The SIMMS MAGNETO

TYPES
S.F.4.L.O.
S.F.6.L.O.

Simms Magnetos

UNITS TRADE MARK

S.F.4.L.O.
AND
S.F.6.L.O.

SIMMS MOTOR UNITS, LTD.

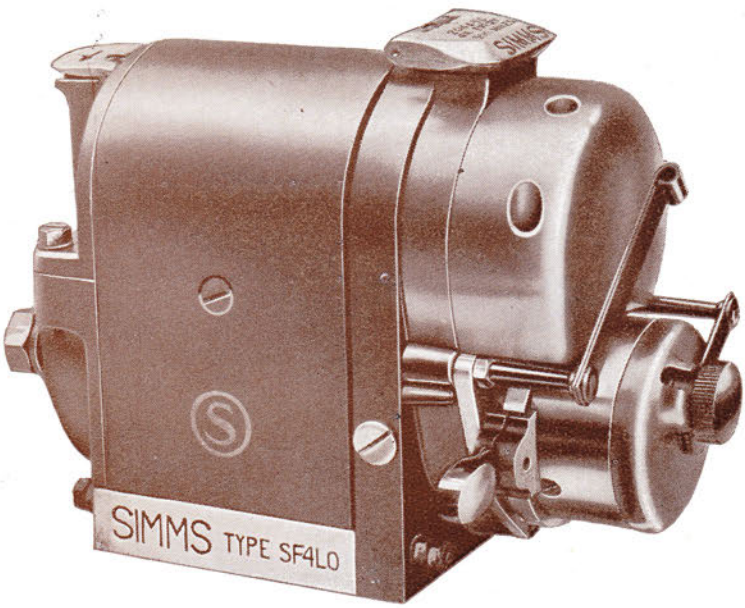
Percy Buildings, Gresse Street,
LONDON, W.1

TELEGRAMS: "SIMOTUNIT, LONDON." *Codes: A.B.C. 5th and 6th Ed. and Marconi.* TELEPHONE: MUSEUM 6300 (5 lines)

MAGNETO, DYNAMO AND ACCESSORY WORKS:
GRANGE WORKS, OAK LANE, EAST FINCHLEY, N.
Telephone: Finchley 2426

For addresses of Branches, see page 32.

FEBRUARY, 1934.



The SIMMS MAGNETO

S.F.4.L.O. Type for 4-Cylinder Engines.

The SIMMS MAGNETO

BEFORE dealing with the working of a magneto it is necessary that one has some knowledge of what is required of it.

The specification of such apparatus is broadly as follows :—

(1) It must function at very low engine speeds. In other words it must start the engine easily and allow it to idle without a misfire.

(2) It must be capable of running at speeds of the order of 8,000 R.P.M. on occasions.

(3) It must provide such a spark at the plug that a sooted plug insulator has little effect upon it.

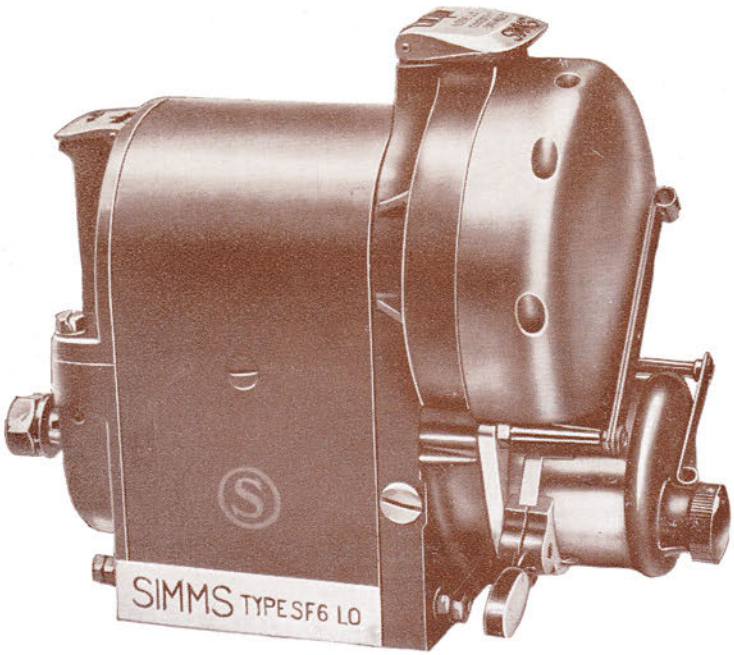
(4) It must fire under any reasonable conditions of compression and turbulence.

(5) It must be waterproof and dustproof.

(6) It must be silent in operation.

It will be realised that we are able to fulfil all these conditions as we have cases where our magnetos operate for 21 hours per day, and in 'bus operation it is really the hours run rather than the mileage that must be considered, owing to congested traffic conditions.

Magnetos, types S.F.4.L.O. and S.F.6.L.O. will give a 5.5 mm. spark in air at approximately 40 revolutions per minute at the full advanced



The SIMMS MAGNETO

S.F.6.L.O. Type for 6-Cylinder Engines.

position of the timing lever and at 80 revolutions per minute at 20° retard.

Obviously a magneto of very low spark energy characteristics has very little reserve when firing a badly sooted plug. Enough energy must be applied to counteract the leak up the sides of the plug insulator.

The degree of compression under which a magneto will function is largely a matter of the surface insulation provided and the length of the safety spark gap.

This series of magnetos are suitable for engines up to 85 mm. bore with a compression ratio not exceeding 5 to 1.

To ensure silence we provide a non-metallic half-speed gear, and by making the "moving" parts of the contact breaker very light we reduce the noise due to the impact of the lever to a minimum.

The SIMMS MAGNETO

A WORD TO DESIGNERS.

With increasing crank case temperatures, it becomes more essential to mount the magneto in the coolest position, *e.g.*, immediately in the rear of the fan.

It is desirable to arrange for the magneto platform to be channelled out in the centre to allow the maximum air circulation beneath the magneto and the minimum contact between the magneto base plate and the crank chamber (*see illustration*).

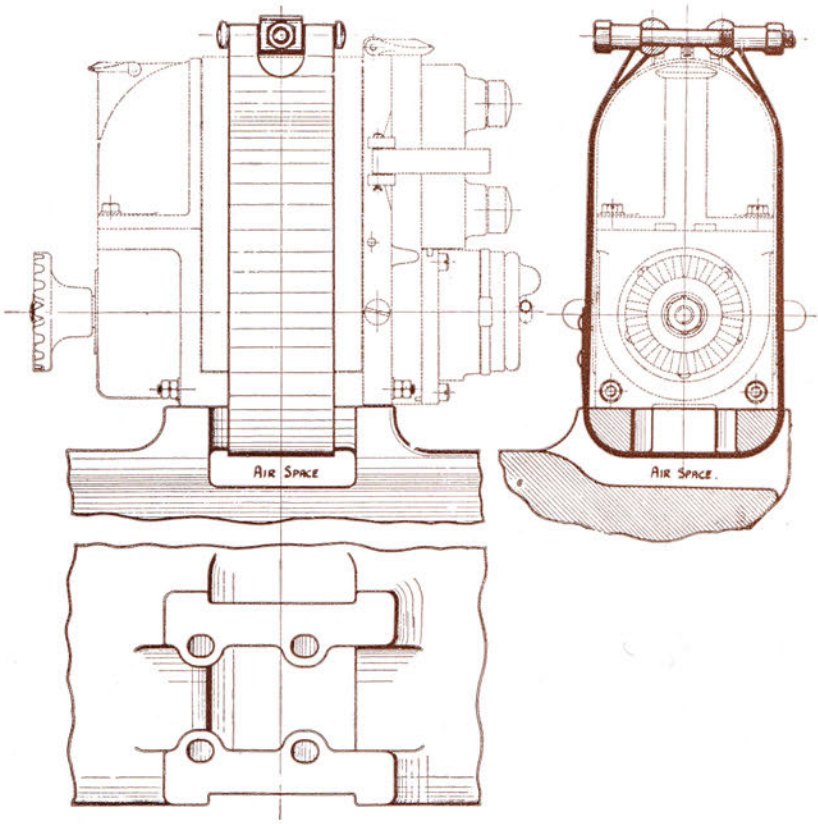
In forward drive vehicles do not obstruct the magneto and automatic advance oiling arrangements with other accessories. Oil flaps are not only a means to lubricate, but also to call attention to their purpose. You cannot run magnetos for 300 miles per day on grease lubrication.

Do not place the magneto beneath the carburetter unless a tray is provided beneath the latter, the drain being arranged away from the magneto.

Arrange high tension wiring so that it can be inspected. Don't carry it in tubes whether of metal or insulating material.

Remember that the more accessible you make the magneto, the more likely it is that it will be inspected. Place it in some very inaccessible position and it will be forgotten.

The SIMMS MAGNETO



Suggested method of mounting Magneto.

The SIMMS MAGNETO

Working of the Magneto.

MAGNETOS, types S.F.4.L.O. and S.F.6.L.O. are high-tension machines in which the high tension current is directly generated in the winding of the rotating armature.

The armature rotates between the pole shoes of permanent magnets which form a powerful magnetic field. The armature is wound in two sections, one of which is the primary winding, consisting of a few turns of thick wire, the other being the secondary winding which consists of a large number of turns of fine wire. The rotation of the armature in the magnetic field generates a strong electric current in the primary winding. This current reaches its maximum value twice in each revolution and is interrupted by the opening of the contact breaker in the primary circuit. The effect of this is to induce a high-tension current in the secondary winding. This high-tension current is distributed from the armature by a high-tension distributor to each cylinder in turn, so that, simultaneous with the breaking of the primary circuit, an arc-like spark jumps across the electrode of the sparking plug in whichever cylinder is at the moment on its firing stroke, thus igniting the mixture and causing the explosion.

The SIMMS MAGNETO

The timing of the ignition can be varied by advancing or retarding the lever which is connected to the steel cams operating the contact breaker. This arrangement enables the breaking of the primary circuit to occur either earlier or later as the case requires.

METHOD OF TIMING IGNITION.

PATENT VERNIER MAGNETO COUPLING

Stock sizes: 48 mm., 57 mm., 70 mm., 80 mm.

As the magneto only produces a spark when the armature is in certain positions, and the charge in the cylinder must also be ignited at a certain point in the piston stroke, the magneto must be positively driven, preferably by a coupling.

The ratio of gearing must be in accordance with the number of cylinders of the motor. Two sparks are obtained during each revolution of the armature of the type S.F.4.L.O, which is suitable for 4-cylinder (four cycle) motors requiring four sparks during two revolutions of the crankshaft. The ratio of the gearing between the crankshaft and the magneto spindle of the type

S.F.4.L.O. is, therefore, equal to 1 : 1—that is, the armature must rotate at the same speed as the crankshaft.

The type S.F.6.L.O. suitable for 6-cylinder (four cycle) motors, also gives two sparks during each complete turn of the armature, whereas the motor requires six sparks during two revolutions of the crankshaft. The gearing between the armature shaft of the magneto and the crankshaft is therefore to be on the type S.F.6.L.O., equal to 3 : 2 —that is, the armature of the magneto is to be driven at one-and-a-half times the speed of the crankshaft of the engine.

The correct method of timing, when using Simms Patent Vernier Coupling, is as follows :—

(1) Mount engine half coupling on shaft, but do not fix.

(2) Set piston No. 1 cylinder at top of stroke.

(3) Fix magneto in position with timing lever fully retarded and with half coupling mounted on magneto spindle. It will be an advantage to mount the half coupling loosely at first, to enable the final adjustment to be made within the range of the graduations.

(4) Mount rubber clutch on magneto half coupling.

(5) Rotate magneto spindle until contact breaker is just breaking and brush is on distributor segment No. 1

(6) Mesh engine half coupling with rubber clutch and fix bolt.

(7) Connect up magneto distributor to sparking plugs (see diagram).

(8) If it is desired to alter timing of magneto with engine, remove bolt and slide engine half coupling out of engagement with rubber clutch.

The SIMMS MAGNETO

(9) Rotate magneto spindle together with rubber clutch a distance of one tooth in the desired direction ; mesh rubber clutch with engine half coupling and rotate magneto spindle only a distance of one tooth in the opposite direction.

Rotating the magneto spindle to the right, in respect to the engine, retards it on a R.H. magneto.

Rotating the magneto spindle to the left, advances it on R.H. magneto.

Rotating magneto spindle to the right, in respect to the engine, advances it on a L.H. magneto.

Rotating magneto spindle to the left, retards it on a L.H. magneto.

The half couplings have 19 and 20 teeth respectively, and the adjustment is therefore 1/19—1/20 = 1/380th part of a revolution, or rather less than 1°.

The graduations on the periphery of the coupling show the adjustment made.

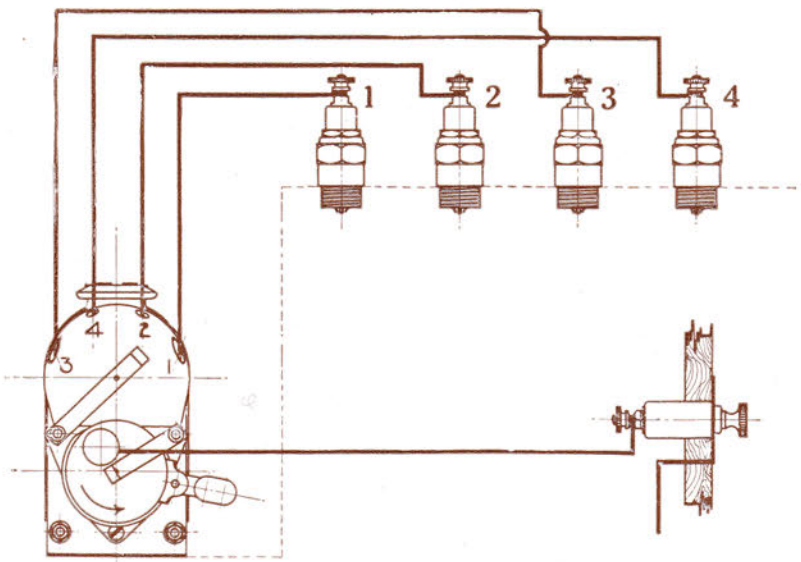
(10) Bring up both rubber clutch and engine half coupling to mesh with magneto half ; mesh and bolt up as before.

(11) Allow 0.5 m/m total play in rubber part of magneto coupling.

The normal advance on this magneto is 20°, but it can be increased to 30° if desired.

Since the S.F.6.L.O. magneto rotates at $1\frac{1}{2}$ times engine speed, it follows that the effective crankshaft range is $\frac{2}{3}$ of the angular movement of the timing lever on this magneto.

The SIMMS MAGNETO



R. H ROTATION

CABLE CONNECTIONS.

WHEN the timing is finished, the sparking plug of No. 1 cylinder (or the cylinder to which the magneto has been timed) must be connected to the terminal marked Fig. 1 on the distributor disc.

The terminal No. 2 is connected with the sparking plug of the cylinder which comes next in order of firing.

The terminal No. 3 is connected with the sparking plug of that cylinder which follows in the sequence of firing and the terminal No. 4 is connected to the sparking plug of the cylinder which fires last.

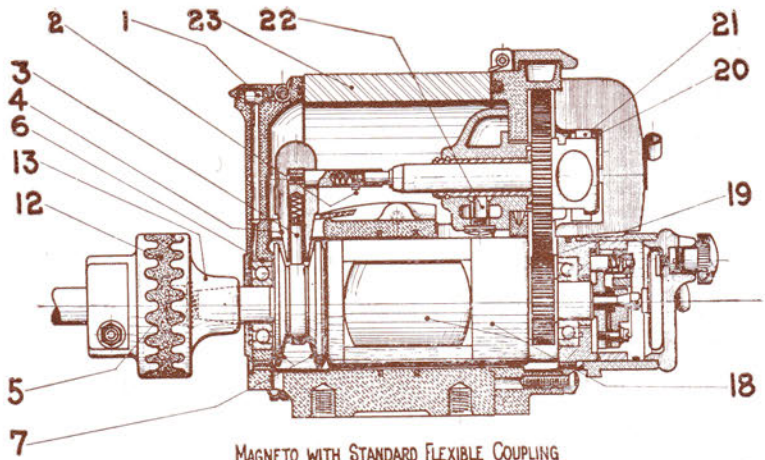
On 6-cylinder motors the terminals 5 and 6 of the distributor disc are connected in a similar way to the sparking plugs of the 5th and 6th cylinders as they follow in the sequence of firing.

It will be seen from the above that the cables are not connected consecutively in the same order as the cylinders are arranged on the engine, but in accordance with the firing sequence.

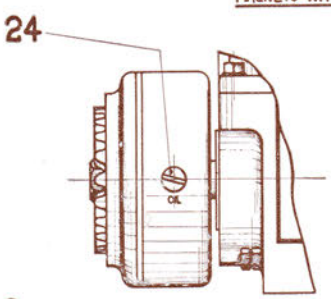
In order to facilitate the connections, the terminals are indicated with numbers from 1-4 and 1-6 respectively placed beside the respective terminals. Beside the top right-hand terminal the figure 1 is placed.

On right-hand magnetos the further numbering of the terminals continues from the terminal No. 1 and runs in the same direction as the hand of a watch. On left-handed magnetos the indication follows in the opposite direction (the magneto being viewed from the distributor end).

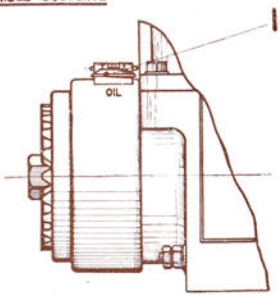
It is advisable to mark the various cylinders of the motor according to the sequence of firing. It is then only necessary to connect the cables according to the corresponding numbered terminals of the distributor and plugs of those cylinders carrying these respective numbers. (Note wiring diagram on page 12). The magneto is ready for running as soon as the timing is finished and the cables have been connected correctly.



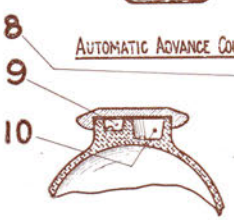
MAGNETO WITH STANDARD FLEXIBLE COUPLING



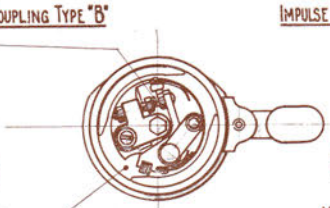
AUTOMATIC ADVANCE COUPLING TYPE "B"



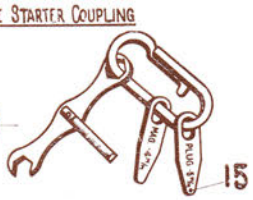
IMPULSE STARTER COUPLING



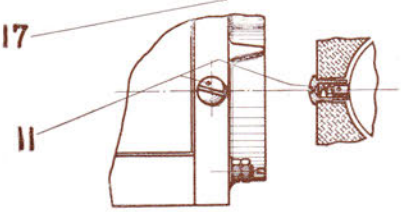
SECTION OF DISTRIBUTOR END PLATE SHOWING OIL WELLS



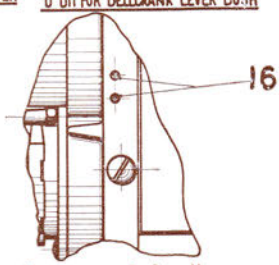
CONTACT BREAKER AND TIMING LEVER



KEYRING WITH SPANNER, GAUGES, AND "D" BIT FOR BELLCRANK LEVER BUSH



SIDE EARTH SCREW AND CARBON



VIEW SHOWING OIL DRAIN HOLES

The SIMMS MAGNETO

SERVICE HINTS

The following service hints are based upon the high daily mileage attained in omnibus operation and the periods mentioned assume that the bus is running for about 15 hours per day.

SIMMS S.F.4.L.O. MAGNETO SERVICE DIAGRAM

(1) Oil well for driving end ball bearing. Fill oil well WEEKLY.

(2) The safety spark gap is set at 7.5 mm.

(3) See that carbons work freely in holders.

(4) Clean tapered end of collector carbon holder MONTHLY.

(5) When removing magneto coupling, do not hit end of armature spindle with a hammer.

(6) The outer race of the ball bearing is insulated from the magneto body by presspahn rings and washers to prevent primary current passing across bearing and destroying it.

(7) Clean bevelled sides of slip ring MONTHLY.

(8) Gap between contacts when breaking should be 0.4 mm. (to gauge).

(9) Oil well for contact end ball bearing and fibre heel of contact breaker. Fill oil well WEEKLY.

(10) Oil well for plain bearing of half speed wheel spindle. Fill oil well WEEKLY.

(11) Remove any oil from earth brushes MONTHLY.

(12) Note that any excessive thrust caused by mounting the magneto driving coupling up too tightly, has a detrimental effect on the contact end ball bearing. If the coupling is a Simms Patent Vernier Type allow the rubber to float slightly.

(13) Do not knock coupling off with a hammer.

(14) Oil impulse starter once per WEEK. Use thin oil.

(15) Check up plug gaps with gauge fortnightly. Gaps should not exceed 0.5 mm. Use only three point plugs, not single point plugs.

(16) Keep oil overflow holes in distributor end plate clear.

(17) Clean out timing lever MONTHLY.

(18) Do not wash the armature and condenser assembly in petrol or benzol.

(19) When removing spindle nut, do not place a screw driver between the magneto gears to hold the armature stationary.

(20) Clean distributor track MONTHLY. Do not use emery cloth.

(21) See that carbon works freely in holder.

(22) Replace oil wick every time magneto is dissembled.

(23) Use brass and not steel straps for fixing magneto.

(24) Oil Automatic Advance WEEKLY with the heaviest possible engine oil. (Use our oil syringe).

Change the wiring YEARLY.

The periods given (Monthly, Fortnightly, Weekly) are on the basis of approximately fifteen hours running time per day.

Do not swab down the magneto with petrol or paraffin. If these or similar liquids are absorbed by the felt strips or find any access to the inside of the magneto the vapour given off is extremely detrimental to the platinum iridium contacts.

If the magneto is located beneath a carburetter or near the crank case breather, place a tray or shield so that no oily vapour enters the timing lever housing.

Always lubricate magnetos, automatic advance couplings, and impulse couplings, at the end of the day's run when the engine and the magneto are warm.

The oil will then flow easily and the excess oil will drain away.

Use one of the following oils for magneto lubrication :—

Mobiloil " Arctic."

Houghton's " Cosmolubric No. 33."

Houghton's " Kensington Spindle."

" Three in One."

Houghton's " DL " Absorbed Oil.

These are selected for their non gumming and lasting qualities.

The SIMMS MAGNETO

DETECTION OF FAULTS.

IN the event of the ignition being defective, it must first of all be ascertained whether the fault lies in the magneto or in the plugs. If one cylinder misfires continually, the trouble will usually be due to the sparking plug, the changing of which will prove an immediate remedy.

The usual troubles experienced with sparking plugs can be dealt with as follows :—

(1) Short-circuiting between the electrodes and the body of the plug caused by small metallic beads which are sometimes formed as a result of the strong magneto sparks melting the electrode. This fault can be quickly remedied as the beads are easily removed.

(2) Too wide a gap between the electrodes and the body of the plug.

The correct gap varies with different engines, and any gap larger or less than the specific requirements of the engine will cause the ignition to work unsatisfactorily.

The spark plug gaps (generally) with heavy electrode plugs should be as under :

Turbulent head engines ..	.3 mm. to .5 mm.
Overhead valve engines with compression ratio of about 5 to 1	.4 mm. to .6 mm.
Old type engines with side or overhead valves with compression ratio of 4 to 1 or less	.5 mm. to .7 mm.

The " top " figures given are the maximums for the type of engine, the lower figures being those to which the plugs should be adjusted.

The electrodes can easily be bent until they are the correct distance from the body of the plug. If the gap is too great, the spark produced by the magneto will be discharged across the safety gap as described above. When plugs are removed from the cylinders, they might appear, of course, to work satisfactorily even if the gaps are excessive, but it must be remembered that they will not necessarily work correctly under compression where the resistance to the spark is very much greater than in air. The fact that the sparks jump regularly across the plugs, when the latter are

removed from the cylinders, gives no guarantee that the electrodes are set correctly, as such an experiment is only of value if the plugs are working under compression.

(3) "Sooting-up" of sparking plugs.

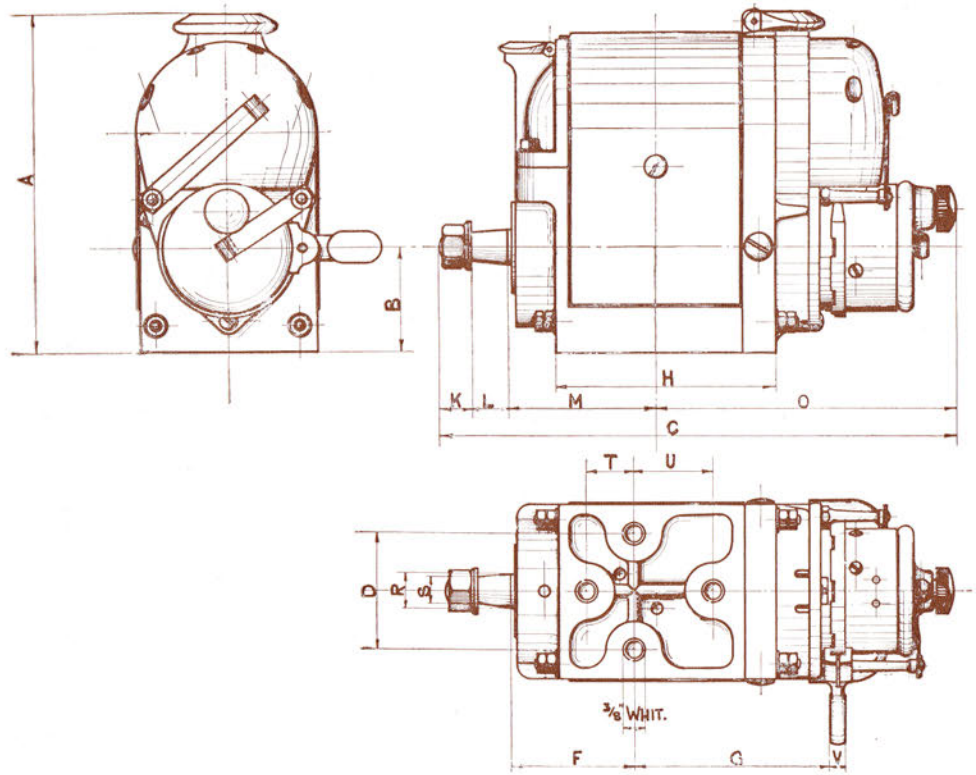
If this sooting-up should occur, the portions which are exposed to the explosive gases can easily be cleaned by means of a little petrol.

(4) "Oiling-up" of sparking plugs.

This is usually due to worn or faulty piston rings. Plugs should not be opened up to overcome this, as it will cause missing (due to jumping at safety gap), lack of power on inclines and in getting away.

Irregular firing may be due to defective working of the contact breaker. In order to ascertain this, the end cap must be removed, and great care taken to see that the fastening screw **2764** is well tightened up, and that the segments **2716** are securely fastened to the timing lever **2715**. Special attention should be given to platinum screw **2305** and in lever **2303** in order to ensure that they are well tightened up.

It must also be noticed whether the platinum contacts are exactly 0.4 mm. apart from each other, when the bell crank lever is deflected by the steel cams. The platinum contacts must be



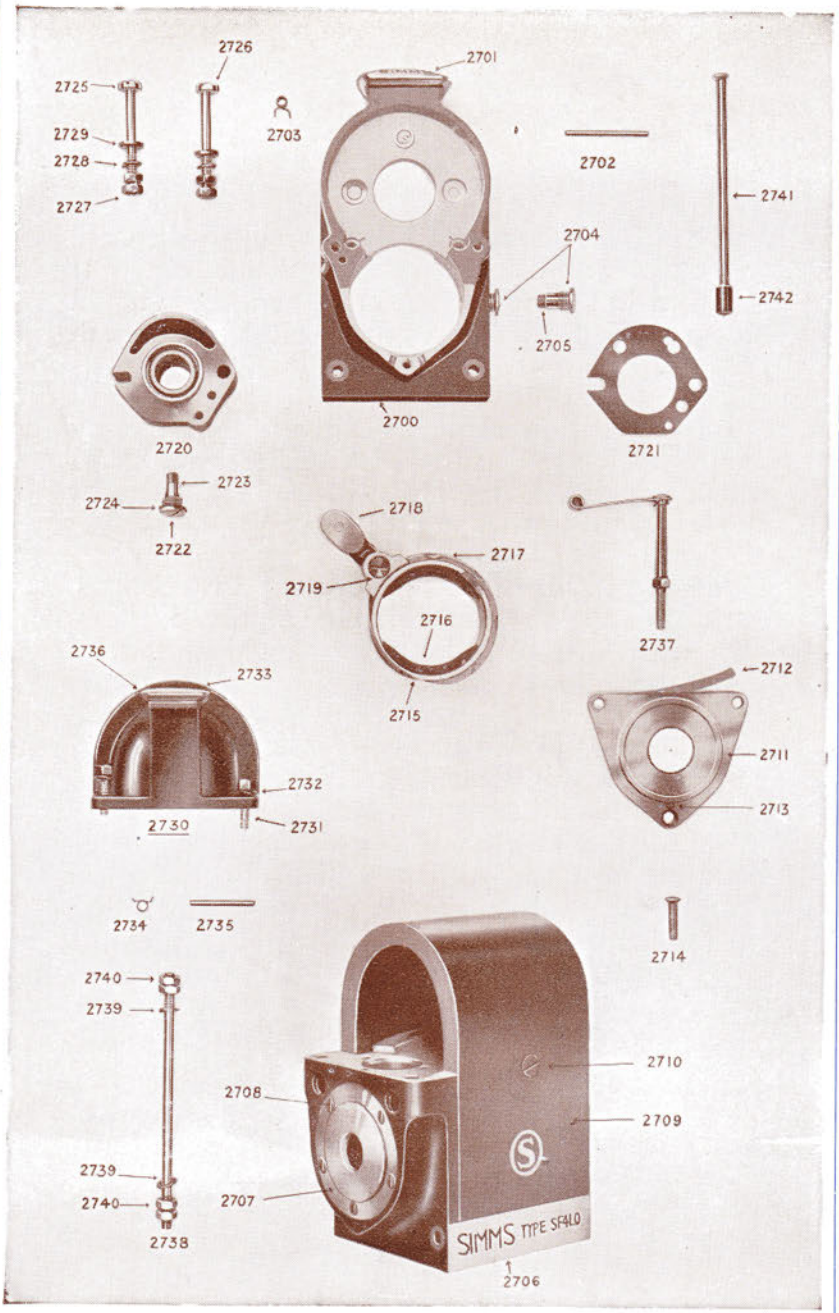
	TYPE SF4L0	TYPE SF6L0
A	146 MM	171·5 MM
B	45 MM OR 38 MM	45 MM OR 38 MM
C	219 MM	219 MM
D	50 MM	50 MM
E	136 MM	145·5 MM
F	53 MM	53 MM
G	83 MM	85 MM
H	95 MM	95 MM
K	12·5 MM	12·5 MM
L	15 MM	15 MM
M	63 MM	63 MM
N	76 MM	76 MM
O	128·5 MM	128·5 MM
P	78 MM	78 MM
R	15 MM	15 MM
S	12 MM	12 MM
T	20·5 MM	20·5 MM
U	34·5 MM	34·5 MM
V	6·5 MM	6·5 MM

adjusted if necessary and kept thoroughly cleaned, any oil or dirt being removed immediately. If they should be uneven, but only then, they should be carefully filed flat again with a very smooth file.

Special attention should be given to the easy movement of the bell crank lever 2303L and 2303R which is pivoted in a non-metallic bush, in order to render lubrication unnecessary.

If, after carrying out the foregoing instructions, the running of the motor is not improved in any way, the timing of the magneto should be verified by reference to pages 9-13.

If the timing of the magneto is found to be incorrect, it is advisable to return the magneto to the maker at once, as any further dismantling of it would only result in the eventual repair being more complicated and more expensive.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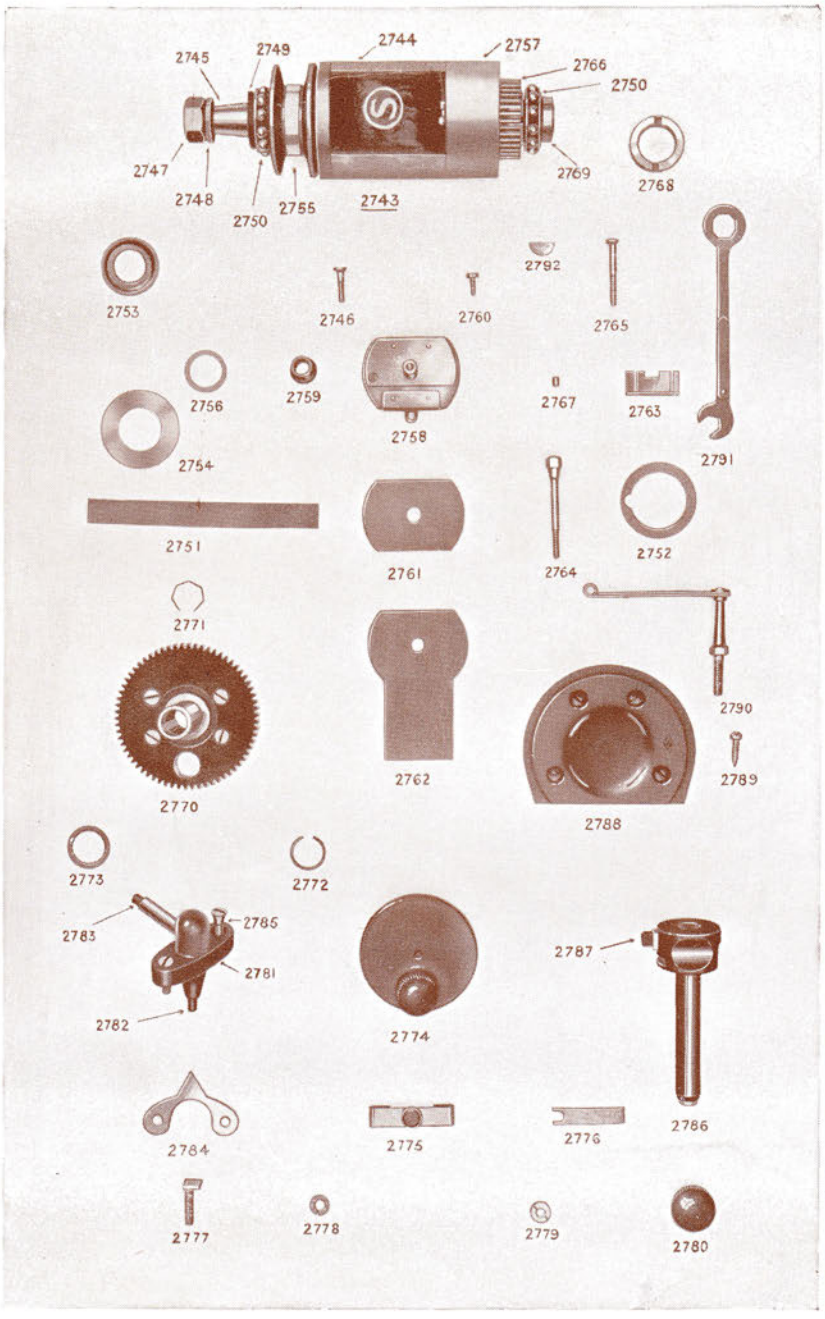
The
SIMMS MAGNETO

SPARE PARTS FOR TYPES S.F.4.L.O. and S.F.6.L.O.

No.	Description.	£	s.	d.
2700	Distributor Endplate without Oil Reservoir (S.F.4.L.O.)	1	0	0
2700/6	,, ,, ,, ,, ,, (S.F.6.L.O.)....	1	2	6
2701	,, End Oil Flap		1	9
2702	,, ,, ,, ,, Pin			2
2703	,, ,, ,, ,, Spring			3
2704	Side Earth Carbon Screw only			4
2705	,, ,, ,, and Spring only			10
2706	Baseplate and Poleshoes	2	0	0
2707	Driving Endplate Flange (Brass)		5	6
2708	,, ,, ,, Fixing Screw			2
2709	Magnet		15	0
2710	,, Fixing Screw			3
2711	Contact Endplate		16	0
2712	,, ,, Felt Strip			3
2713	,, ,, Stop Screw for Timing Lever			2
2714	,, ,, Lower Fixing Screw			3
2715	Timing Ring with Segments without Arm		10	0
2716	Segments only (per pair)		7	0
2717	,, Fixing Screws			2
2718	Timing Lever Arm with Screw		4	6
2719	,, ,, ,, Screw only			3
2720	Oil Reservoir		10	6
2721	,, ,, Paper Packing Washer			3
2722	,, ,, Oil Wick Screw only			4
2723	,, ,, ,, ,, and Spring only			6
2724	,, ,, ,, ,, Screw Leather Washer			1
2725	,, ,, Concentric Bolt			4
2726	,, ,, Eccentric ,, ...			4
2727	,, ,, Nuts for both Bolts			1
2728	,, ,, Spring Washer for both Bolts			1
2729	,, ,, Flat Washer for both Bolts			1
2730	Dome Coverplate with Oil Flap and Felt		4	6
2731	,, ,, Fixing Screw			3
2732	,, ,, ,, ,, Spring Washer			1
2733	Dome Coverplate Oil Flap		1	3
2734	,, ,, ,, ,, Spring			2
2735	,, ,, ,, ,, Pin			2
2736	,, ,, Felt Strip			3
2737	Pillar and Spring for Holding C. P. Cover		2	0
2738	Endplate Tie Rod (Bottom)			4
2739	,, ,, ,, Spring Washer			1
2740	,, ,, Nut			1
2741	Top Endplate Fixing Bolt			6
2742	,, ,, ,, ,, Nut			2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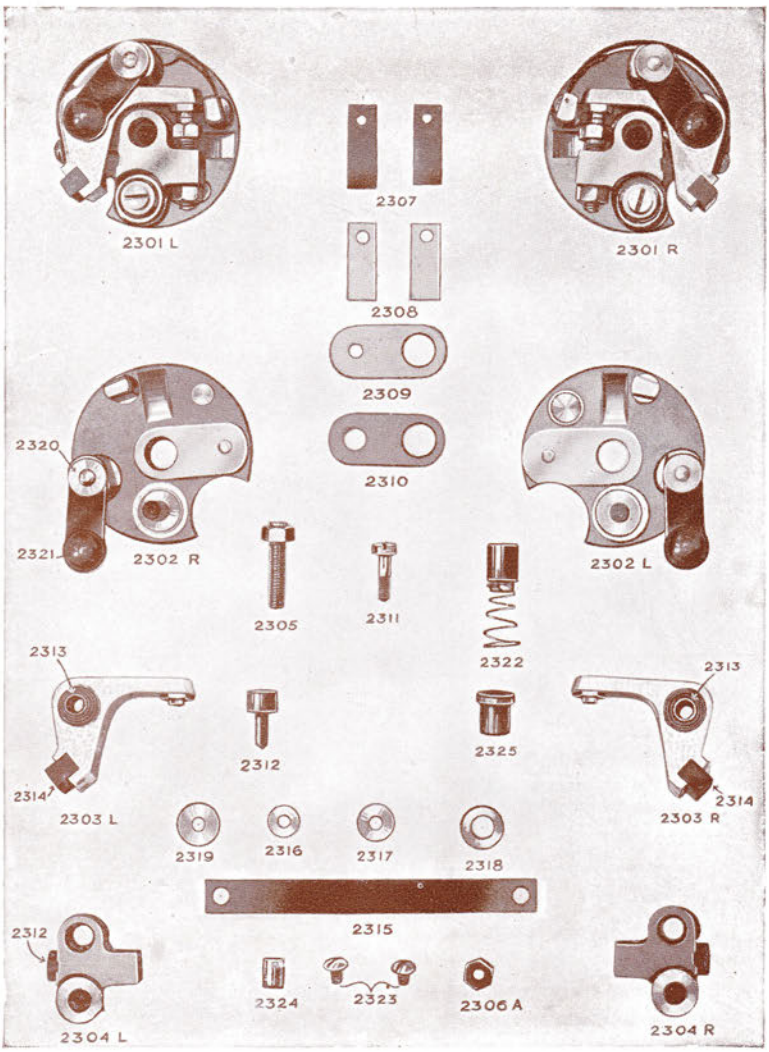
The SIMMS MAGNETO

SPARE PARTS FOR TYPES S.F.4.L.O and S.F.6.L.O.

No.	Description.	£	s.	d.
2743	Armature complete (S.F.4.L.O.)	4	10	0
2743/6	,, ,, (S.F.6.L.O.)	4	10	0
2744	Wound Armature Core	2	0	0
2745	Driving Spindle and Disc		15	0
2746	,, ,, ,, Fixing Screw			3
2747	,, ,, ,, Nut			3
2748	,, ,, ,, Washer			2
2749	Felt Washer			1
2750	Complete Ballrace		5	9
2750I	Inner Ballrace only		2	6
2750O	Outer ,, ,,		2	6
2750C	Cage and Balls only		1	6
2751	Presspahn Strip for Ballrace Packing			1
2752	,, Washer ,, ,,			1
2753	Cupped Steel Spring Slipring Washer			2
2754	Flat Mica Slipring Washer			2
2755	Slipring		9	6
2756	Steel Endplay Washer			1
2757	Condensor Case		15	0
2758	Condensor complete	1	0	0
2759	,, Insulating Bush			8
2760	,, Earth Lug Fixing Screw			1
2761	,, Linen Insulation (Small)			2
2762	,, ,, ,, (Long)			3
2763	,, Brass Packing Piece			2
2764	Centre Screw for Holding Contact Breaker			6
2765	Condensor Case Fixing Screw			3
2766	Full Speed Wheel (S.F.4.L.O.)		7	6
2766/6	,, ,, ,, (S.F.6.L.O.)		7	6
2767	,, ,, ,, Dowel Pin			1
2768	,, ,, ,, Fixing Nut		1	6
2769	Steel Collar on Condensor Case Spindle			9
2770	Half Speed Wheel (Celeron) (S.F.4.L.O.)		16	0
2770/6	,, ,, ,, ,, (S.F.6.L.O.)		17	6
2771	Hexagon Spring for Interior of Gear Spindle			1
2772	Spring Ring for End of ,, ,,			1
2773	Endplay Washer for ,, ,,			1
2774	Contact Breaker Cover complete		4	6
2775	Switch Spring with Brush for C.B. Cover			9
2776	Steel Holding Spring ,, ,, ,,			3
2777	Switch Bolt ,, ,, ,,			6
2778	,, ,, Spring Washer ,, ,,			1
2779	Slotted Brass Nut ,, ,, ,,			2
2780	Vulcanite Switch Nut ,, ,, ,,			9
2781	Collector Carbon Holder (S.F.4.L.O.)		12	0
2781/6	,, ,, ,, (S.F.6.L.O.)		12	0
2782	Collector Carbon and Spring			8
2783	Conductor ,, ,,			8
2784	Spark Gap Plate		1	8
2785	Collector Carbon Holder Fixing Screw			3
2786	Distributor Carbon Holder (S.F.4.L.O.)		12	0
2786/6	,, ,, ,, (S.F.6.L.O.)		12	0
2787	Distributor Carbon Spring		1	0
2788	Distributor Board (S.F.4.L.O.)	1	10	0
2788/6	,, ,, (S.F.6.L.O.)	1	15	0
2789	Distributor Board Cable Screw			3
2790	Pillar Spring for Distributor Board		3	0
2791	Spanner			8
2792	Woodruff Key			3



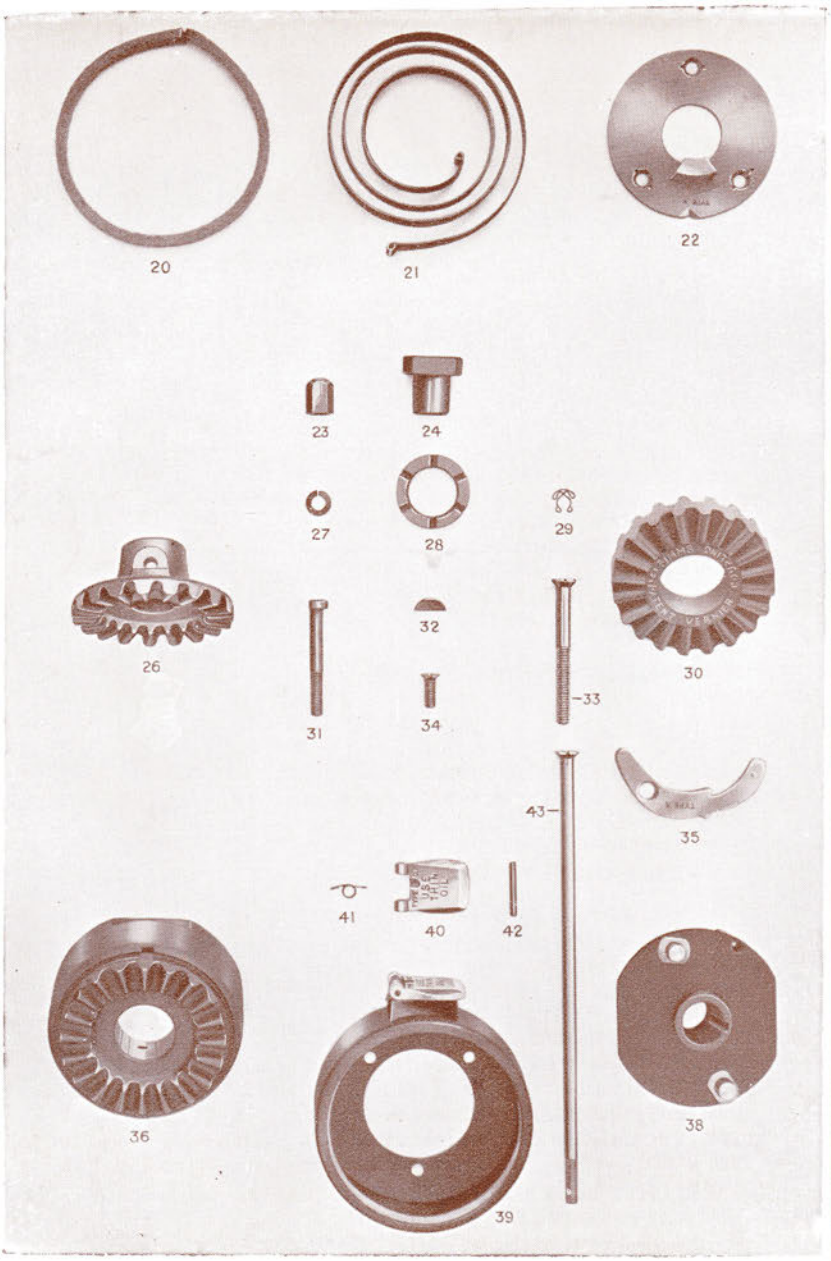
HIGH SPEED CONTACT BREAKER PARTS

The SIMMS MAGNETO

SPARE PARTS FOR HIGH SPEED CONTACT BREAKERS

No.	Description.	£	s.	d.
2301L	Complete Contact Breaker (L.H.)	1	13	0
2301R	,, ,, ,, (R.H.)	1	13	0
2302L	Base (L.H.)		5	6
2302R	,, (R.H.)		5	6
*2303L	Bell Crank Lever (L.H.) complete with Short Platinum Screw		11	0
*2303R	Bell Crank Lever (R.H.) complete with Short Platinum Screw		11	0
2304L	Contact Piece (L.H.)		2	0
2304R	,, ,, (R.H.)		2	0
2305	Long Platinum Screw		6	0
2306A	Locknut for Long Platinum Screw			2
2307	Buffer Springs (each)			1
2308	Packing Strips for Buffer Springs (each)			1
2309	Mica Insulator for Contact Piece (thin lower)			3
2310	,, ,, ,, ,, ,, (thick upper)			8
2311	Contact Piece Fixing Screw			2
2312	Celeron Buffer for Contact Piece			8
2313	,, Bush for Bell Crank Lever			8
2314	Fibre Heel ,, ,, ,, ,, ...			4
2315	Long Restoring Spring			3
2316	Brass Washer on Bell Crank Lever under Buffer Spring			1
2317	Brass Washer under Head of Contact Piece Screw			1
2318	Mica Washer (thick lower) under Head of Contact Piece Screw			4
2319	Mica Washer (thin upper) under Head of Contact Piece Screw			2
2320	Brass Washer for Retaining Spring			1
2321	Steel Spring for Retaining Bell Crank Lever			4
2322	Earth Carbon and Spring for Back of Base			10
2323	Long Spring Fixing Screws (each)			1
2324	Vulcanite Bush for Contact Piece Fixing Screw			8
2325	,, ,, ,, Centre of Base			8

*Bell Crank Lever and Short Platinum Screw are not supplied separately.



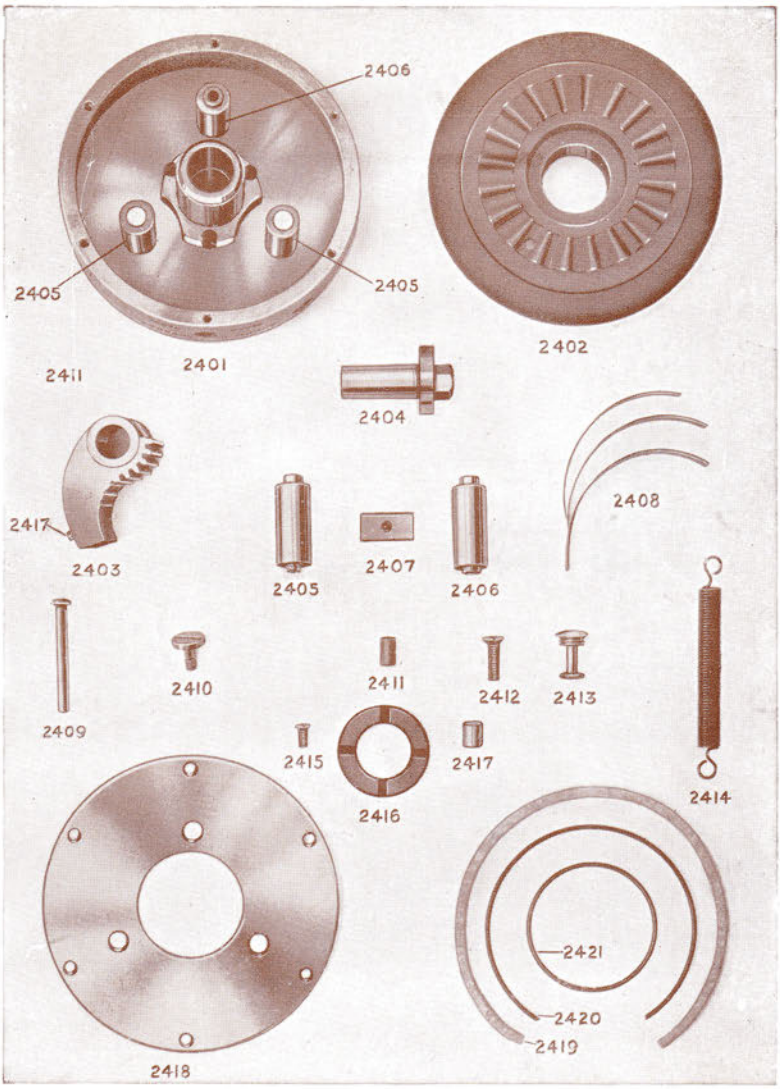
O.F. TYPE IMPULSE STARTER COUPLING PARTS

The SIMMS MAGNETO

IMPULSE STARTER COUPLING PARTS.

O.F. TYPE.

No.	Description.	£	s.	d.
20	Felt Washer			9
21	Spring		2	6
22	Catch Piece		6	6
23	Nut for Coupling Bolt			3
24	Armature Spindle Nut		1	0
26	Engine Half Coupling		8	6
27	Washer for Coupling Bolt			1
28	Slotted Nut			10
29	Crab Spring for Fulcrum Pin			3
30	Coupling Rubber		3	6
31	Coupling Bolt			8
32	Woodruff Key			3
33	Top Endplate Screw (Iron Poleshoe Types)			3
34	Bottom Endplate and Catchpiece Fixing Screw			3
35	Pawl		2	0
36	Coupling Portion with Housing		18	6
38	Hub		8	6
39	Shrouding with Oil Flap		7	6
40	Oilflap only		1	3
41	,, Spring			2
42	,, Pin			2
43	Long Bolt for Laminated Poleshoe Types			8



TYPE C AUTOMATIC ADVANCE AND RETARD PARTS.

The SIMMS MAGNETO

TYPE C
AUTOMATIC ADVANCE AND RETARD.

No.	Description.	£	s.	d.
2401	Pawl Case with Pawl Spindles and Cork Cushion complete	1	2	6
2402	Coupling Part		15	0
2403	Pawl		8	6
2404	Spindle Sleeve Nut		1	0
2405	Solid Pawl Spindle			3
2406	Hollow ,, ,, ...			4
2407	Spring Retaining Block			6
2408	1 set of 3 Springs (complete set 1/6)			6
2409	Anchor Pin			2
2410	Anchor Screw			2
2411	Cork Buffer			1
2412	Spring Retaining Screw			2
2413	Oil Hole Screw....			6
2414	Index Spring			4
2415	Support Plate Screw			2
2416	Locking Nut		1	0
2417	Oil Wick			3
2418	Support Plate		3	6
2419	Felt Packing			3
2420	Outer Spring Ring			3
2421	Inner ,, ,, ...			3

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