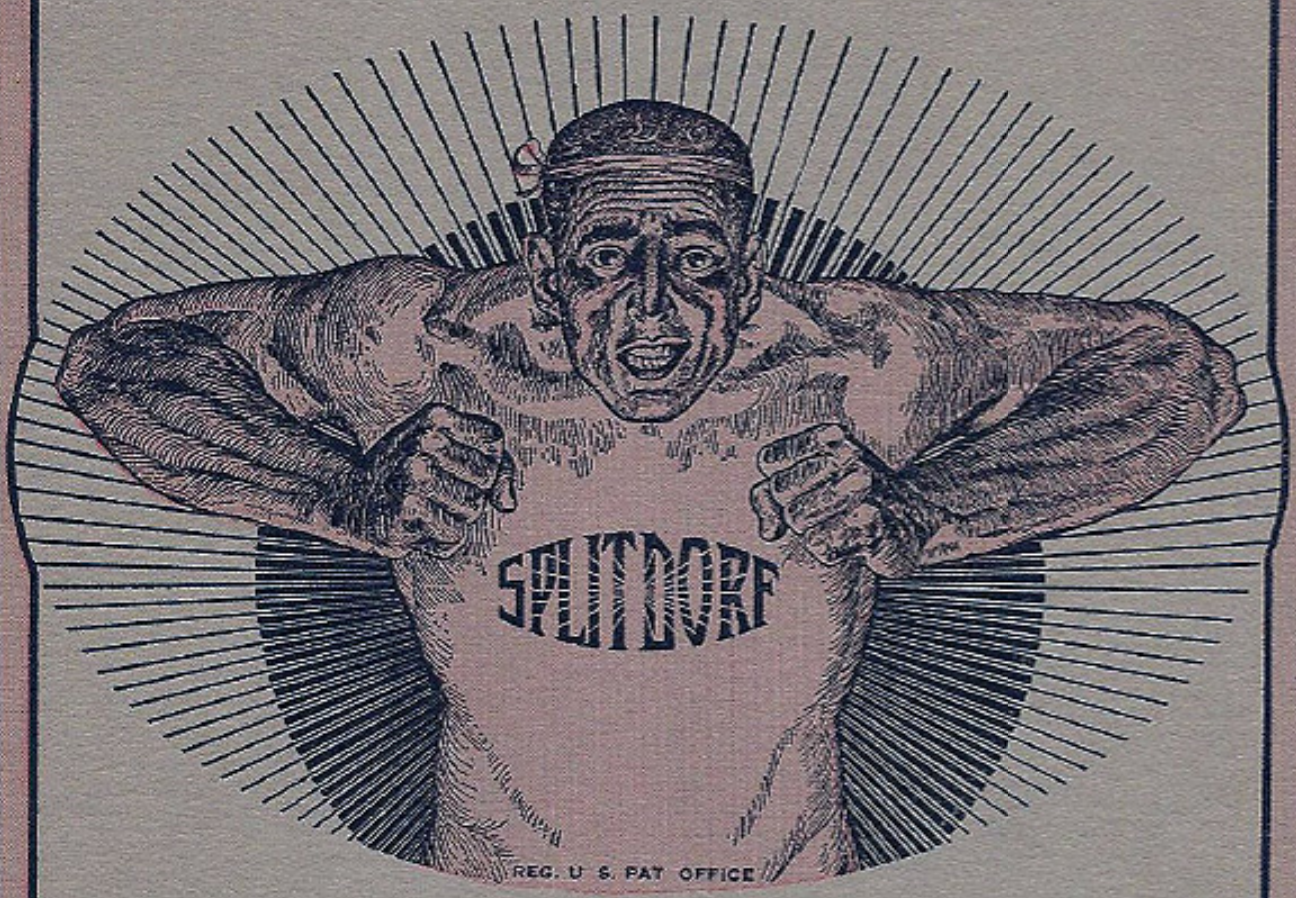


MAGNETO IGNITION

CATALOG
53

MOTORCYCLE
MODELS EU, EV

CAUTION!

Imitations of SPLITDORF magneto parts are handled by many Jobbers and Dealers and are sold with disappointing results to the user and untold harm to our reputation.

A few cents saved in the purchase of a spurious part —a careless acceptance of a poor replacement—can only lead to trouble.

If your Jobber or Dealer cannot supply Genuine Splitdorf Parts, our nearest branch carries a full stock and will be very glad to give your order prompt attention.

GUARANTEE

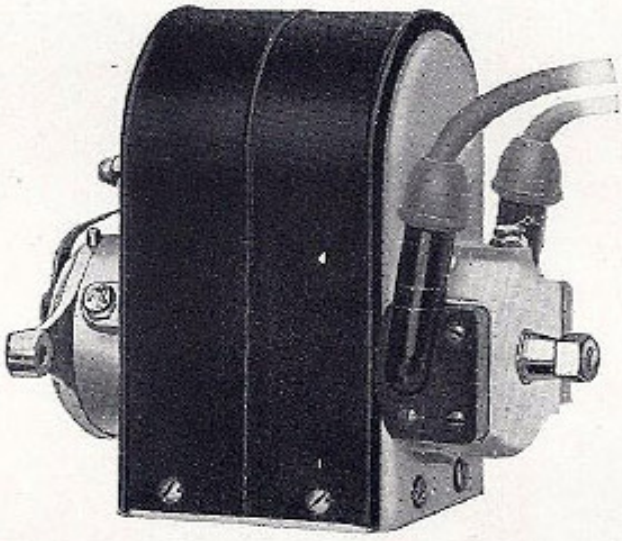
SPLITDORF MAGNETOS are guaranteed against defects in material and workmanship for a period of one year from date of purchase from us, but are not guaranteed against misuse, neglect or improper installation. Parts covered by guarantee should be shipped, transportation charges prepaid.

NOTE

Splitdorf Service always at your command at any of our Branches

SPLITDORF
MOTORCYCLE MAGNETOS

ALL the qualities that go to make ideal ignition possible with electrical science and exhaustive trials, are incorporated in SPLITDORF MAGNETOS, and they stand, to-day, strictly on their merits, typifying magneto ignition at once attractive and serviceable to the highest degree—staunch, rugged and manufactured to bear the hardest usage with minimum attention.



Side View of Model EV Magneto
Showing Terminals

The Splitdorf Enclosed Magneto is made in the following types:

Model EU—Adapted to single cylinder motors.

Model EV—Adapted to the two cylinder V type motors, set at angles of 42, 45, or 50 degrees.

Model E 2—Adapted to motors having equally spaced firing periods, such as 180 degrees.

Model EU4—Adapted to motors having four cylinders.

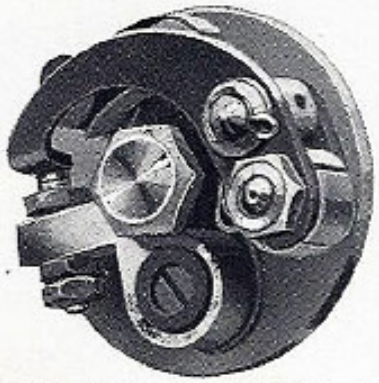
CONSTRUCTION

The construction of these magnetos, embodies an aluminum base to which the pole pieces are secured, and between which revolves an armature on two annular ball bearings. The armature, after being wound, is impregnated with a suitable oil and heat proof compound, which renders the windings practically indestructible.

A condenser of suitable capacity is contained in the armature in close proximity to the circuit breaker.

The action of the condenser increases the intensity of the high tension spark and reduces the wear of the platinum points.

A pair of magnets of the best grade of Tungsten steel straddle the pole pieces, and a ribbed aluminum cover fitted tightly over the end plates, provides protection from dust, moisture, and effectually waterproofs the operating parts.



Circuit Breaker of Splitdorf Motorcycle Magneto

The circuit breaker is attached to one end of the armature shaft, and revolves with it. Owing to centrifugal action, the platinum points come in contact in a positive manner at high speed, thus permitting the use of a weaker spring and lessening the wear on the cam. One end of the breaker arm supports a fibre roller which is adjustable for wear. (These and other similar refinements are the subject of patents, and patent application, and are exclusive Splitdorf features.) This roller comes in contact with a steel cam, causing the platinum points to separate, thus breaking the primary circuit. Since the magneto is self-contained, having

both a primary and secondary winding on the armature, a powerful and hot spark follows the sudden separation of the platinum points.

The high tension winding of the armature is connected to a collector ring or segment, imbedded in a spool mounted on the driving end of the armature shaft. From the bronze segment a carbon brush leads the current through a waterproof brush holder, having a detachable plug to which the cable leading to the spark plug is connected.

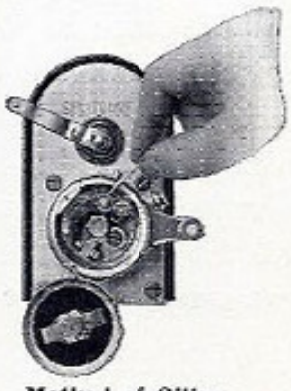
A Cophite carbon button mounted on a phosphor bronze compression spring in the cam holder cover serves to carry the current to the cover spring for the purpose described below.

A pin, suitably located on the rim of the cam holder, comes in contact with the cover spring when the cam holder is in the extremely retarded position, thus grounding the primary current, and cutting off the spark.

CARE OF MAGNETO

The main bearings of the magneto are provided with oil cups, a few drops of light oil every 1,000 miles are sufficient to lubricate the same.

The breaker arm should be lubricated with a drop of light oil applied with a tooth pick to the hole in the bronze bearing pivoted on the steel pin.



Method of Oiling

The cams are lubricated by a felt packing, and a little oil applied to the holes in the edge of the cams will last a long time; any surplus oil should be removed and care taken to prevent any oil getting on the platinum points, as this will cause undue sparking, which will prevent the points from coming into the perfect electrical contact, essential to produce a hot spark at the spark plug.

The proper distance between the platinum points when separated should be .020 or $^1/_{50}$ of an inch. A bronze gauge of the proper size is attached to the wrench furnished for the adjustment of the platinum screw and lock nut.

Terminal of Model EU Magneto

The fibre roller on the end of the breaker arm is held in position by a pawl spring. The wearing surface of the roller may be renewed by rotating the same a quarter turn, thus bringing a new surface to bear on the cam, and as there are four slots in the roller, four wearing surfaces are available.

Great care has been taken in the manufacture of the Splitdorf waterproof magneto to prevent any leakage of the high tension current in the connections and cables leading to the spark plug.

A soft rubber hood snugly encloses both the cable and the hard rubber terminal positively excluding moisture.

The end of the cable leading from the spark plug terminates within a brass plug, to which the cable is soldered after being inserted into a skirted insulating piece, which fits tightly into and over a socket moulded in the hard rubber brush holder. The brass plug should be pushed down until there is a perfect joint between the shoulder on the brush holder and terminal plug.

The brush holder may be detached by removing the screws holding the same in position, care being taken not to damage the silk gasket interposed between the joint. The collector ring may be cleaned if required with a clean piece of cloth dipped in gasolene and wrapped around a pencil inserted in the hole, at the same time rotating the shaft of the magneto to insure thorough cleaning.

Should the necessity arise of renewing the cables leading to the spark plugs, the brass plug should be drilled at the place where the copper wires in the cable are soldered to the plug and the cable then removed from the plug.

The new cable should be bared for 5/8 of an inch on one end, the copper strands twisted and

Cross Sectional View of Model EU Terminal

Terminal of Model EV Magneto

inserted in the hole of the terminal plug until the rubber covering reaches the bottom of the hole in the insulation. The copper strands now appear in the cross hole of the brass plug and the hole is then filled with solder. Remove all excess solder which might tend to prevent the plug from properly seating in the brush holder. The brass plug is split; a snug fit may be obtained by spreading the slit with a knife blade.

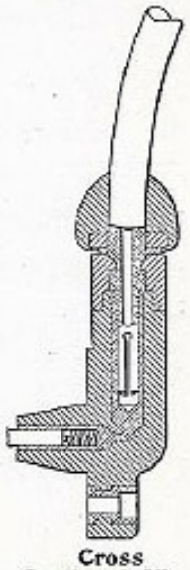
TIMING

In order to obtain the utmost efficiency from the motor, the magneto must be correctly timed to the motor. This is done when the magneto is fitted at the factory. However, should the occasion arise to retime the magneto, the procedure for a single cylinder motor fitted with type EU Waterproof Magneto is as follows:—

Rotate the crank shaft so as to bring the piston $^1/_{16}$ of an inch past the upper dead center of the compression stroke. With the timing lever fully retarded, the platinum points of the circuit breaker should be about to separate. Some motors may require an earlier setting in order to obtain the best results.

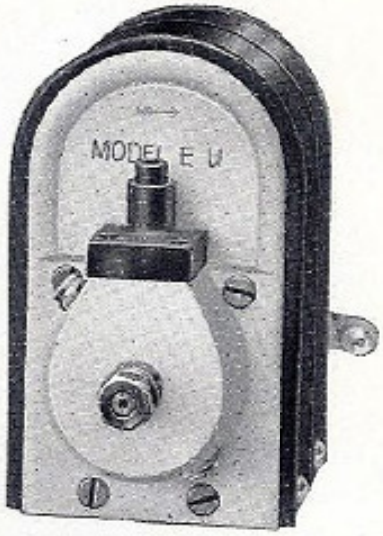
For motors of the twin cylinder type, equipped with our EV or E 2 type of waterproof magneto, rotate the crank shaft so as to bring the piston of number 1 cylinder, which is usually the rear one (the first in the direction of rotation), $^1/_{16}$ of an inch past the upper dead center of the compression stroke.

With the timing lever in the fully retarded position, the platinum points of the circuit breaker should be about to separate, when the fibre roller of the breaker arm commences to ride on the steel cam marked No. 1.



Cross Sectional View of Model EV Terminal

Front View



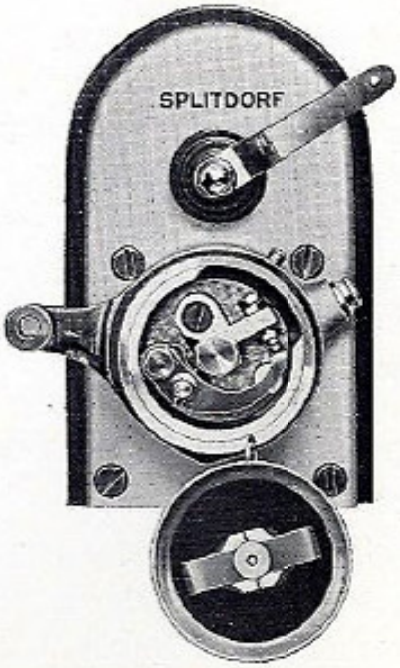
Rear View

MODEL EU MAGNETO

Waterproof Construction

Price $45.00

In ordering give direction of rotation looking at driving end and length of cable required. Also specify position of advance lever as shown in dimension cut on page 9.



Front View
Showing Breaker Box Cover Removed

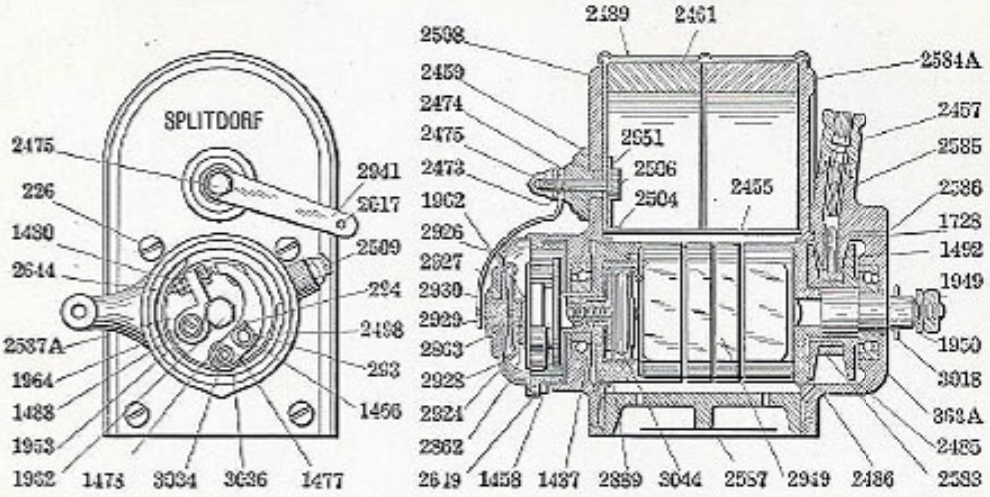


Diagram of Cross Section of Model EU Magneto

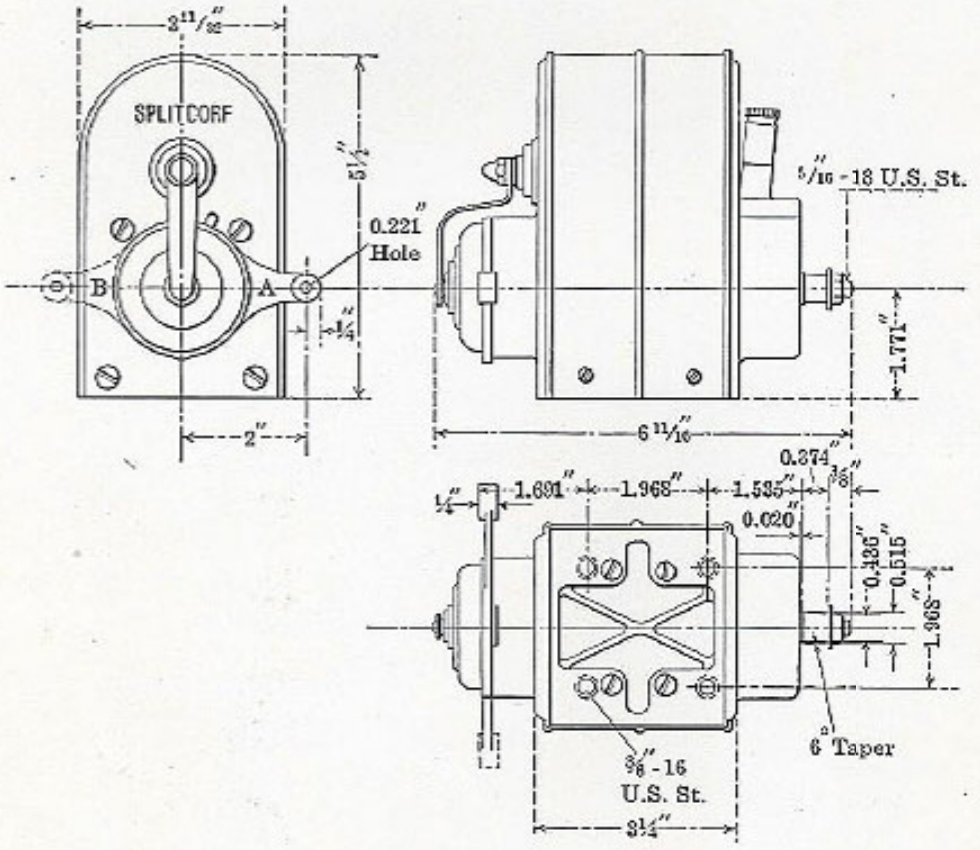
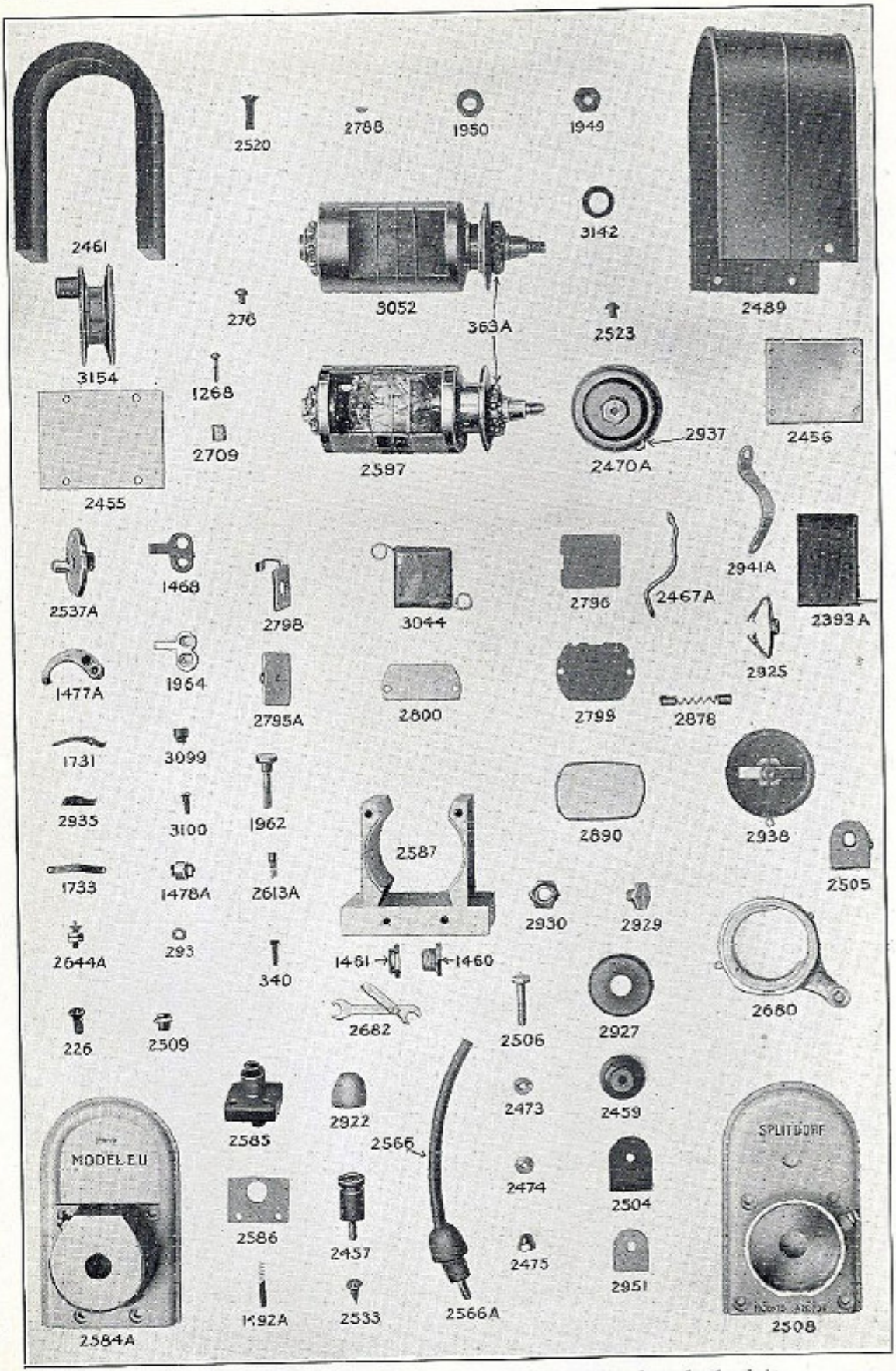


Diagram of Principal Dimensions of Model EU Magneto



When ordering parts specify magneto number stamped on back plate

MAGNETO PARTS—MODEL EU

CRADLE:

Part No.		List.	Part No.		List.
276	Armature cover screws...each	.05	2489	Magneto cover	.75
1268	Condenser clamp stud screw..	.05	2520	Magnet screws .....each	.05
2393A	Condenser	.50	2523	Magneto cover screws....each	.05
2455	Armature cover	.05	2587	Cradle	5.00
2456	Condenser clamp	.05	2709	Condenser clamp stud.....	.05
2461	Magnets .....per pair	5.00			

FRONT PLATE:

226	Plate screws short with lock washers .....each	.05	2504	Condenser terminal lock insulation	.05
363A	Standard annular bearing 15 m/m for armature shaft.....	2.50	2505	Condenser terminal lock.....	.05
2459	Terminal insulation	.25	2506	Condenser terminal screw....	.05
2473	Condenser terminal spanner nut	.05	2508	Front plate with oiler.....	3.00
2474	Cover spring hinge nut.....	.05	2508A	Front plate with bearing and oiler	5.50
2475	Ground connection nut.....	.05	2509	Oil cup complete.....	.25
			2951	Condenser terminal lock.....	.05

ARMATURE:

1949	Armature shaft nut.....	.05	2799	Condenser insulation top.....	.05
1950	Armature shaft washer.....	.05	2800	Condenser clamp	.05
2516	Armature driving end.....	1.75	2889	Armature cam end.....	1.50
2525	Armature cam end.....	1.50	2890	Condenser insulating tube....	.05
2597	Armature complete with spool and bearings	21.25	3044	Condenser	.35
2597A	Armature with spool.....	16.25	3052	Armature complete with spool bearings and condenser.....	21.50
2597B	Armature only	15.00	3052A	Armature with spool and condenser	16.50
2788	Woodruff key	.05	3052B	Armature with condenser....	15.25
2795A	Fastening screw plate.....	.25	3142	Armature felt washer.....	.05
2796	Condenser insulation bottom.	.05	3154	Secondary spool	1.25
2798	Condenser connection strip...	.05			

BREAKER BAR FACE PLATE:

214	Ground spring screw.....	.05	1733	Breaker bar ground spring...	.05
293	Spring washer	.05	1962	Face plate fastening screw...	.05
294	Spring washer cotter pin.....		1964	Contact screw bracket.....	.35
1110	Spring fastening screw.....	.05	2537A	Breaker bar face plate only..	.75
1468	Contact screw bracket insulating strip	.05	2613A	Ground brush and spring....	.20
1477A	Breaker bar complete with platinum	2.00	2644A	Platinum contact screw complete with platinum.....	1.75
1478A	Breaker bar roller, screw and lock nut	.15	2682	Wrench	.10
1731	Breaker bar spring.....	.05	2935	Breaker bar spring stop.....	.05
			3099	Screw insulating bushing....	.05
			3100	Bracket fastening screw.....	.05

BACK PLATE:

226	Plate screws with lock washers each	.05	2509	Oil cup complete.....	.25
			2533	Safety gap screw.....	.05
363A	Standard annular bearing 15 m/m for armature shaft.....	2.50	2584	Back plate with oiler.....	2.00
			2584A	Back plate with bearing & oiler	4.50

CAM HOLDER:

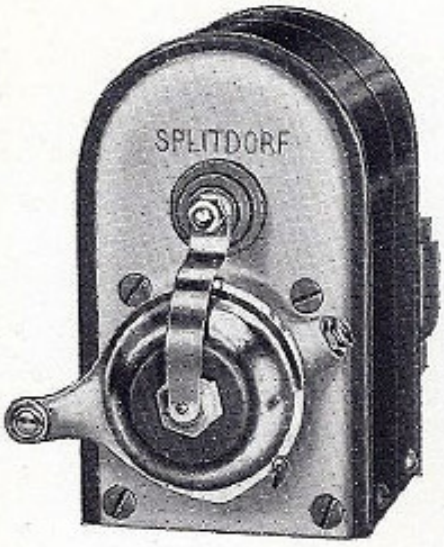
1458	Advance stop screw.....	.05	2498	Cam	.50
2496	Cam screw	.05	2680	Cam holder complete with cam	3.00
2497	Grounding screw	.05			

CAM HOLDER COVER:

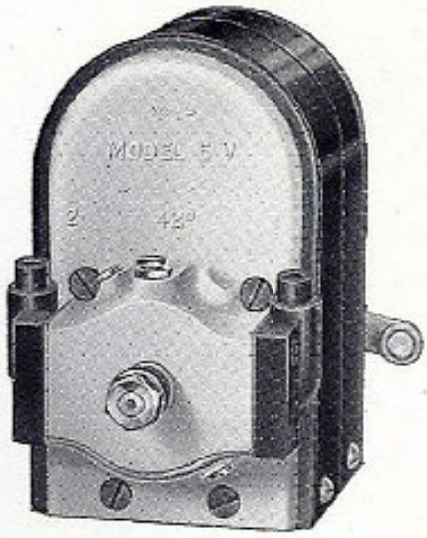
1460	Brush holder	.15	2928	Brush holder washer.....	.05
1461	Brush holder cap.....	.10	2929	Brush holder stud.....	.05
2467A	Cover spring	.25	2930	Brush holder stud nut.....	.05
2470A	Cam holder cover with two brushes	1.00	2937	Cam holder cover ring.....	.05
2878	Gauze brushes with spring...	.20	2938	Cam holder cover complete with brush holder and brush.	1.00
2925	Brush holder	.25	2941A	Cover spring	.25
2927	Brush holder insulation.....	.25			

BRUSH HOLDER:

340	Brush holder screws.....each	.05	2566A	Cable with terminal plug.....	.60
1492A	Carbon brush with spring....	.10	2585	Brush holder with brushes...	.60
2457	Terminal and plug.....	.25	2586	Brush holder gasket.....	.05
2566	19″ Cable	.25	2922	Terminal hood	.05



Front View



Rear View

MODEL EV MAGNETO

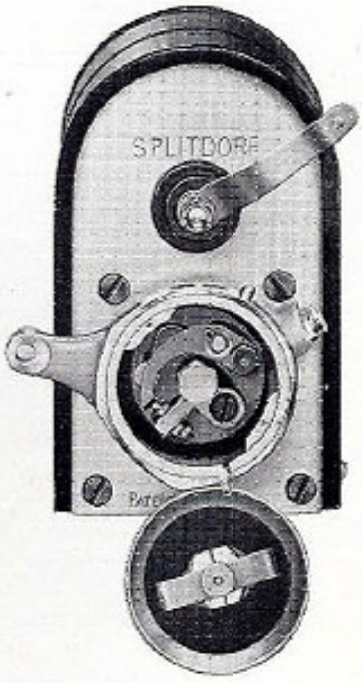
Waterproof Construction

Price, $48.00

This model is made for motors having cylinders set at 42°, 45° and 50°.

In ordering give direction of rotation looking at driving end, angle of cylinders and length of cables required. Also specify position of advance lever as shown in dimension cut on page 13.

CAUTION:—Be sure that terminal No. 1 is connected to Spark Plug on rear Cylinder.



Front View
Showing Breaker Box Cover Removed

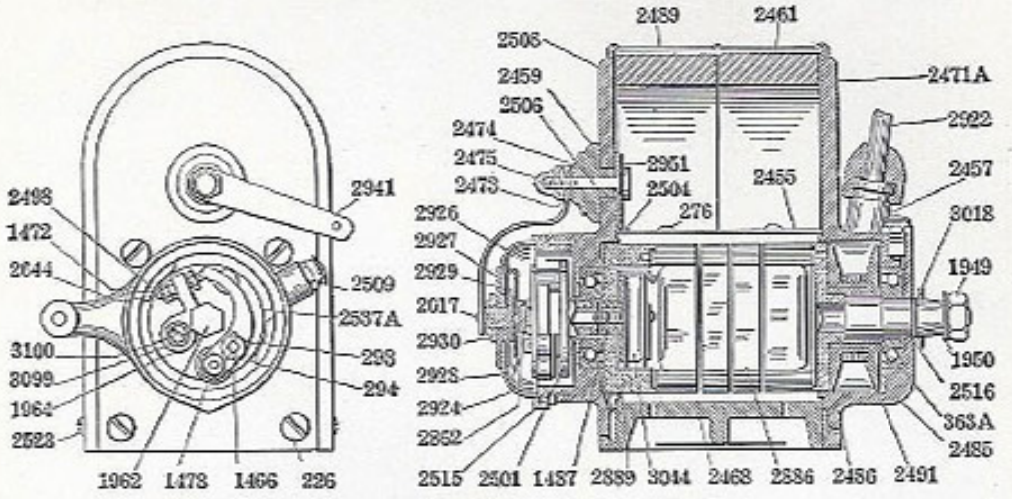


Diagram of Cross Section of Model EV Magneto

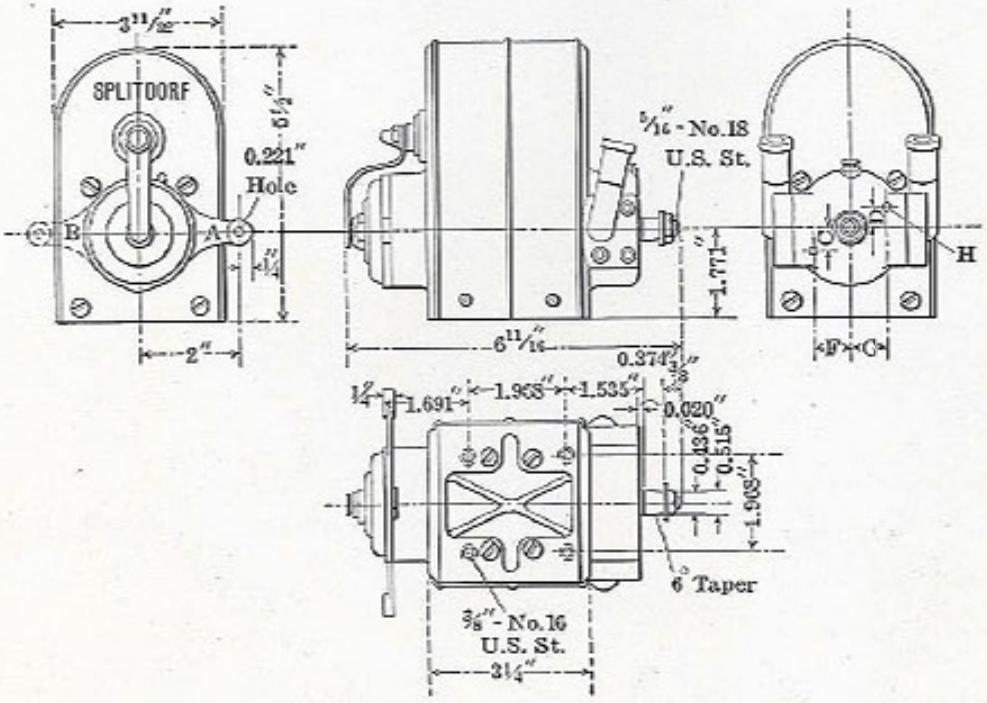
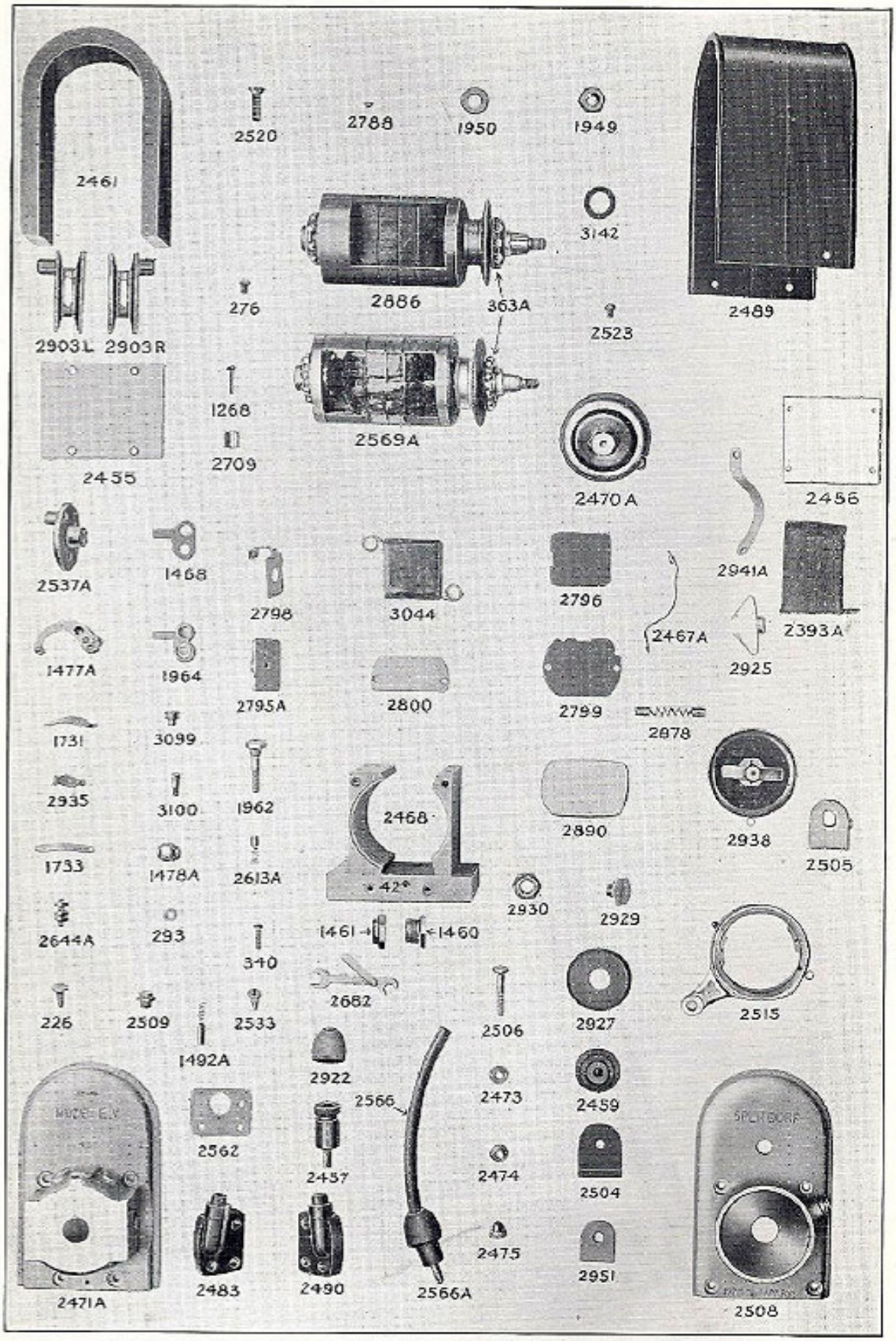


Diagram of Principal Dimensions of Model EV Magneto



When ordering parts specify magneto number stamped on back plate

MAGNETO PARTS—MODEL EV

CRADLE:

Part No.		List.
276	Armature cover screws...each	.05
1268	Condenser clamp stud screw..	.05
2393A	Condenser	.50
2455	Armature cover	.05
2456	Condenser clamp	.05
2461	Magnets .....per pair	5.00
2468	Cradle	5.00
2489	Magneto cover	.75
2520	Magnet screws .....each	.05
2523	Magneto cover screws....each	.05
2709	Condenser clamp stud.....	.05

FRONT PLATE:

226	Plate screws short with lock washers .....each	.05
363A	Standard annular bearing 15 m/m for armature shaft.....	2.50
2459	Terminal insulation	.25
2473	Condenser terminal spanner nut	.05
2474	Cover spring hinge nut.....	.05
2475	Ground connection nut.....	.05
2504	Condenser terminal lock insulation	.05
2505	Condenser terminal lock.....	.05
2506	Condenser terminal screw....	.05
2508	Front plate with oiler.....	3.00
2508A	Front plate with bearing and oiler	5.50
2509	Oil cup complete.....	.25
2951	Condenser terminal lock.....	.05

ARMATURE:

1949	Armature shaft nut.....	.05
1950	Armature shaft washer.....	.05
2516	Armature driving end.....	1.75
2525	Armature cam end.....	1.50
2569	Armature only	15.00
2569A	Armature complete with spool and bearings	21.25
2569B	Armature with spool.....	16.25
2788	Woodruff key	.05
2795A	Fastening screw plate.....	.25
2796	Condenser insulation bottom.	.05
2798	Condenser connection strip..	.05
2799	Condenser insulation top.....	.05
2800	Condenser clamp	.05
2886	Armature complete with spool bearings and condenser.....	21.50
2886A	Armature with spool and condenser	16.50
2886B	Armature with condenser....	15.25
2889	Armature cam end.....	1.50
2890	Condenser insulating tube...	.05
2903L	Secondary spool left hand...	1.25
2903R	Secondary spool right hand..	1.25
3044	Condenser	.25
3142	Armature felt washer.....	.05

BREAKER BAR FACE PLATE:

214	Ground spring screw.....	.05
293	Spring washer	.05
294	Spring washer cotter pin.....	
1110	Spring fastening screw.....	.05
1468	Contact screw bracket insuting strip	.05
1477A	Breaker bar complete with platinum	2.00
1478A	Breaker bar roller, screw and lock nut	.15
1731	Breaker bar spring.....	.05
1733	Breaker bar ground spring...	.05
1962	Face plate fastening screw...	.05
1964	Contact screw bracket.....	.35
2537A	Breaker bar face plate only..	.75
2613A	Ground brush and spring....	.20
2644A	Platinum contact screw complete with platinum.....	1.75
2682	Wrench	.10
2935	Breaker bar spring stop.....	.05
3099	Screw insulating bushing.....	.05
3100	Bracket fastening screw.....	.05

BACK PLATE:

226	Plate screws with lock washers each	.05
363A	Standard annular bearing 15 m/m for armature shaft.....	2.50
2471	Back plate with oiler.....	2.50
2471A	Back plate with bearing & oiler	5.00
2509	Oil cup complete.....	.25
2533	Safety gap screw.....	.05

CAM HOLDER:

1458	Advance stop screw.....	.05
2496	Cam screw	.05
2497	Grounding screw	.05
2515	Cam holder complete with cams	3.00
3051	Cams .....each	.25

CAM HOLDER COVER:

1460	Brush holder	.15
1461	Brush holder cap.....	.10
2467A	Cover spring	.25
2470A	Cam holder cover with two brushes	1.00
2878	Gauze brushes with spring...	.20
2925	Brush holder	.25
2927	Brush holder insulation.....	.25
2928	Brush holder washer.....	.05
2929	Brush holder stud.....	.05
2930	Brush holder stud nut.....	.05
2937	Cam holder cover ring.....	.05
2938	Cam holder cover complete with brush holder and brush.	1.00
2941A	Cover spring	.25

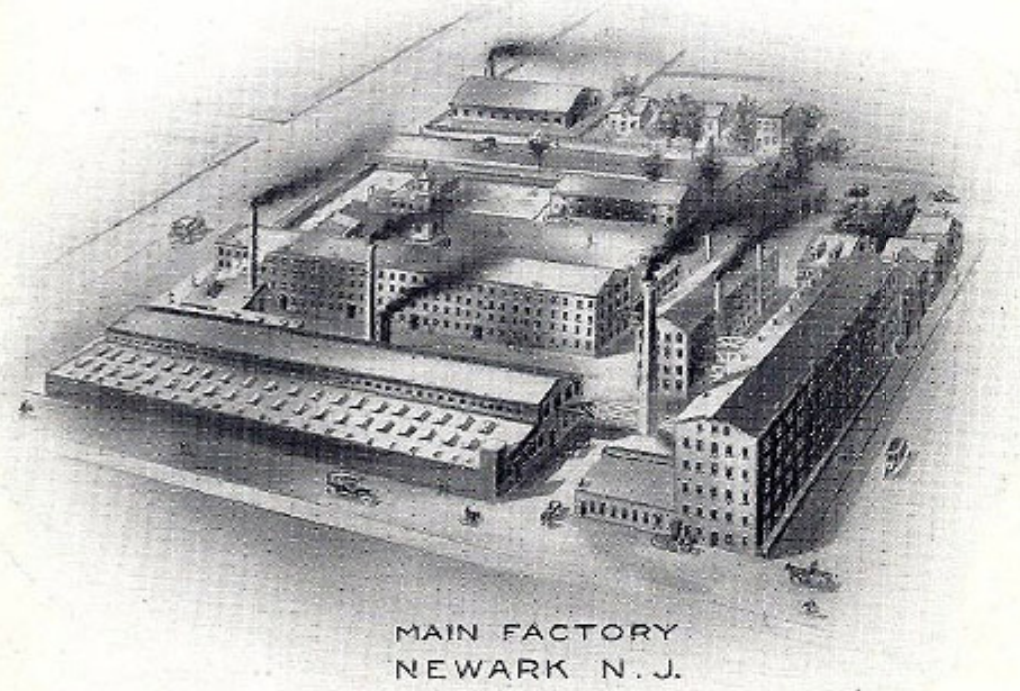
BRUSH HOLDER:

340	Brush holder screws.....each	.05
1492A	Carbon brush with spring....	.10
2457	Terminal and plug.....	.25
2483	Brush holder with brush (left)	1.00
2490	Brush holder with brush (right)	1.00
2562	Brush holder gasket.....	.05
2566	19" cable	.25
2566A	Cable with terminal plug....	.60
2922	Terminal hood	.05

SPLITDORF
MOTORCYCLE PLUGS

These Plugs having been thoroughly tested for years past have been and continue to be the most popular plugs ever manufactured for Motorcycles.

Note improved Sparking Point



MAIN FACTORY
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