rupteur. 85. Ergot clavetage de rupteur, - 98. Ressort de rupteur avec deux contacts.

### Cyclotracteur Spares Price List.

· Subject to Revision without notice.

Cylinder	ì	13	ij	Rubber Pipe	•••	ø	1	3	
. Platon	U	7	6	Unions		8	0	5	
Rbp	0	1	3	Piller Cap	-	0	0	9	
Codgeon Pin	U-	2	4		•				
Tonnecting Rod	ø	3	0	Inlet Valve, complete in				4)	
े श्रीरूष्णेक्टोंड, each	0	10	Ð	C is ng only			7	6	
Crank Pin	0	3	6		•••	200	3		
				Inlet Valve Spring	•		٥	-	
Cuburiter, complete	0	12	6	Valve Nut	***	0	9	2	
·Jeia	. 0	0	9	Exhanst Valve		•	3,	٥	
Toat Pin	0	υ	6		***		0		
Front Chamber Cap	0	0	ō		***		0		
Split Pia	0	0	1		•••	1	1		
Carburetter Slide	G	3	0	Tagpit	***		1		
Sody	0	9	0	Exhaust Cain Lever	***	70	8		
CaA Washer	Q.	0	1	Timing Wheels, each	***	. 0		¥	
Slide Spring , a	0	0	3	Crank Case, Uming side		0	13	0	
				, Driving side			10		
ಟ್ಯಾದಲ್ಯ ದರ್ಪಟಕ್ಟ	.1	10	0	Crankcase Breather Cap		26	2	6	
Contact Breaker, complete	0	7	6	Oil Filter Cap			9	9	
Breaker Spring, with Contact					•••	1000	o	8	
Sereu, eta		3	8			0	1)	6	
Armiliere, complete	. 0		5	· · · · · · · · · · · · · · · · · · ·					
Roller Bearings		2	0	Driving Roller	•••	0	3	'n	
High Tension Lead	0	0	8	Roller Nat		0	0	2	
Carbon Bresh and Holder		2		Exhaust Lift, complete		0	3	6	
Carbon Grunh		552.60	3	Lever coly	***	G	1	ď	
Magasto Cover		0	5	Tappit Lift	•••	0	3	U:	
Magneto Compling Dog		U	3	Betarn Spring Support	0	0	U	9	
Magneto Strap	0	1	0	Bowden, inner and outer	•••	0	1	Ü	
Tank, complete with bracket	0	14	63	Telescopic Forks, comple	te -	C	12	6	
Tank only	. 0	5	Ü	Aluminium Handlebar Cl	mp.	0	7	6	
Tank Support	0	4	6	Long Tubes, each		0	4	0	
Tap	0	1	9	Short Date, each		0	1	6	
Filters	0	3	0	Sporking Plags		3/8	& ·	5/-	

CAIFFIN & SON, Cyclotractour Specialists, Eridze Garage, Minton Road, Merne Will, S.E.24