Delco

Circuit Diagrams

—OF—

THE 1917
AUTOMBILE SYSTEMS

THE
Dayton Engineering Laboratories Co.
DAYTON, OHIO

This section of the Delco Service Manual contains the circuit diagrams of the Delco equipment which is known as 1917 apparatus. Some motor car manufacturers do not make it a practice to bring out a model every season, and in some instances the car model may not be known as a 1917 model.

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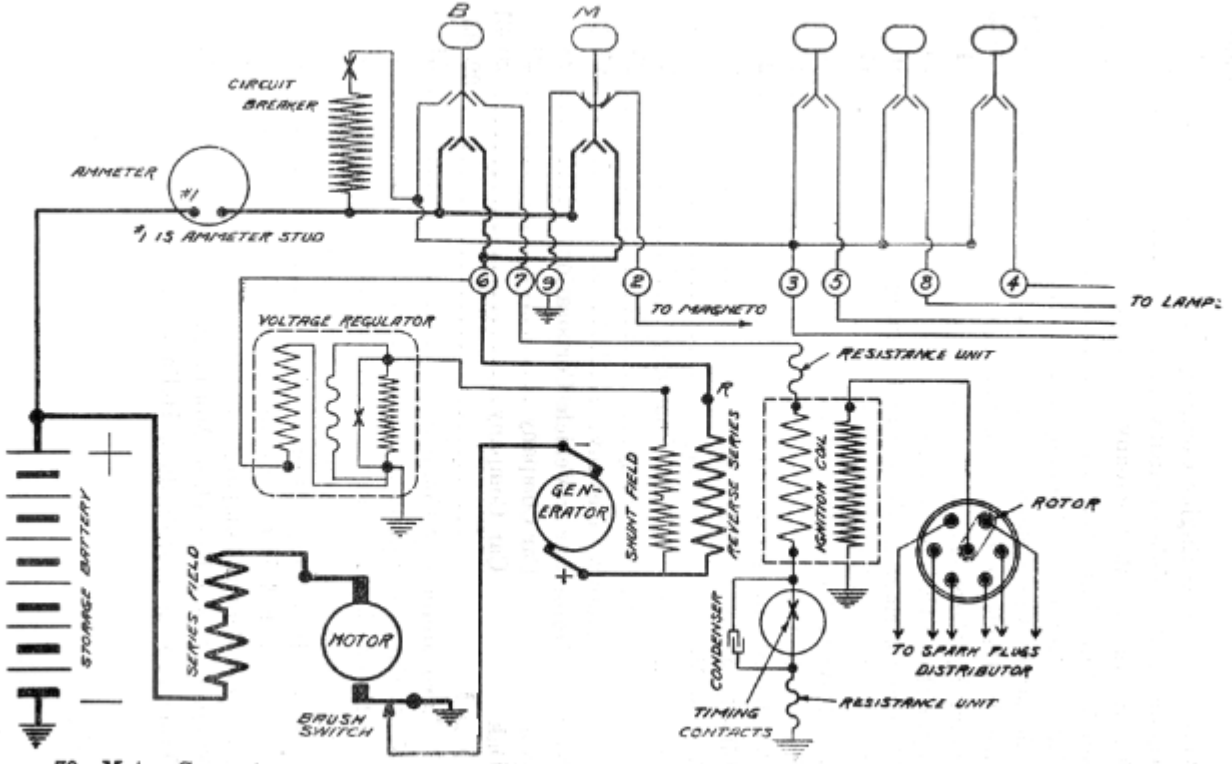
AHRENS-FOX FIRE ENGINE COMPANY

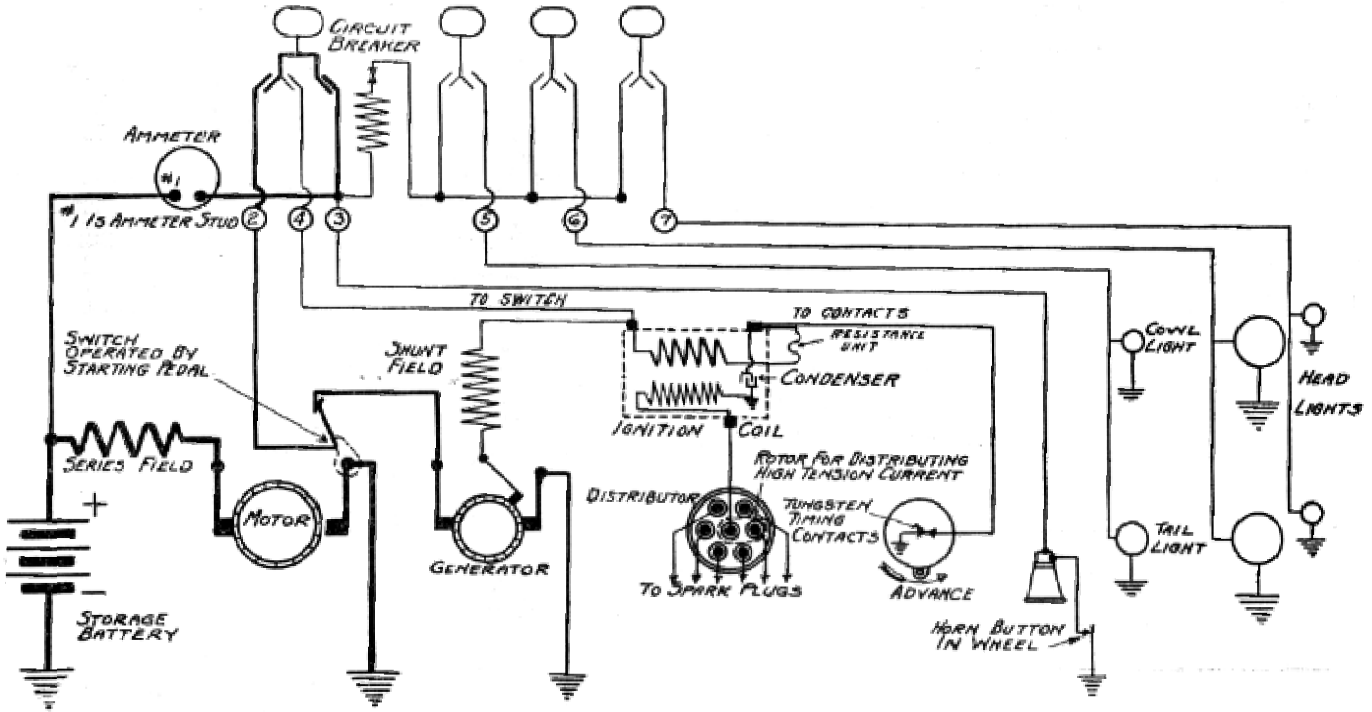


79 Motor Generator
2122 Ignition Coil
1063 Combination Switch

5131 Distributor (4 cyl.)

5132 Distributor (6 cyl.)
5712 Voltage Regulator
10800 Motor Clutch

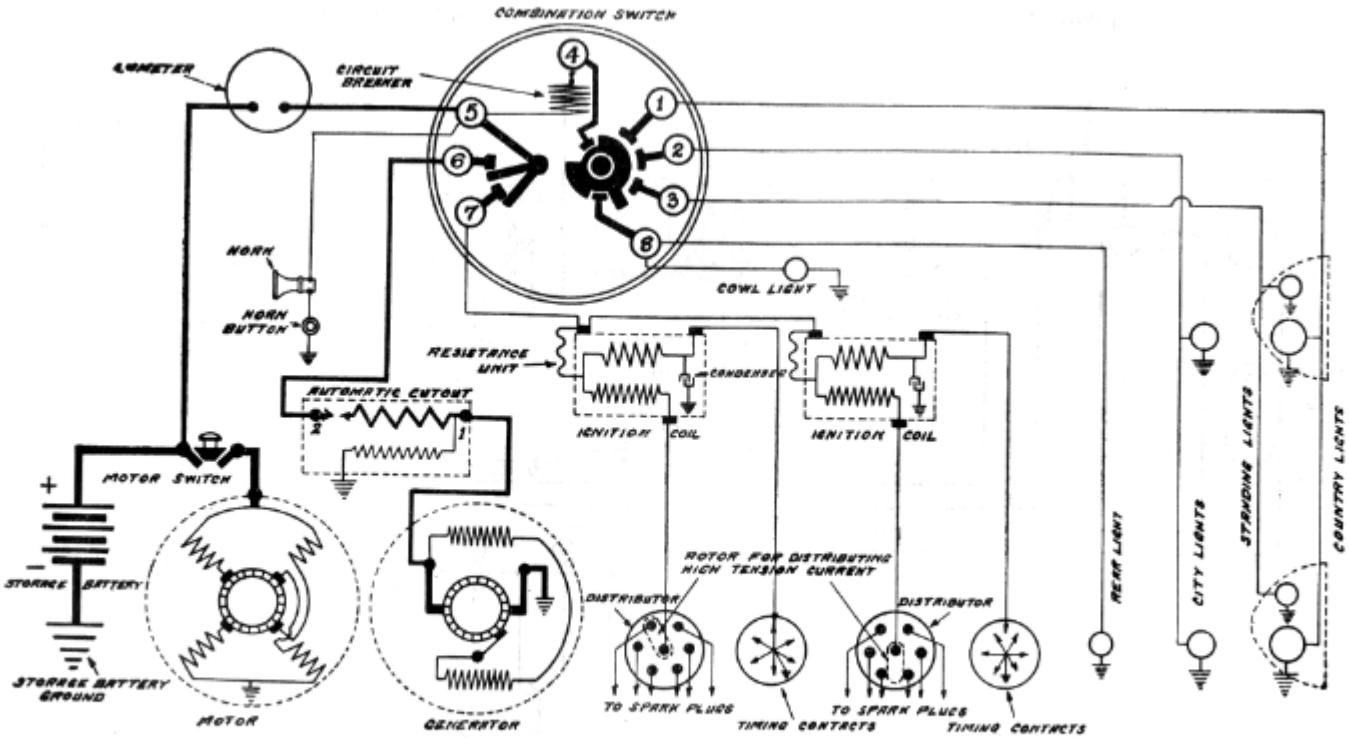
AUBURN AUTOMOBILE COMPANY—MODEL 6-44



83 Motor Generator
1066 Combination Switch

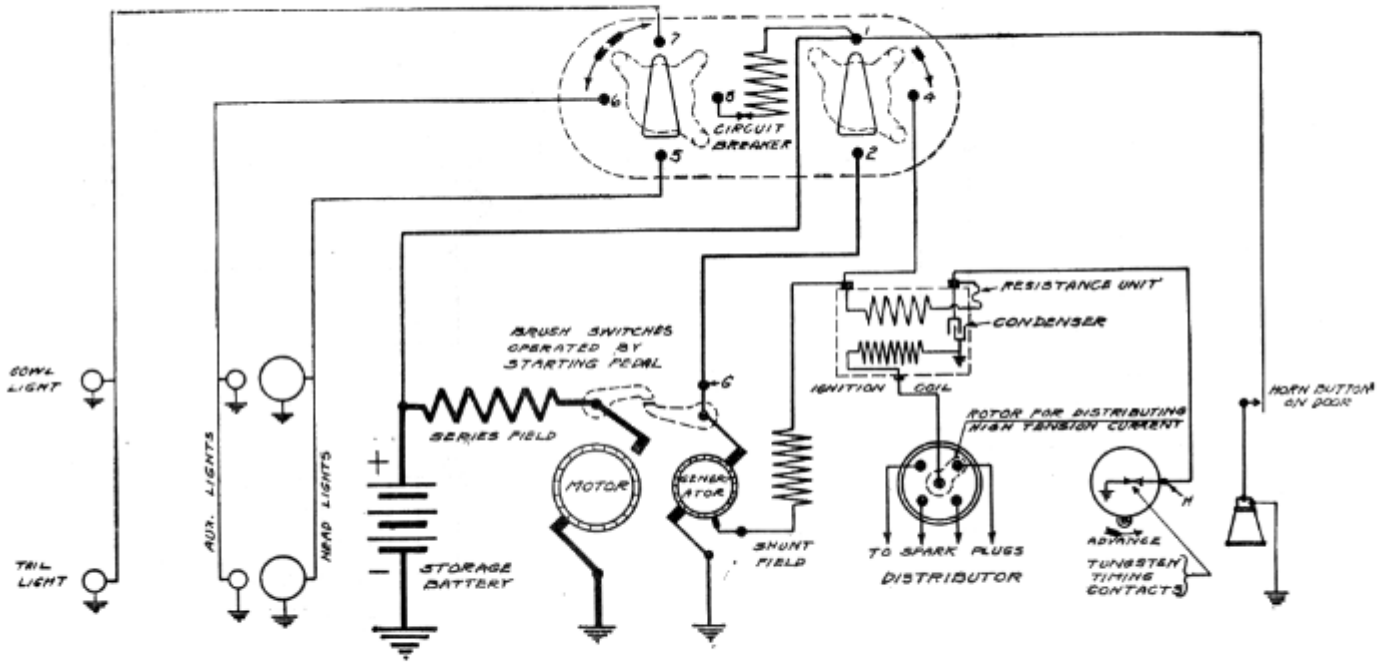
2142 Ignition Coil
12225 Motor Clutch

AUSTIN AUTOMOBILE COMPANY—12 CYL. MODEL



87	Generator	2123	Ignition Coil (2)	86	Motor
5715	Automatic Cut-Out	1085	Combination Switch	1965	Motor Switch
5136	Distributor			6064	Ammeter

BUICK MOTOR COMPANY—MODELS D-34-35

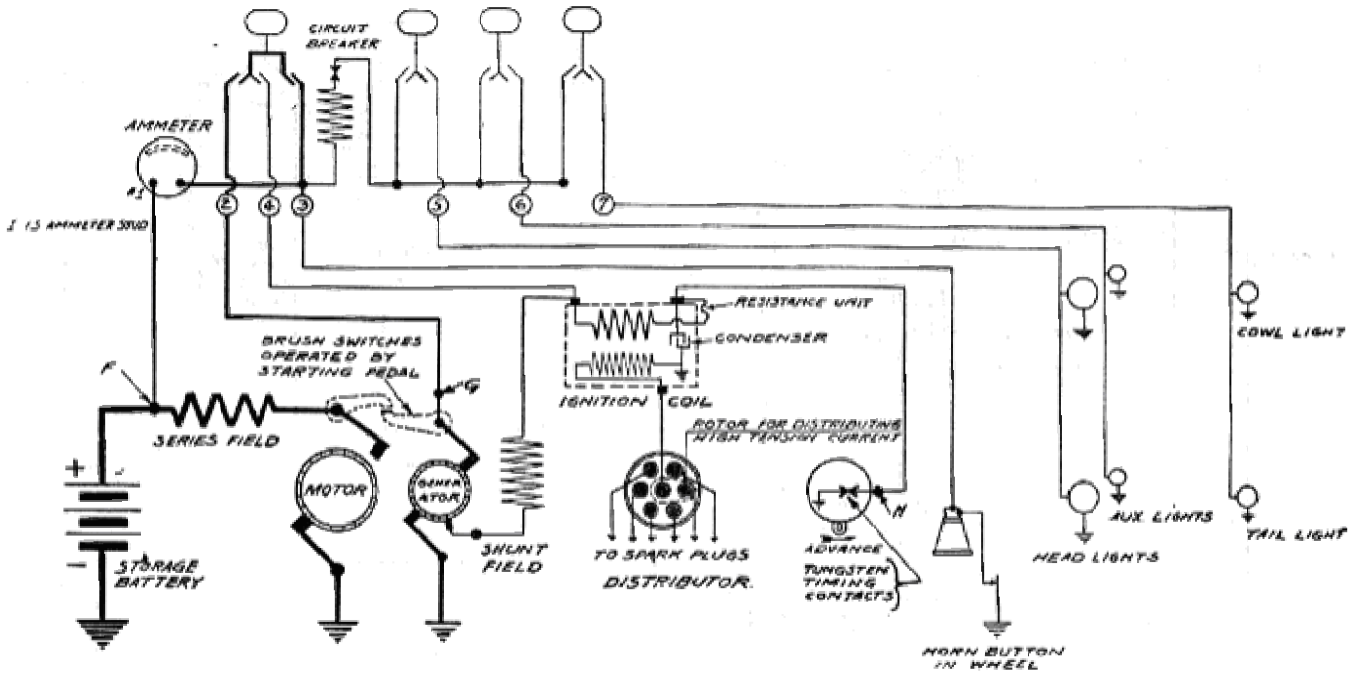


94 or 115 Motor Generator

2138 Ignition Coil

1075 Combination Switch
12647 Motor Clutch

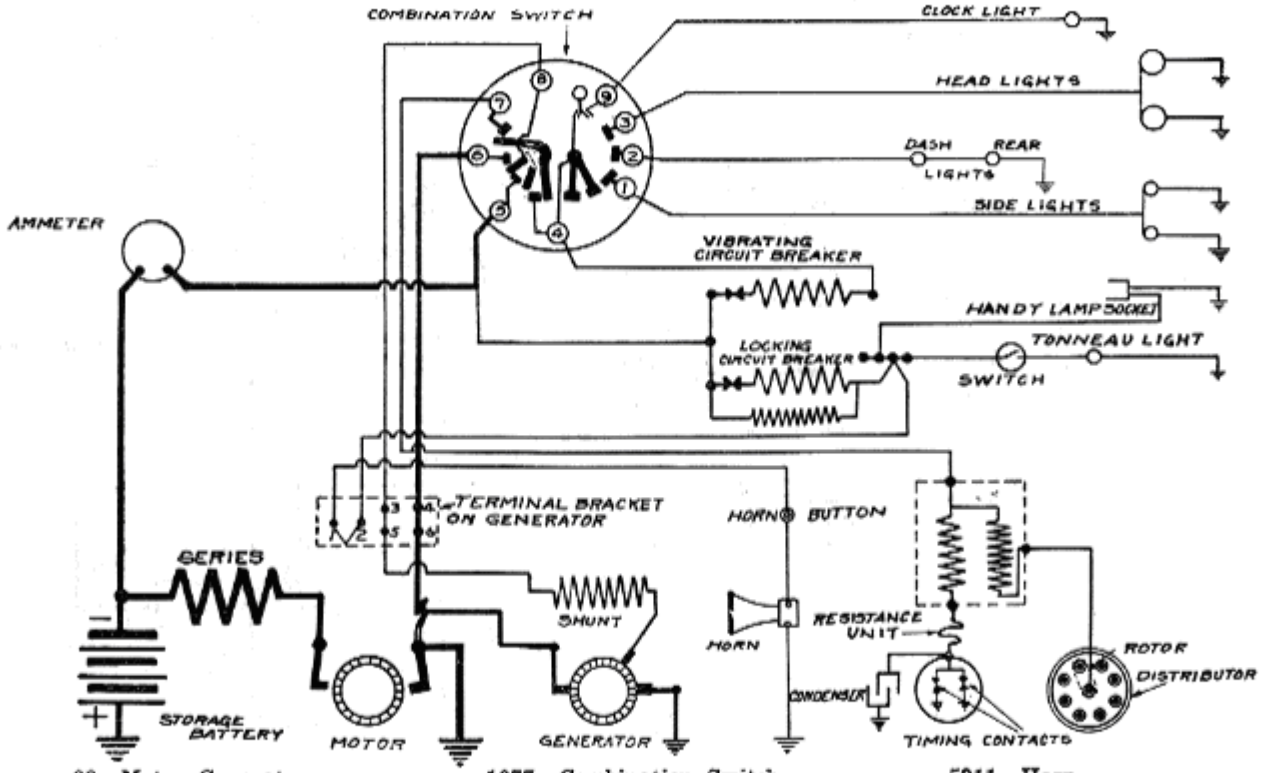
BUICK MOTOR COMPANY—MODELS D-44-45-46-47



70 Motor Generator
12224 Motor Clutch

2138 Ignition Coil
1066 Combination Switch

CADILLAC MOTOR CAR COMPANY—MODEL 55

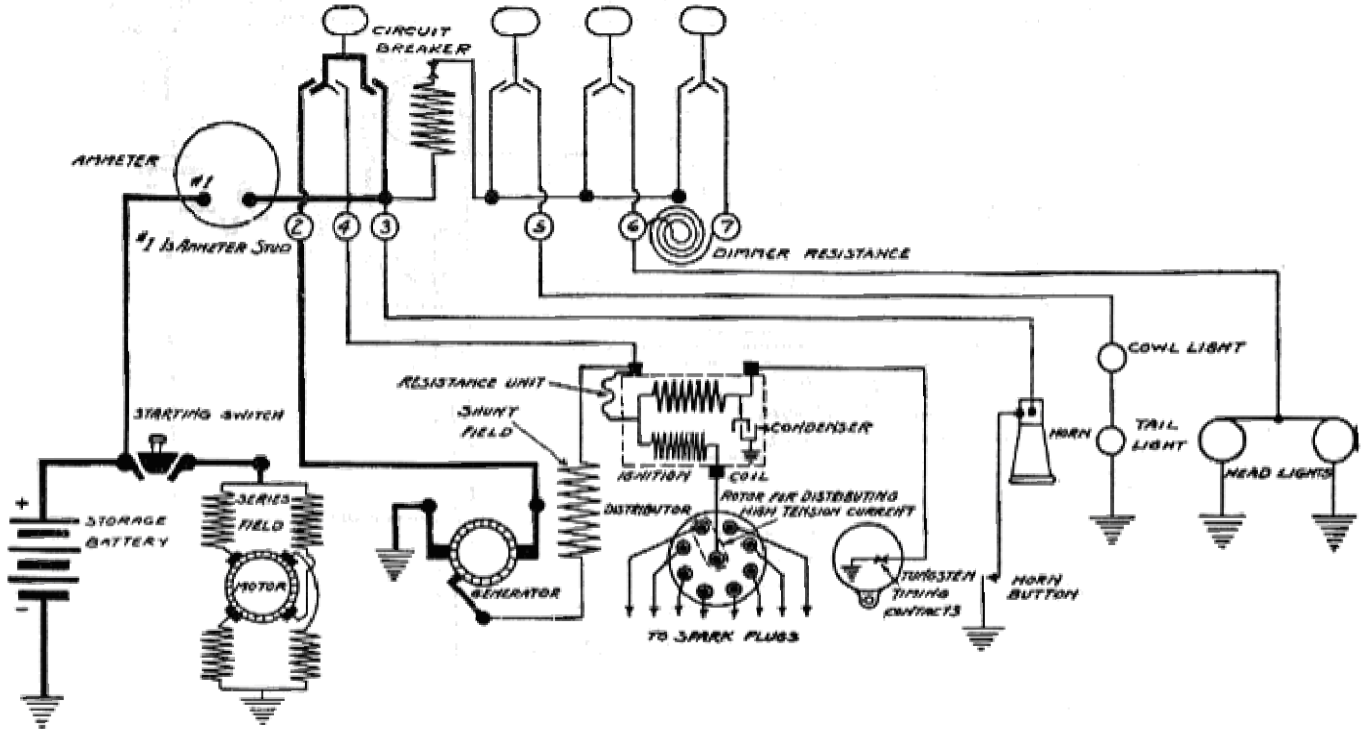


98 Motor Generator
5150 Distributor
2115 Ignition Coil

1077 Combination Switch
5705 Circuit Breaker

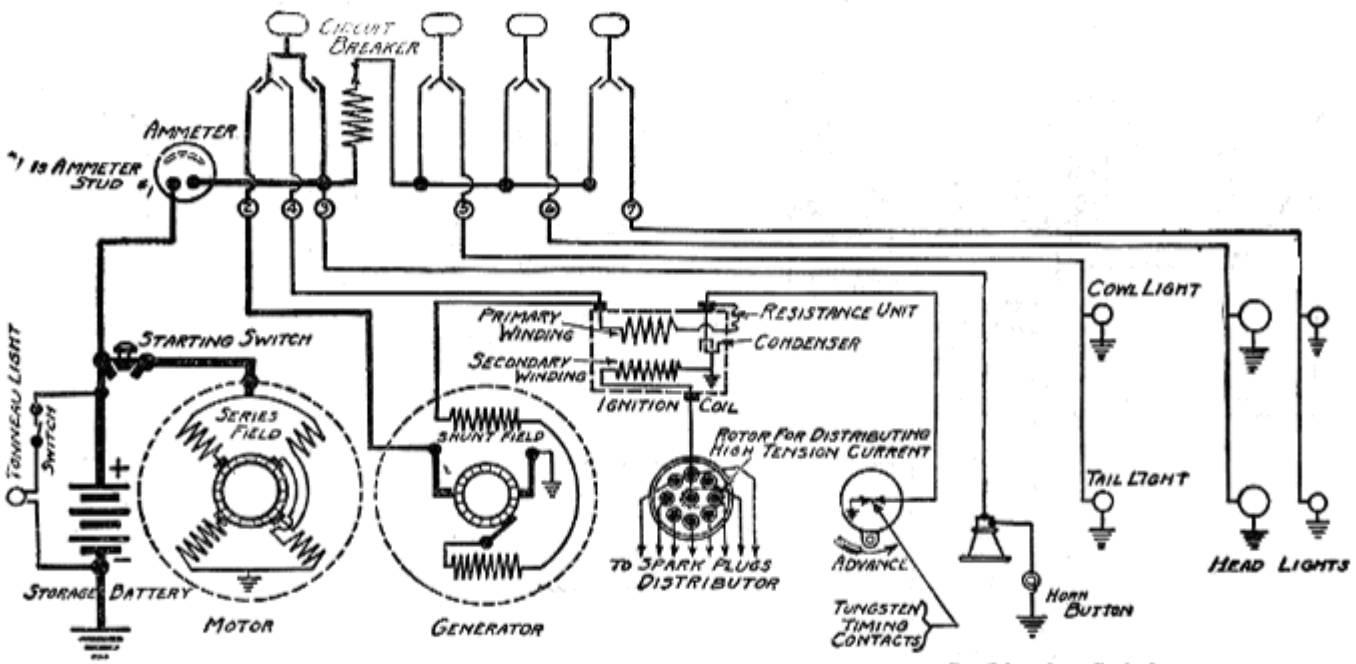
5311 Horn
1061 Horn Switch
12677 Motor Clutch

COLE MOTOR CAR COMPANY—MODEL 860



91	Generator
5153	Distributor
2123	Ignition Coil
1067	Combination Switch
1963	Motor Switch
72	Motor

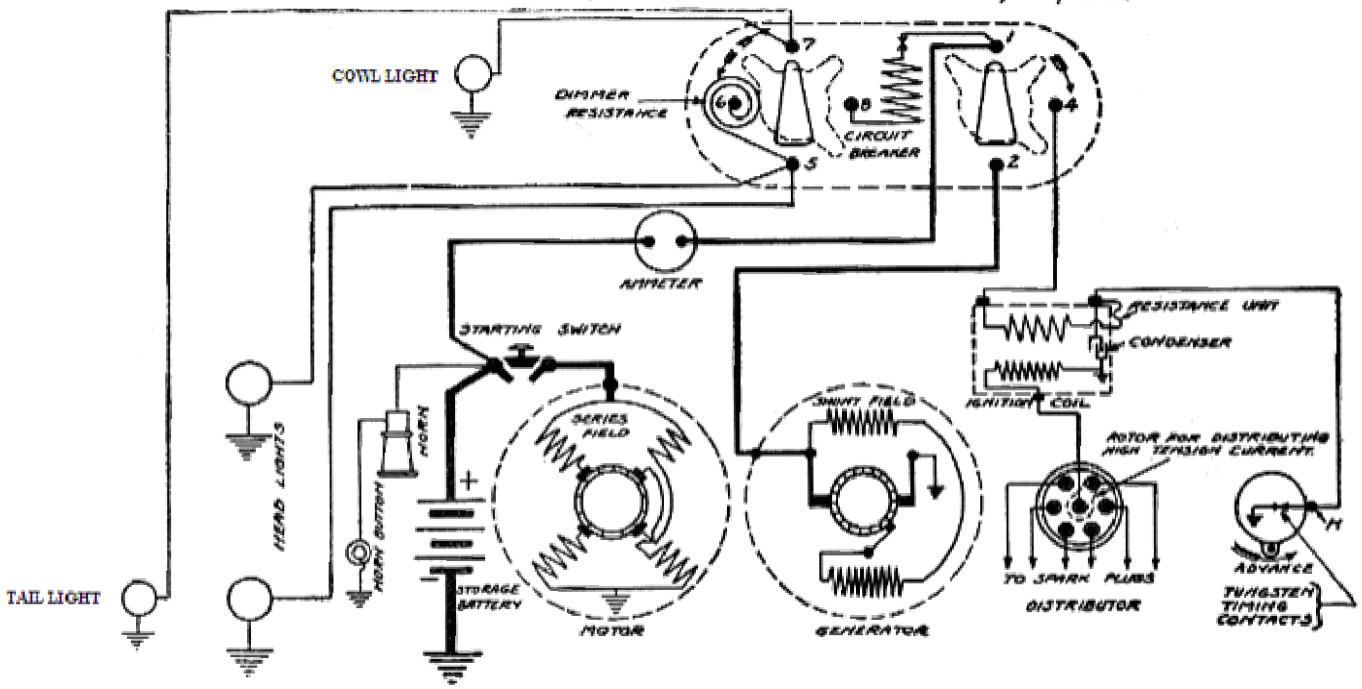
COLE MOTOR CAR COMPANY—MODEL 880



113 Generator
5158 Distributor
2146 Ignition Coil

1087 Combination Switch
72 Motor
1963 Motor Switch

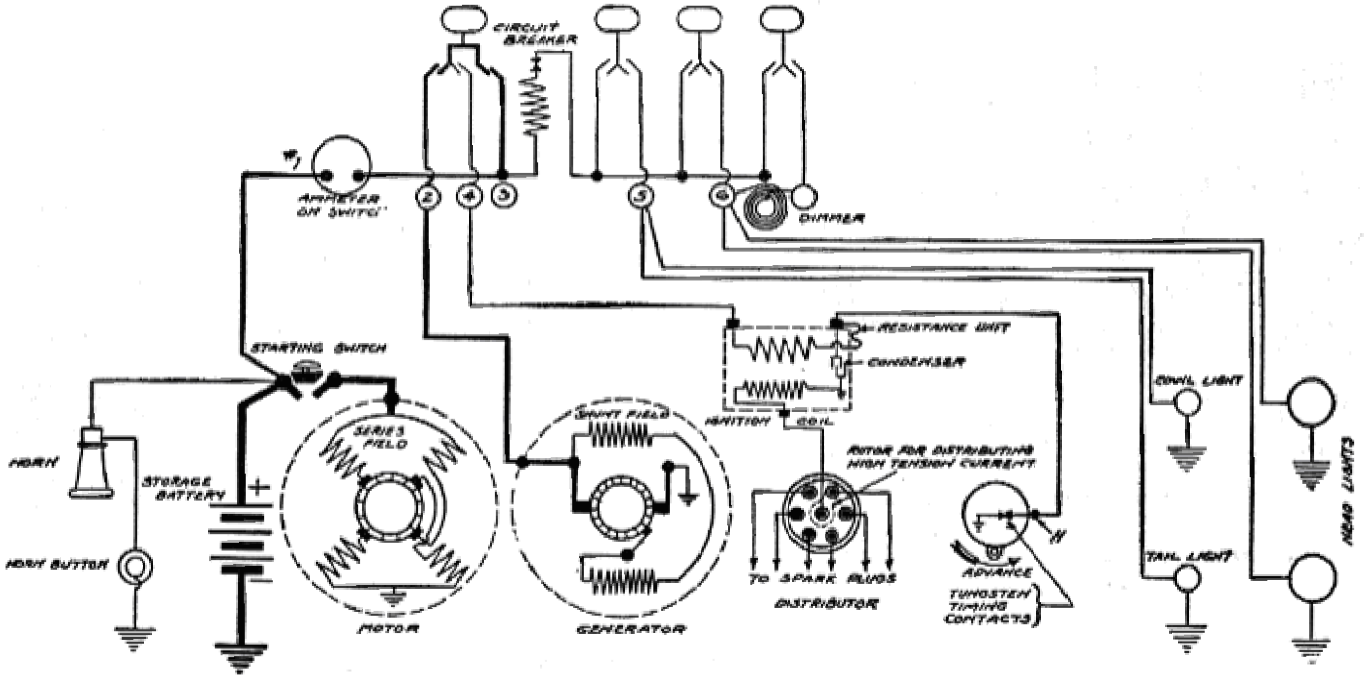
GEO. W. DAVIS MOTOR CAR CO.—MODELS 6-H, 6-I, 6-K



105 Generator
1078 Combination Switch
2139 Ignition Coil

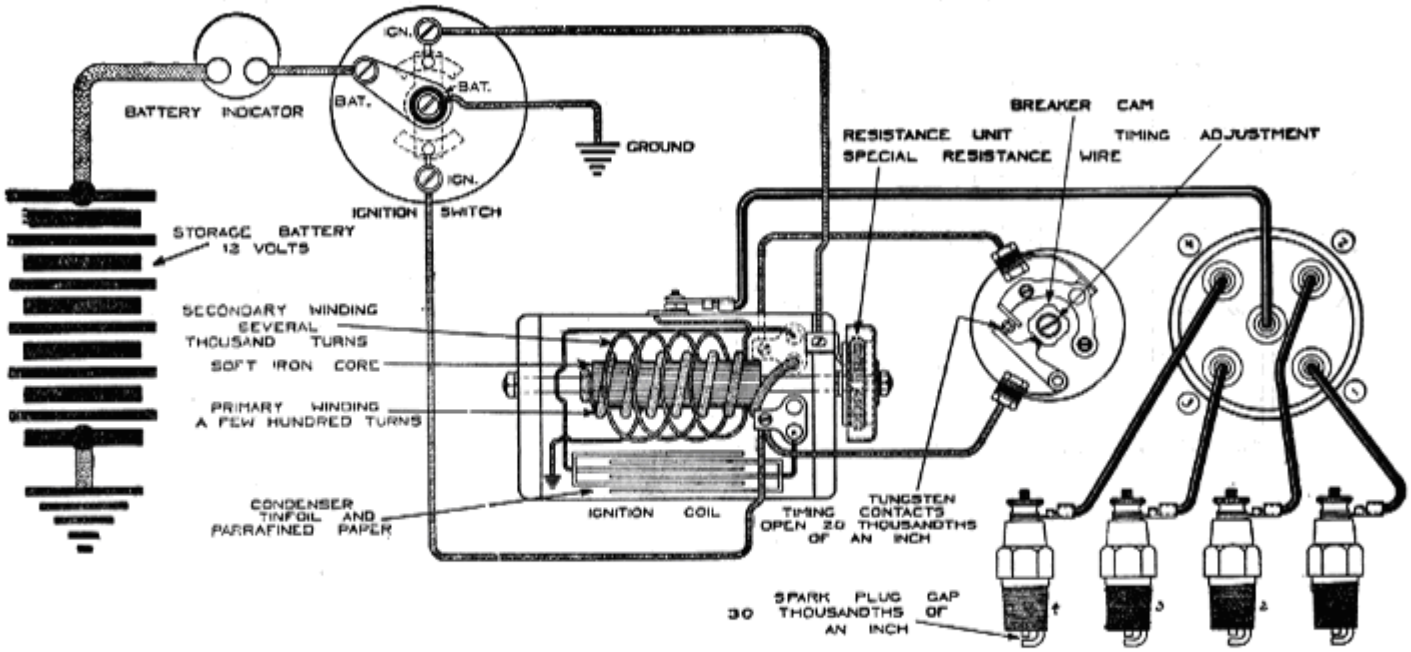
106 Motor
1966 Motor Switch
6063 Ammeter

GEO. W. DAVIS MOTOR CAR COMPANY—MODEL 6-J



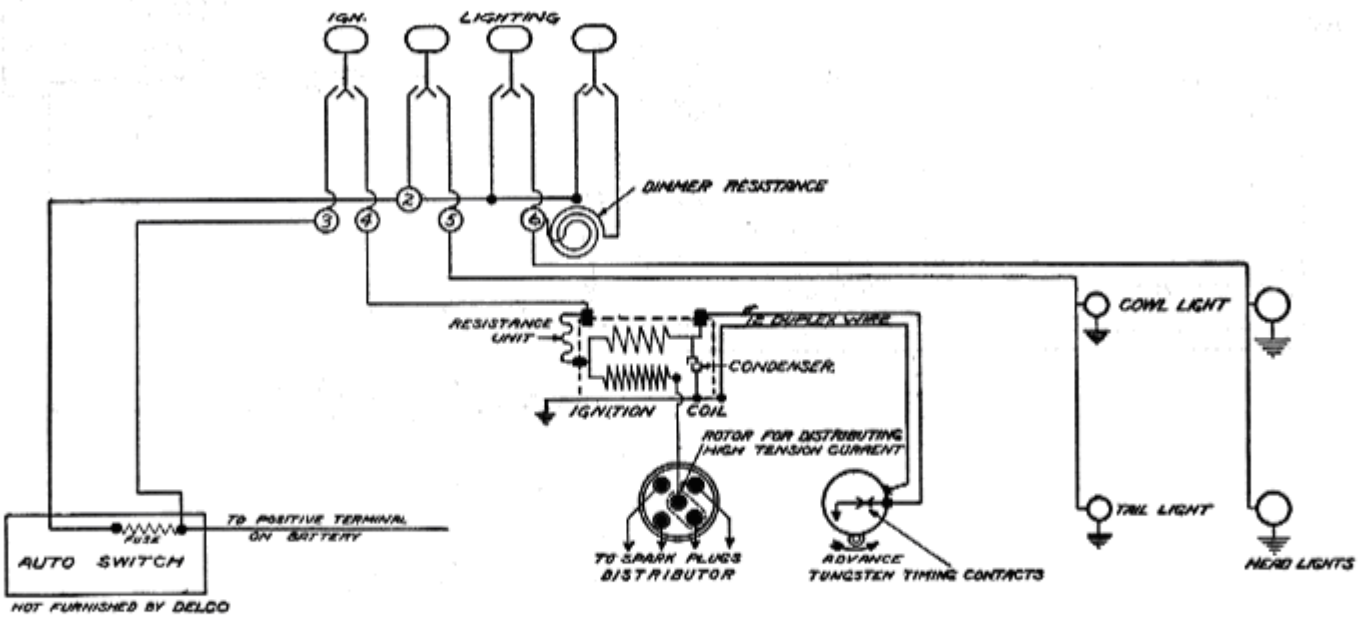
114 Generator
1067 Combination Switch
2139 Ignition Coil

102 Motor
1966 Motor Switch



5151 Distributor, including Ignition Coil No. 2128

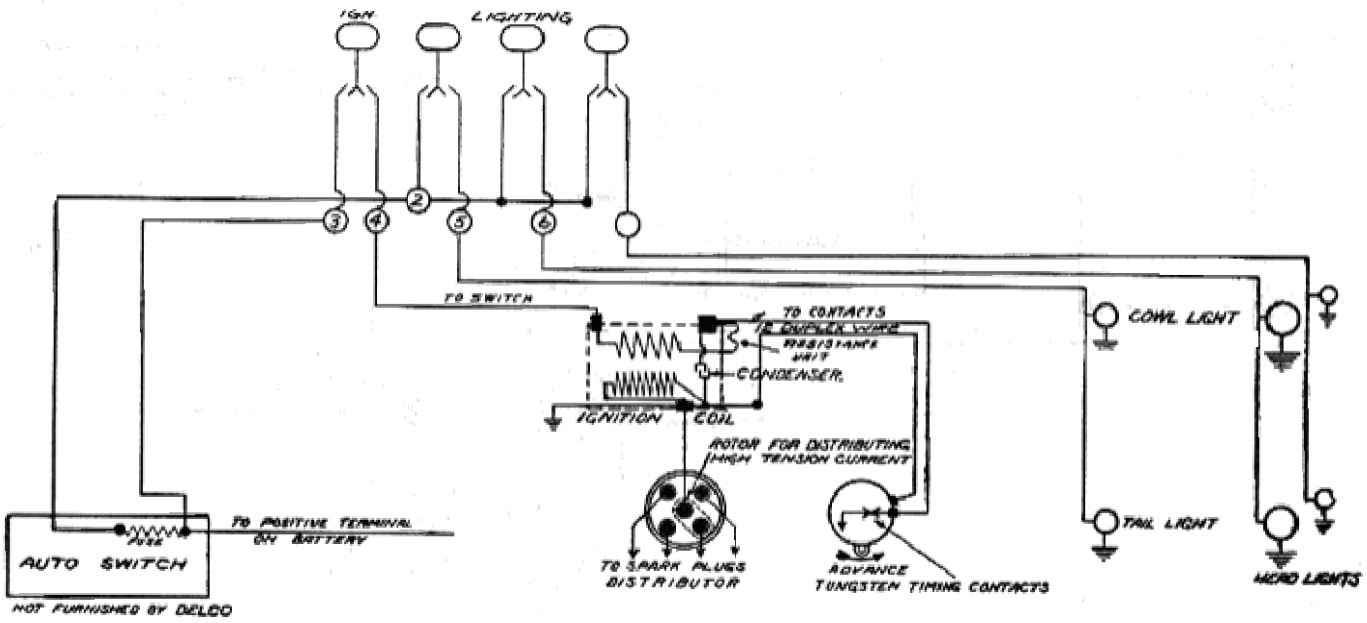
ELGIN MOTOR CAR CORPORATION—MODEL 6-E-16



5148 Distributor 2138 Ignition Coil 1073 Combination Switch

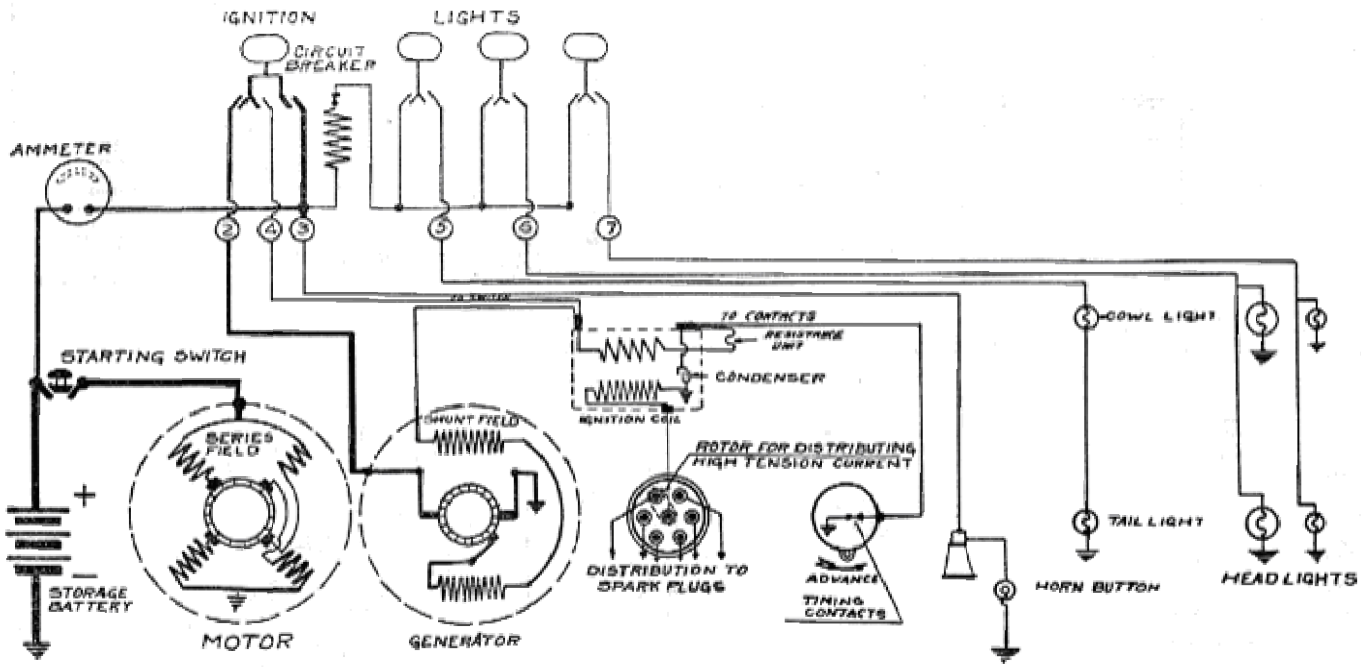
Note—Six cylinder distributor is used.

ELKHART CARRIAGE & MOTOR CAR COMPANY



5141 Distributor 2118 Coil 1094 Combination Switch

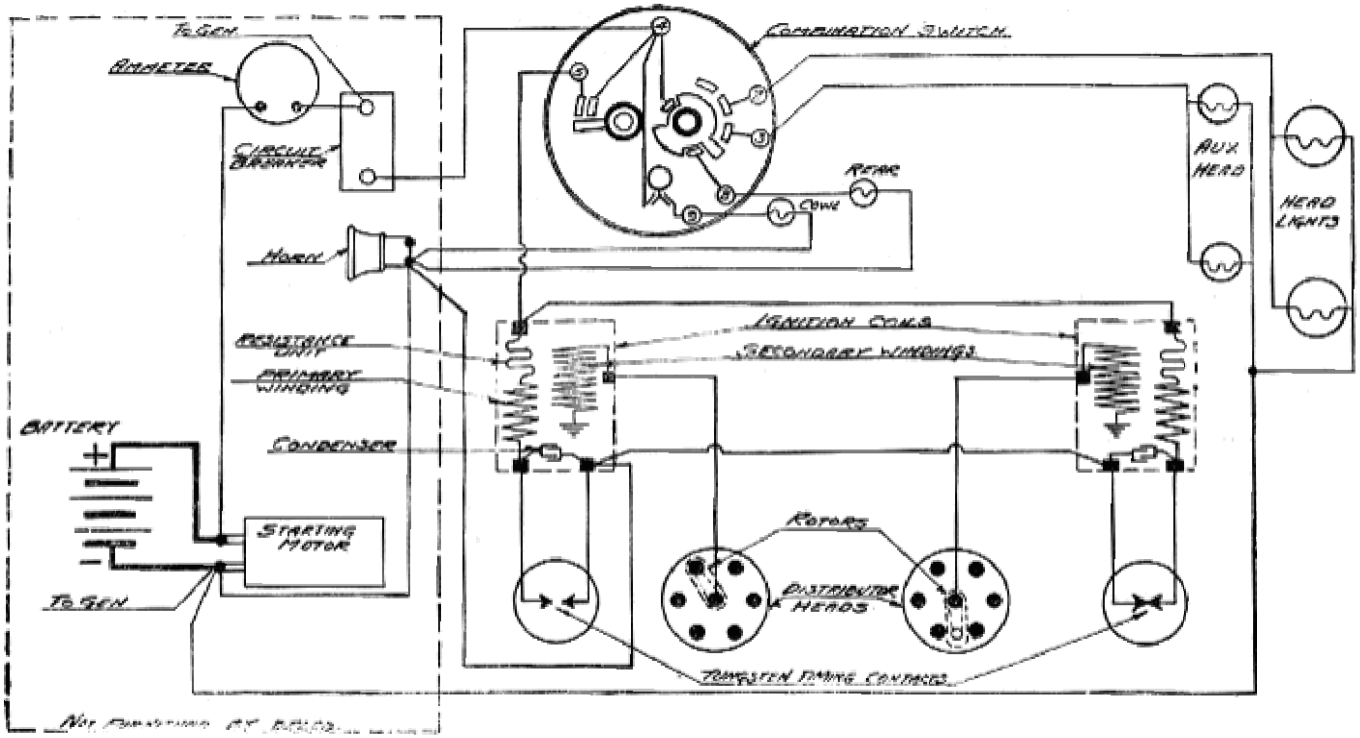
GENERAL MOTORS TRUCK COMPANY
MODELS 15, 25, 26, 30, 31, 40, 41, 70, 71, 100, 101



95 Generator
2134 Ignition Coil

1066 Combination Switch
1965 Motor Switch

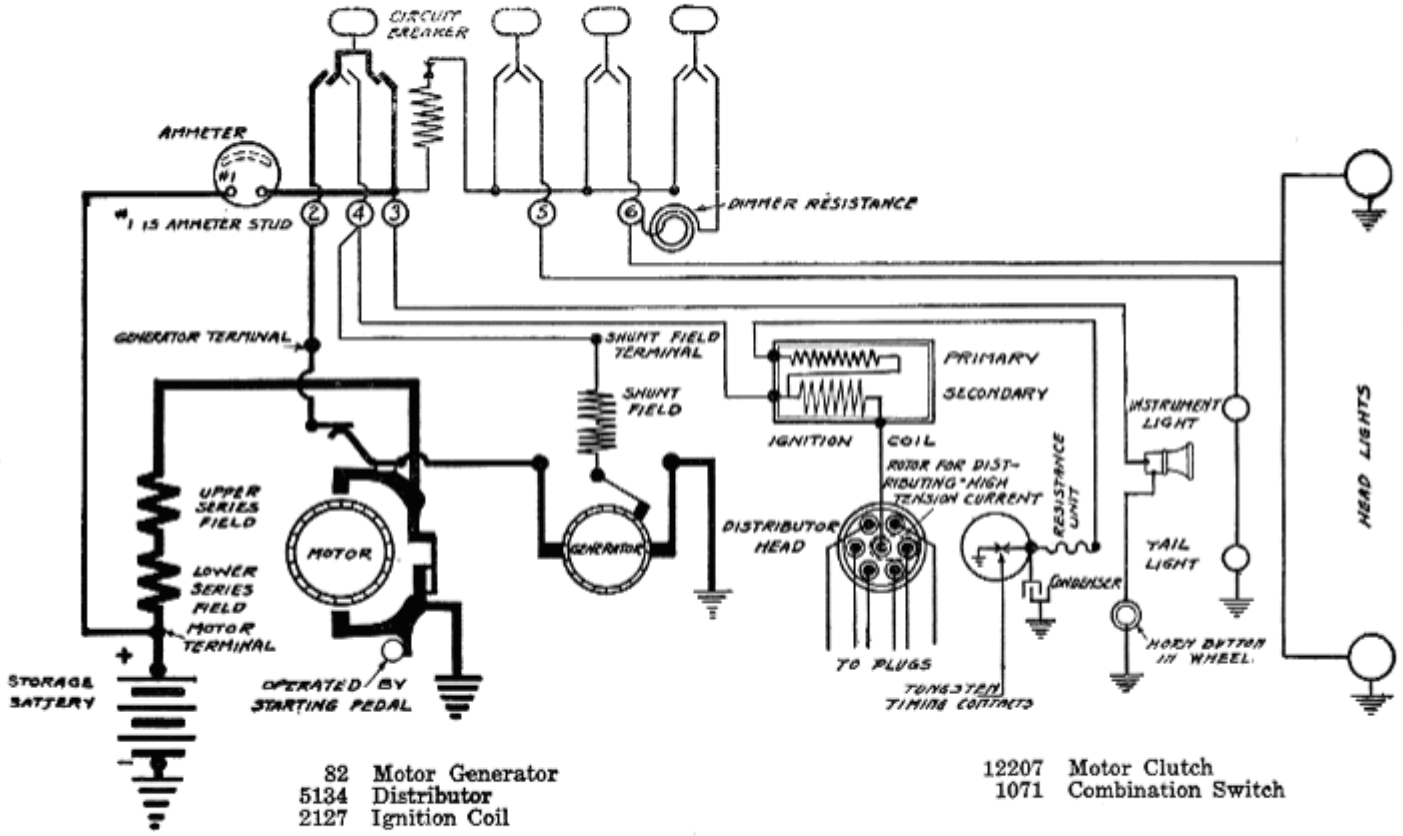
Model 15 uses No. 96 Motor
Models 25, 26, 30, 31 use No. 97 Motor
Models 40, 41, 70, 71, 100, 101 use No. 85 Motor



5155 Distributor (includes 2—2144 coils)

1083 Combination Switch

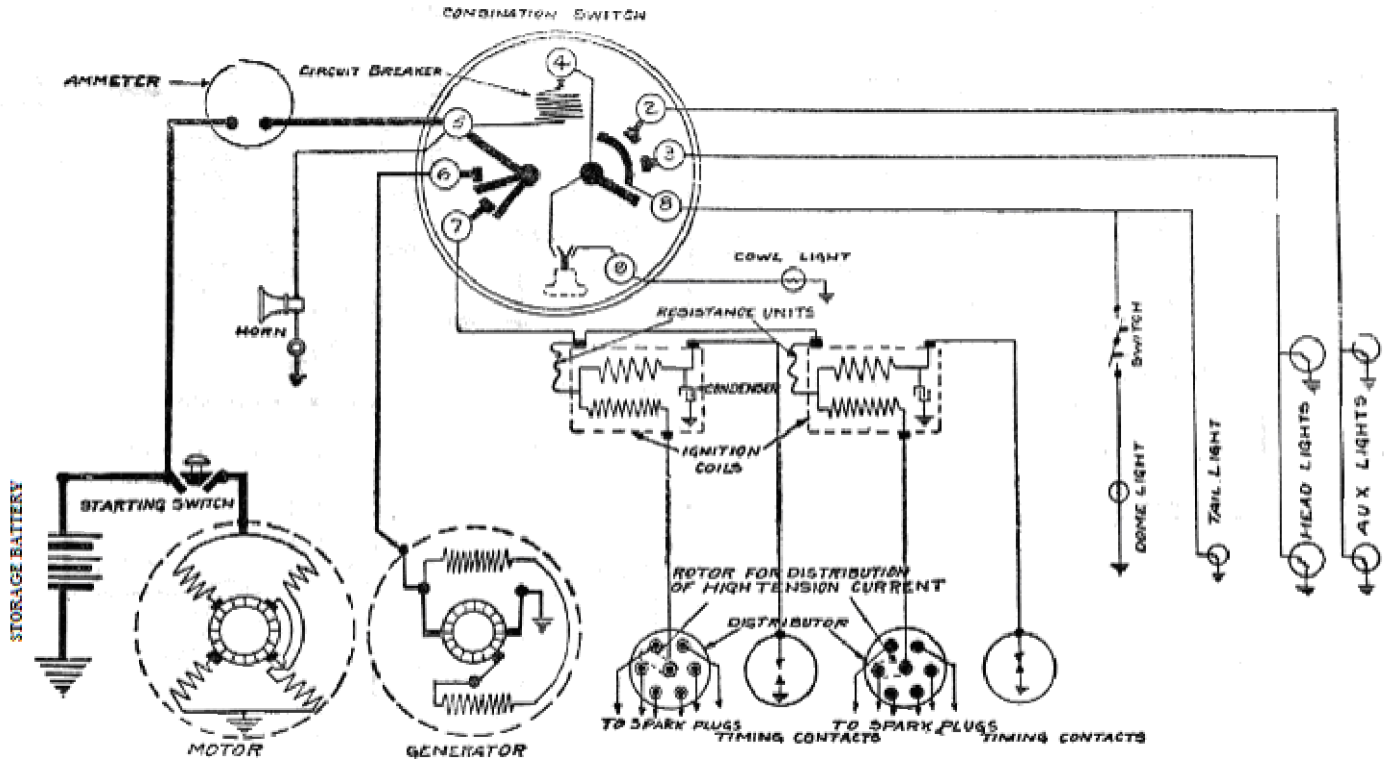
HUDSON MOTOR CAR COMPANY—SUPER-SIX MODEL



82 Motor Generator
5134 Distributor
2127 Ignition Coil

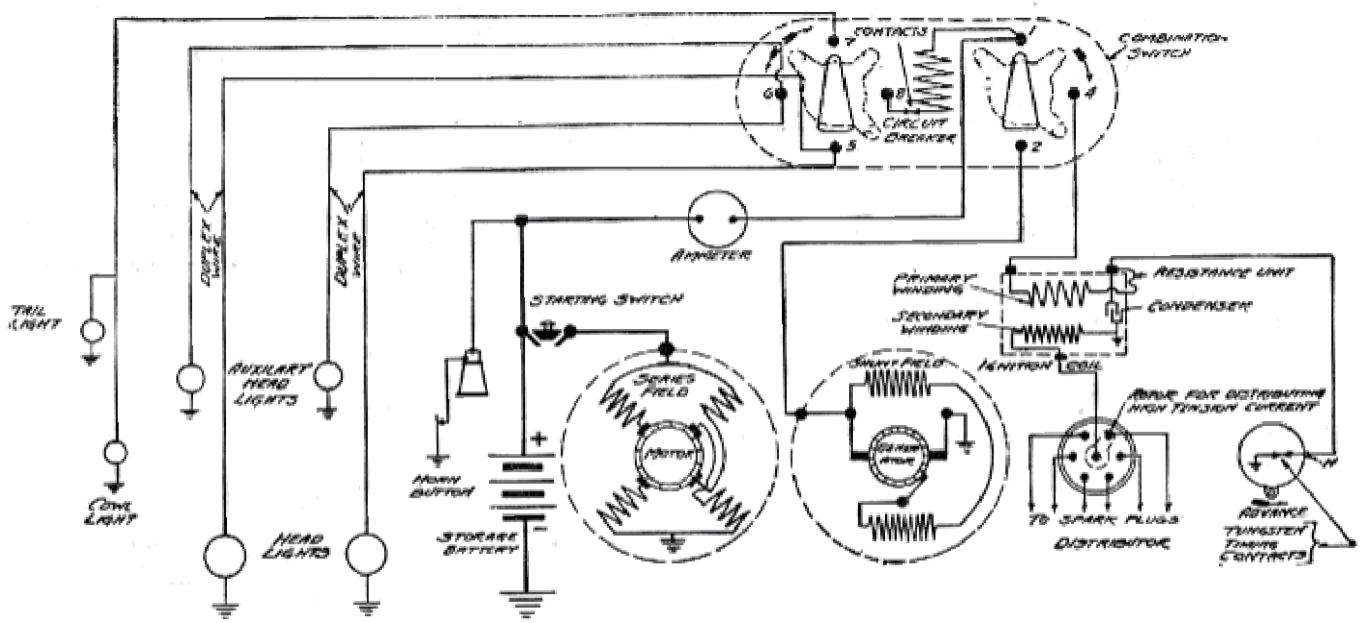
12207 Motor Clutch
1071 Combination Switch

THE KISSEL MOTOR COMPANY—12 CYL. MODEL



87	Generator	2123	Ignition Coil (2)	86	Motor	1966	Motor Switch
5156	Distributor	1093	Combination Switch			6063	Ammeter

LIBERTY MOTOR CAR COMPANY

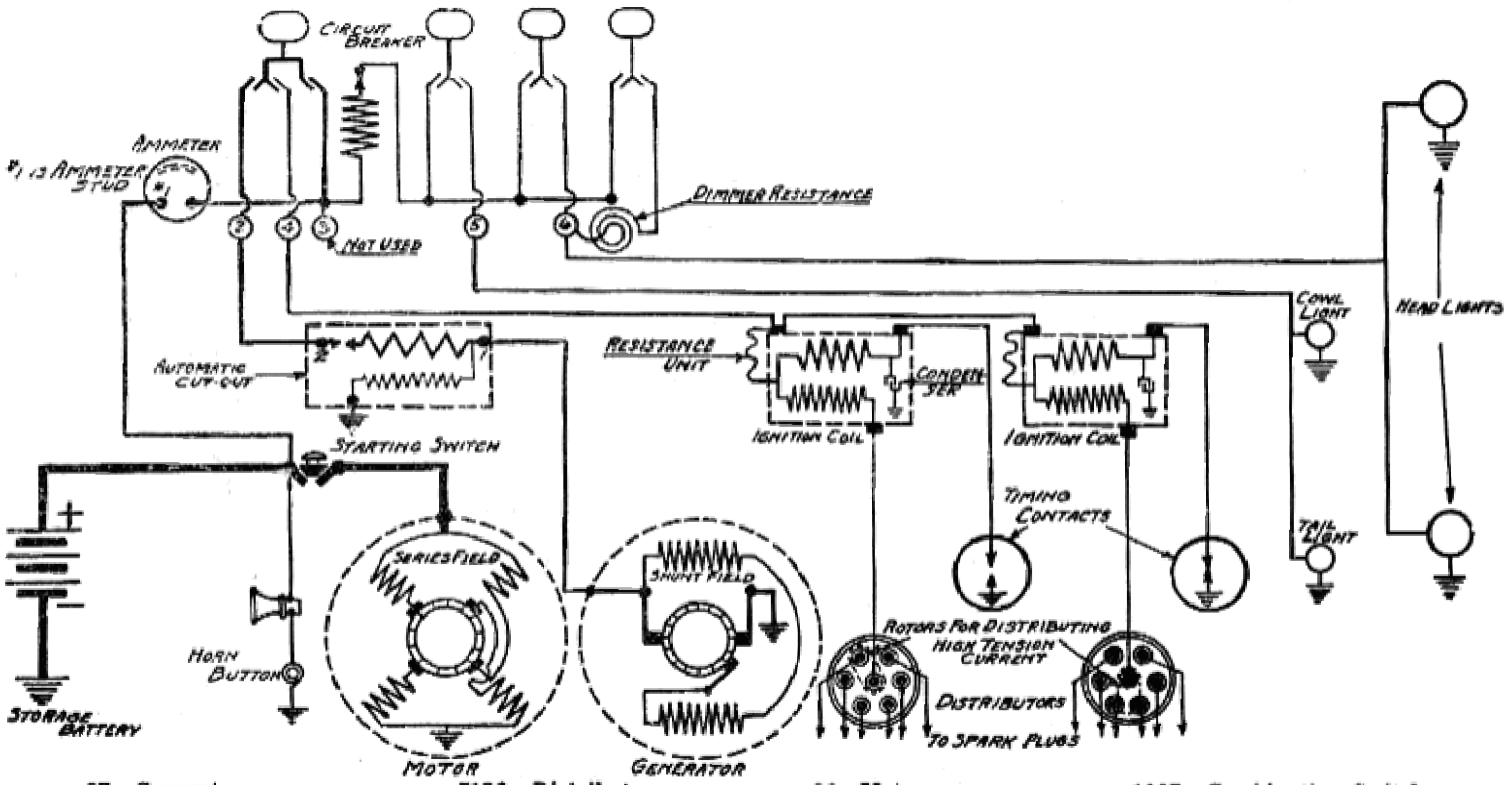


105 Generator
1075 Combination Switch

2139 Ignition Coil

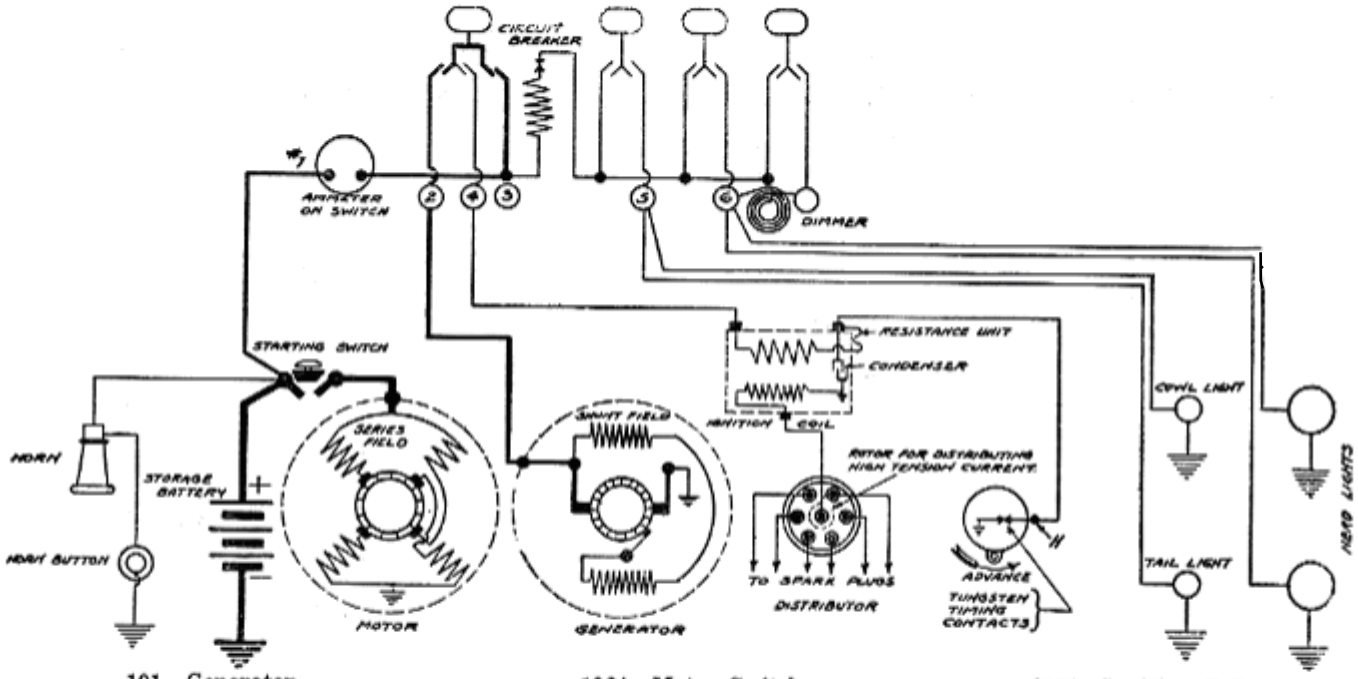
107 Motor
1965 Motor Switch

METEOR MOTOR CAR COMPANY—MODELS 75A-80A



87	Generator	5136	Distributor	86	Motor	1067	Combination Switch
5715	Automatic Cut-Out	2123	Ignition Coil (2)			1965	Motor Switch

METEOR MOTOR CAR COMPANY—MODELS 75 & 80

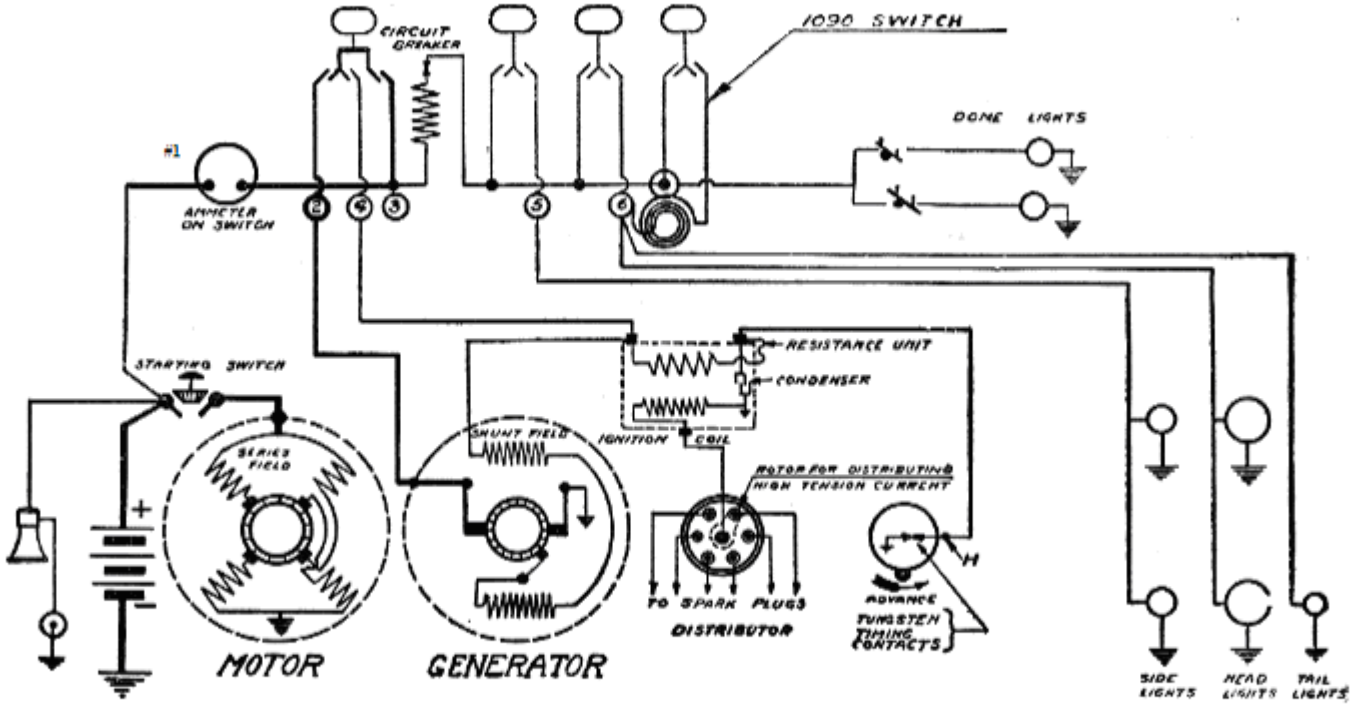


101 Generator
1067 Combination Switch

1964 Motor Switch

2139 Ignition Coil
102 Starting Motor

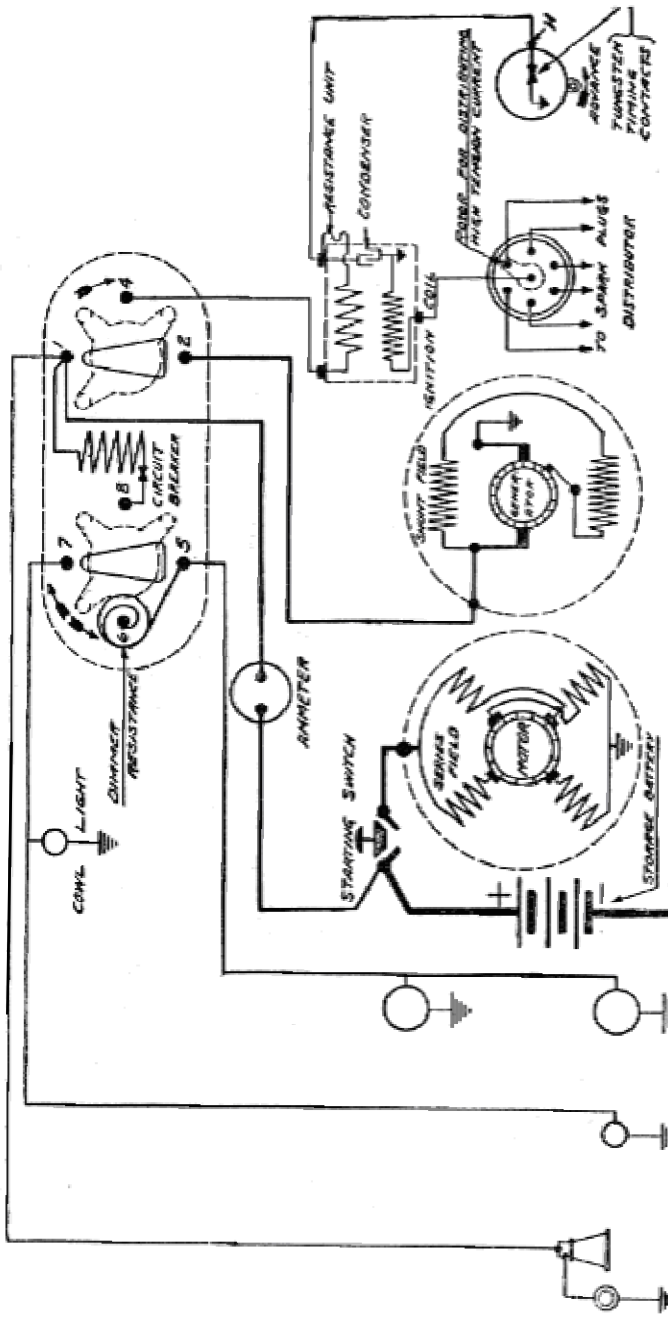
MICHIGAN HEARSE & MOTOR COMPANY
"Light Six" and "Big Six" Chassis



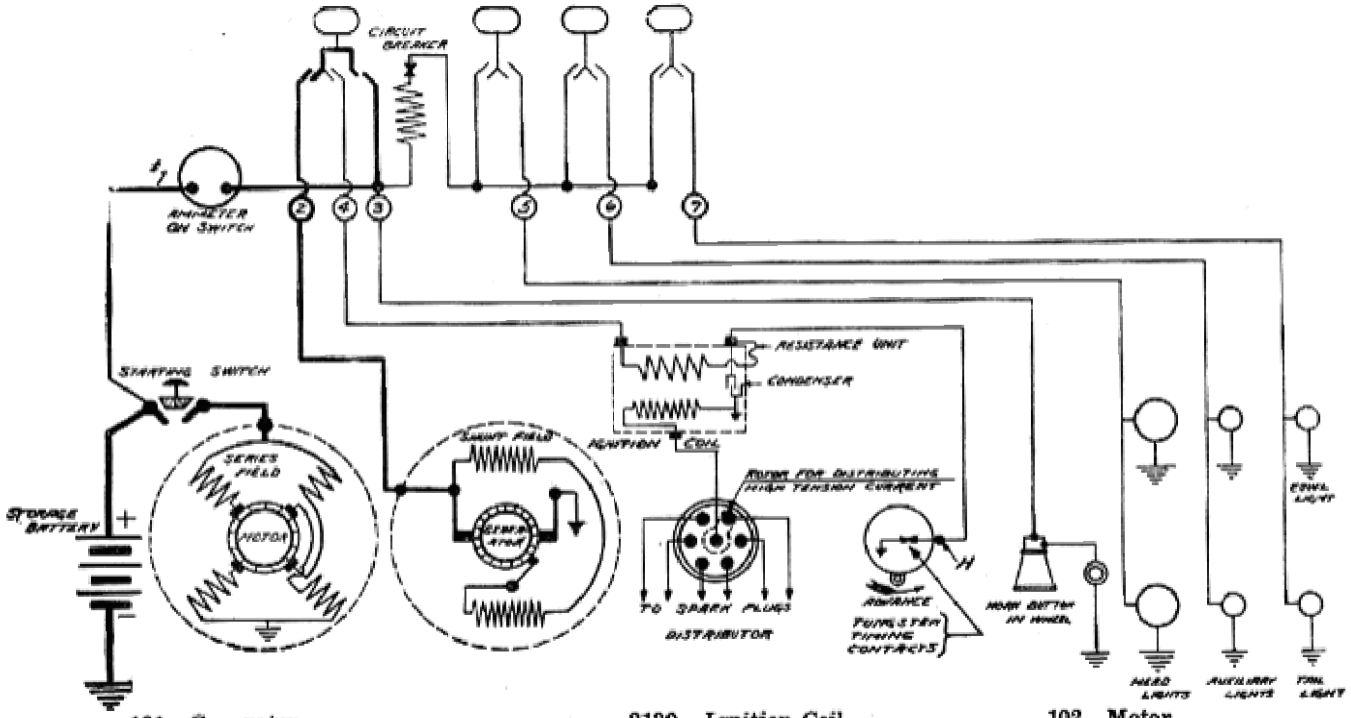
105 Generator
1090 Combination Switch
2139 Ignition Coil

106 Starting Motor
1964 Motor Switch
101 Generator and 102 Motor used on "BIG SIX" Chassis

MOON MOTOR CAR COMPANY—MODEL 6-43



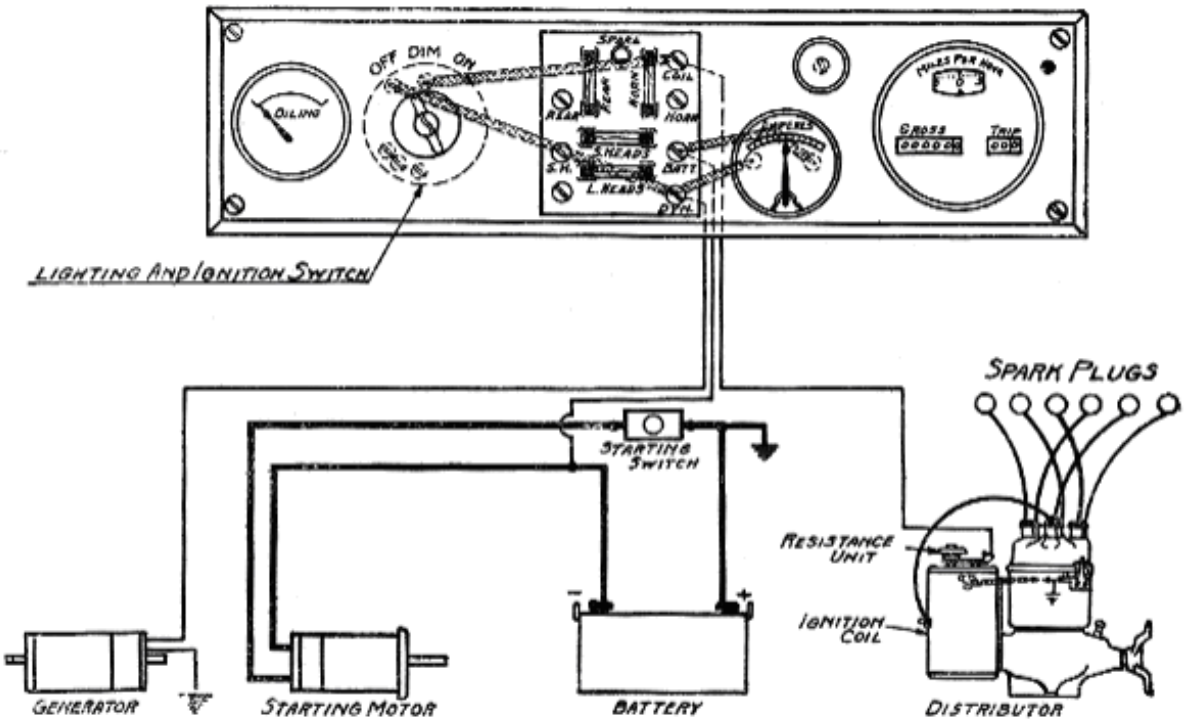
MOON MOTOR CAR COMPANY—MODEL 6-66



101 Generator
1081 Combination Switch

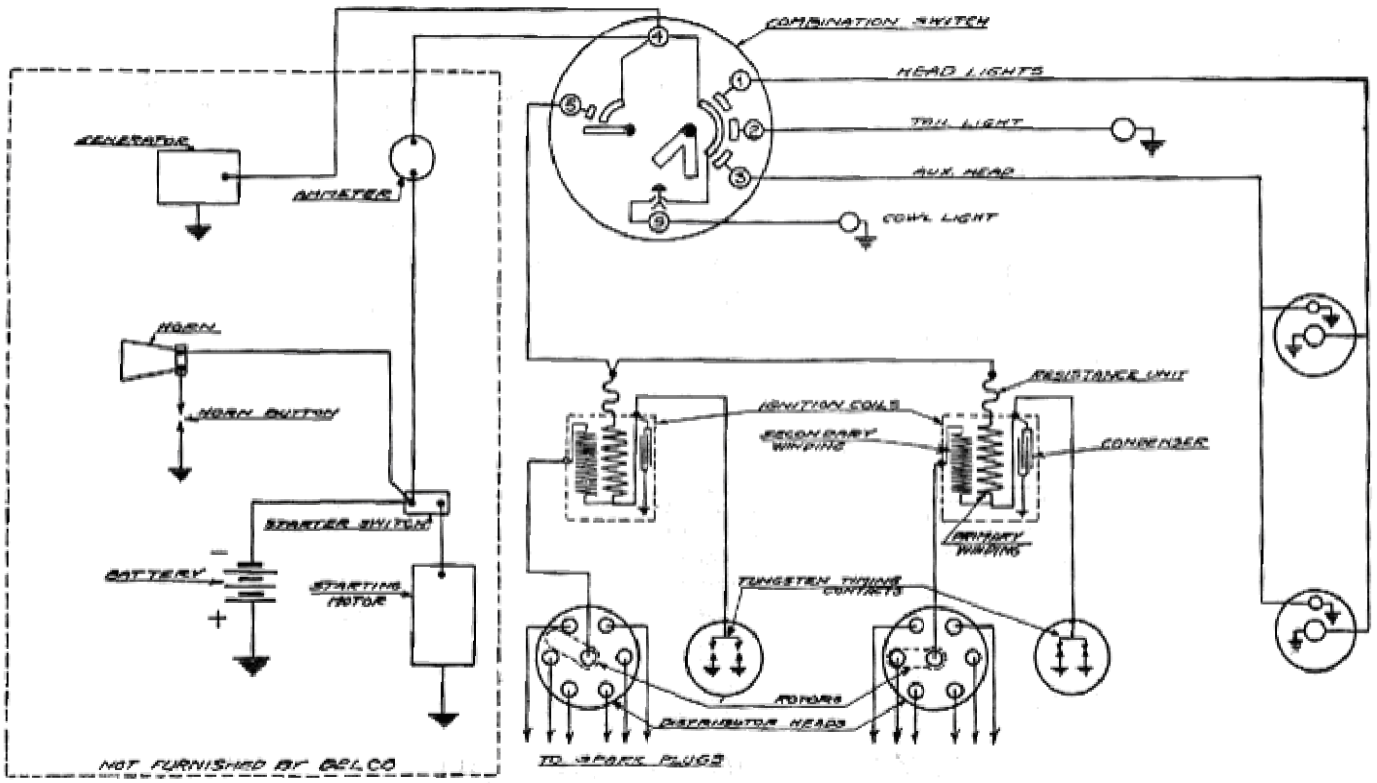
2139 Ignition Coil

102 Motor
1964 Motor Switch



5163 Distributor including one 2155 Coil

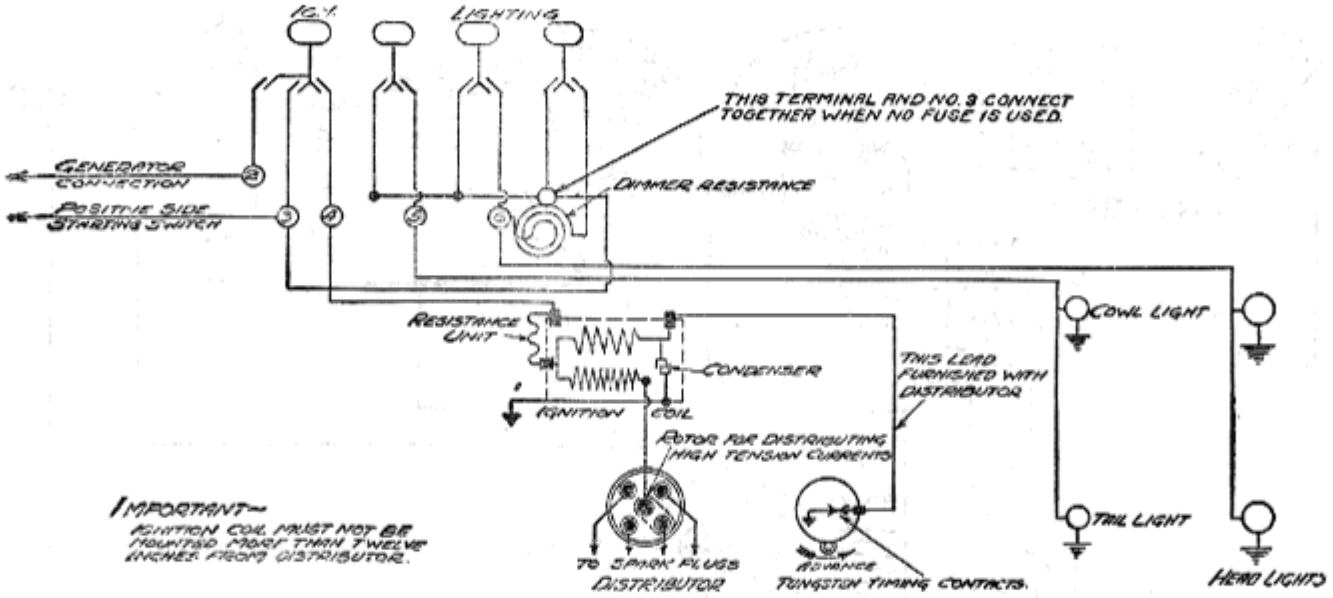
NATIONAL MOTOR CAR & VEHICLE CORP.
SERIES—A-K



5162 Distributor including two ignition coils No. 2152

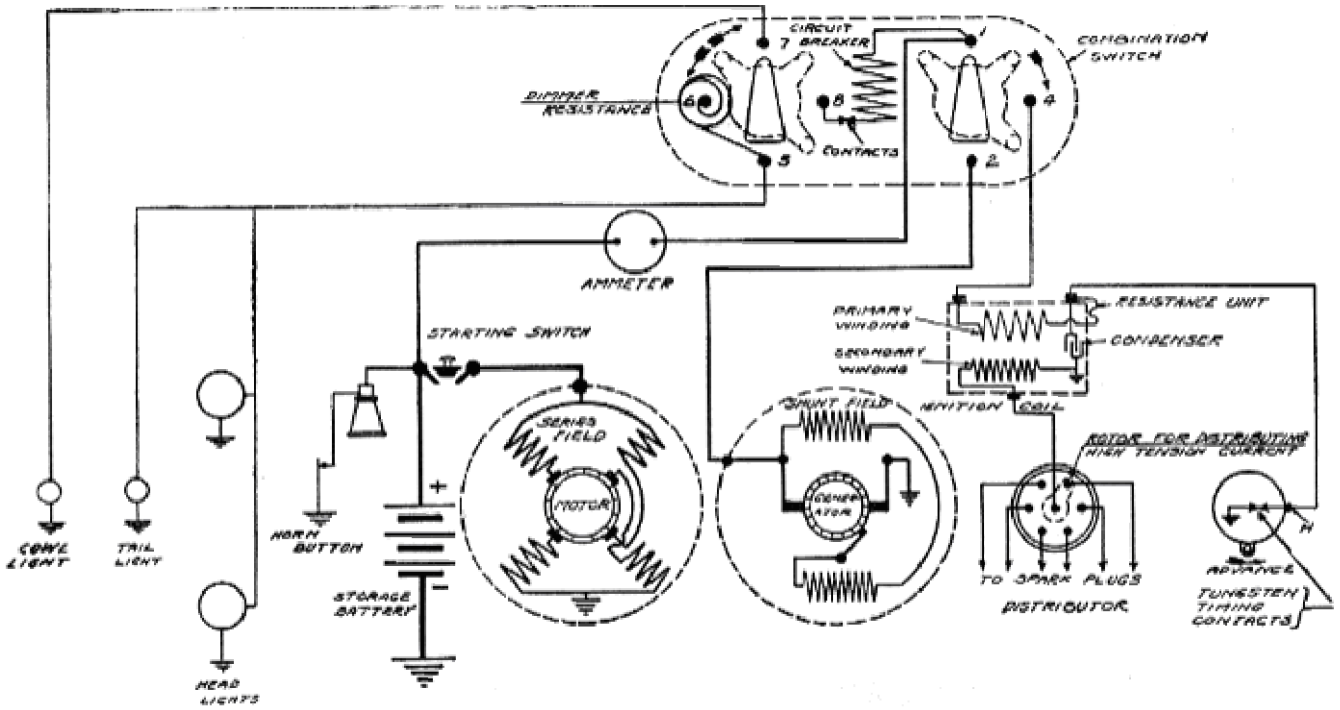
1088 Combination Switch

NORWALK MOTOR CAR COMPANY



5160 Distributor 2118 Ignition Coil 1089 Combination Switch

OAKLAND MOTOR CAR COMPANY—MODEL 32-B 1917

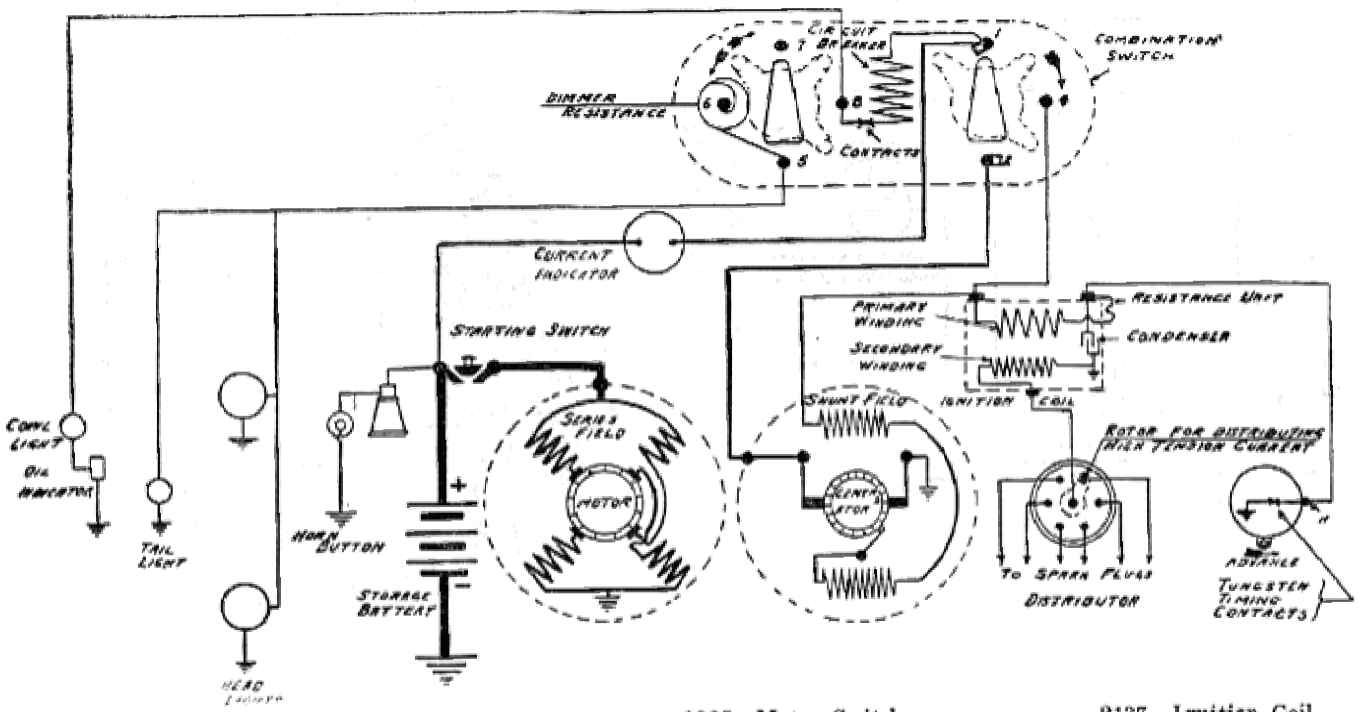


99 Generator
1078 Combination Switch

2137 Ignition Coil

100 Motor
1965 Motor Switch

OAKLAND MOTOR CAR COMPANY—MODEL 34

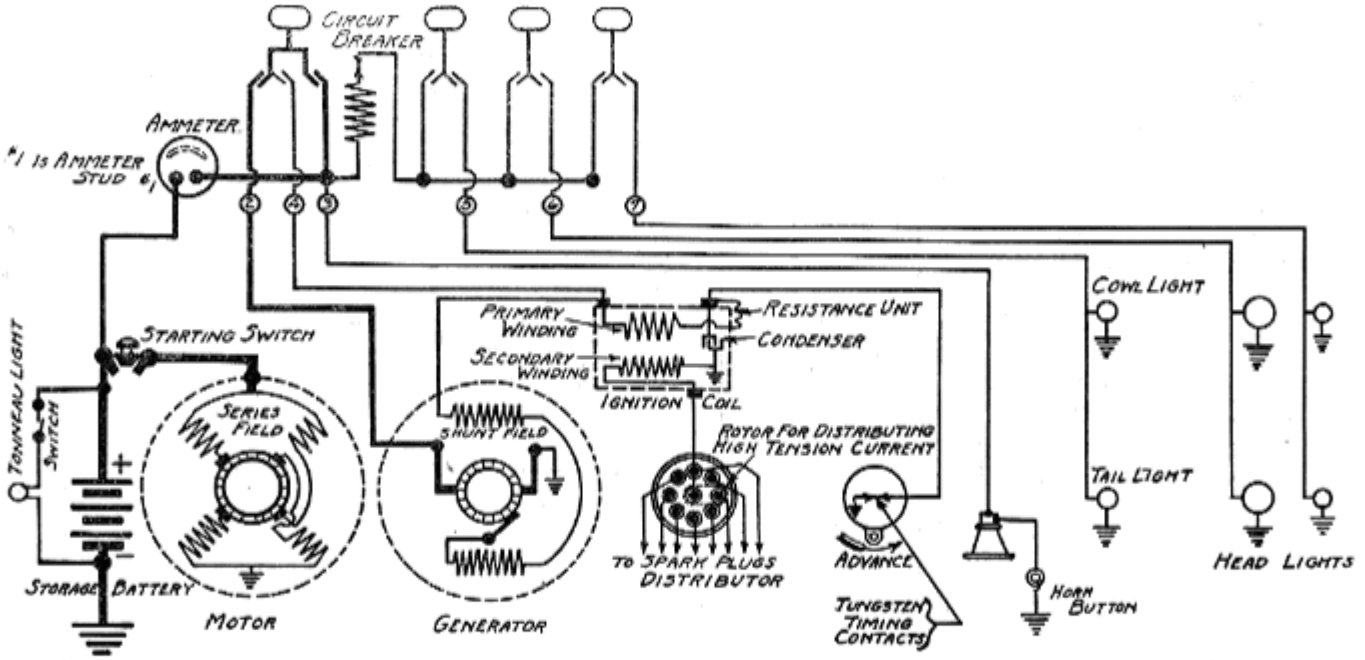


111 Generator
1078 Combination Switch

1965 Motor Switch

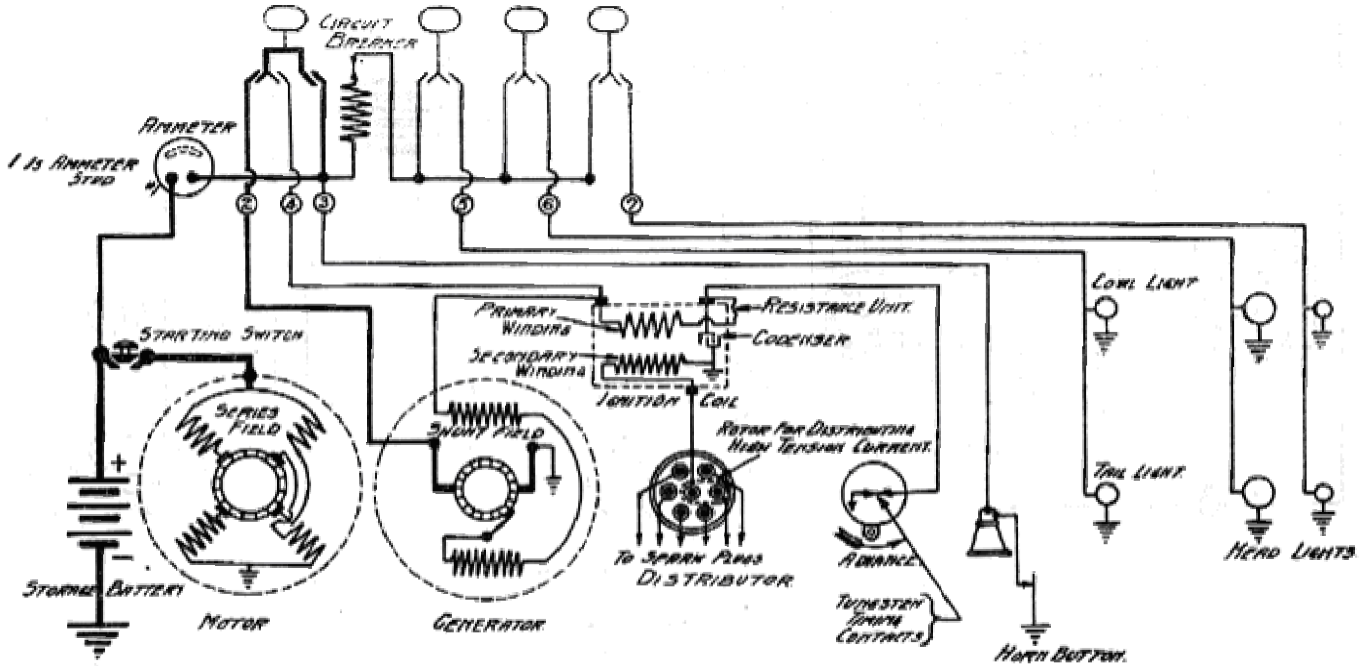
2137 Ignition Coil
100 Motor

OLDS MOTOR WORKS—MODEL 45 1917



113	Generator	1066	Combination Switch
5158	Distributor	72	Motor
2153	Ignition Coil	1966	Motor Switch

OLDS MOTOR WORKS—MODEL 37 1917

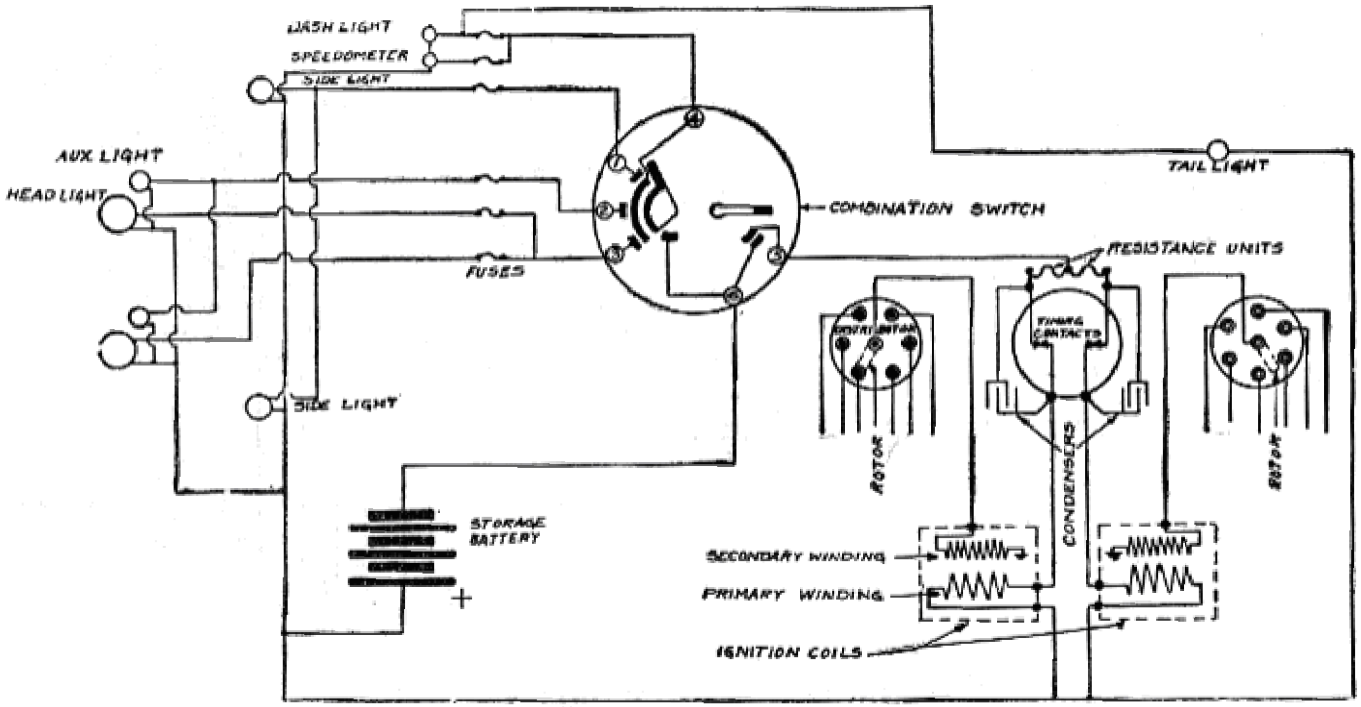


111 Generator
1066 Combination Switch

2137 Ignition Coil

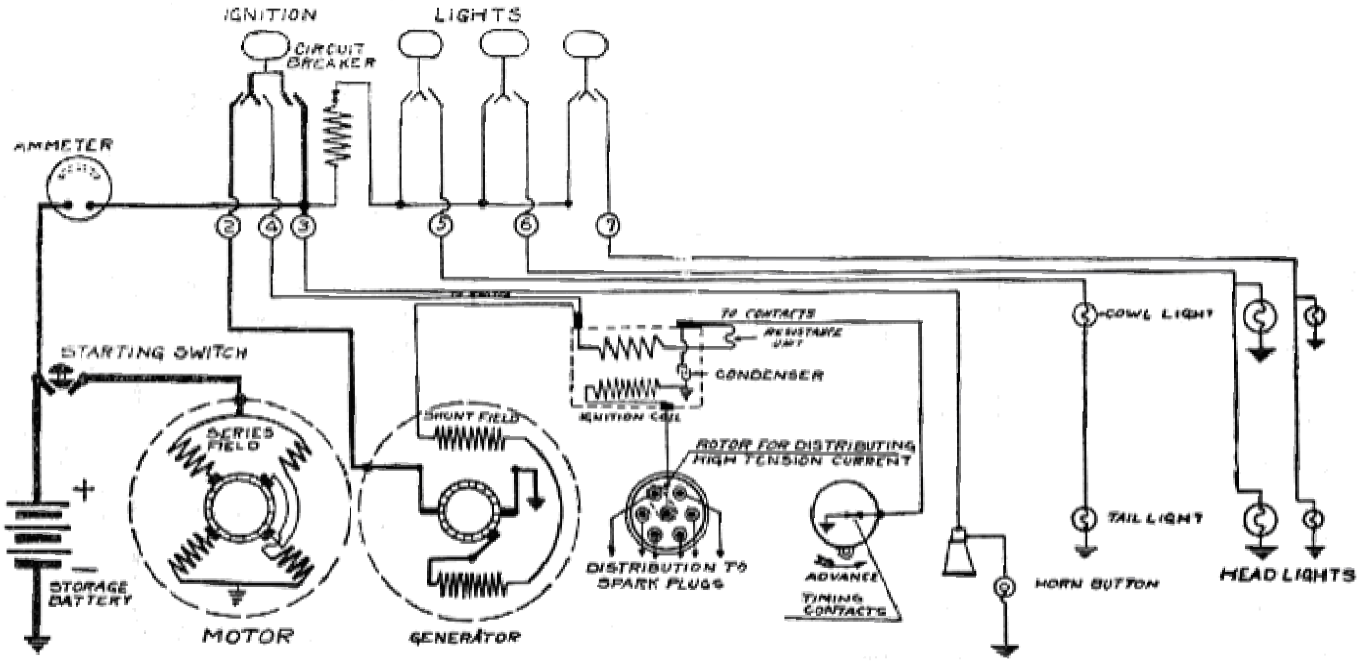
100 Motor
1966 Motor Switch

PACKARD MOTOR CAR COMPANY—MODELS 225 and 235



5149 Distributor 2135 Ignition Coil (2) 1076 Combination Switch

W. A. PATERSON COMPANY—MODELS 6-45 & 6-45R

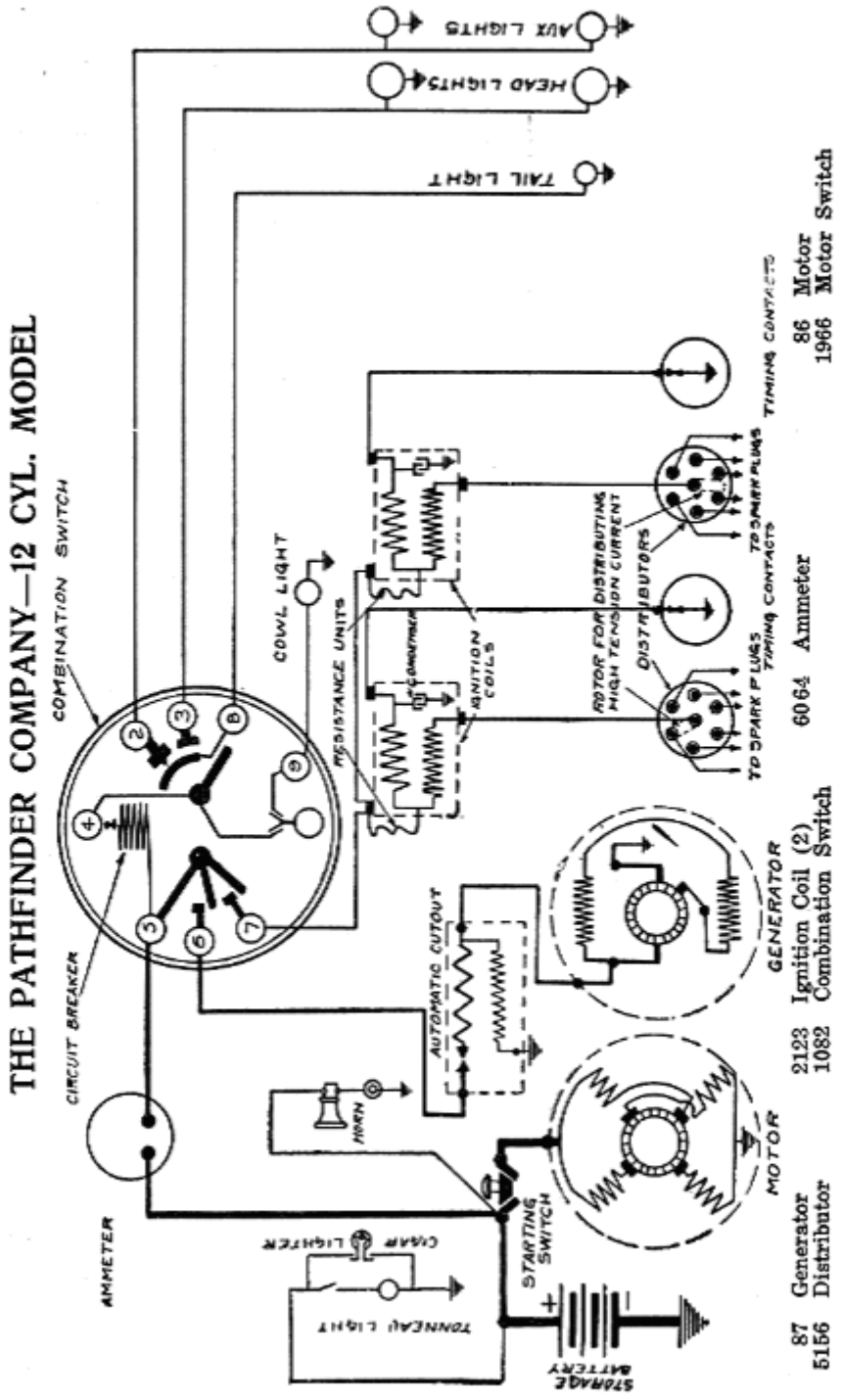


105 Generator
1066 Combination Switch

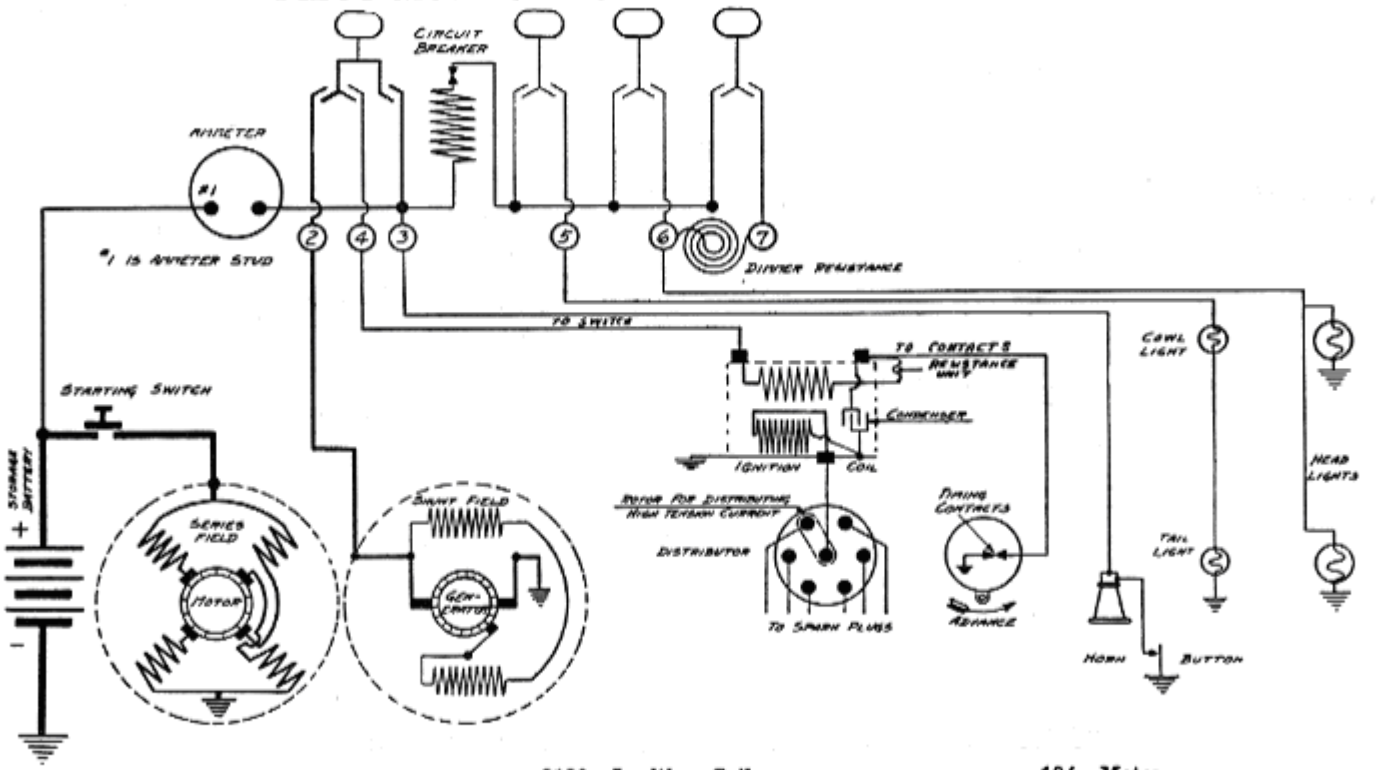
2139 Ignition Coil

106 Motor
1964 Motor Switch

THE PATHFINDER COMPANY—12 CYL. MODEL

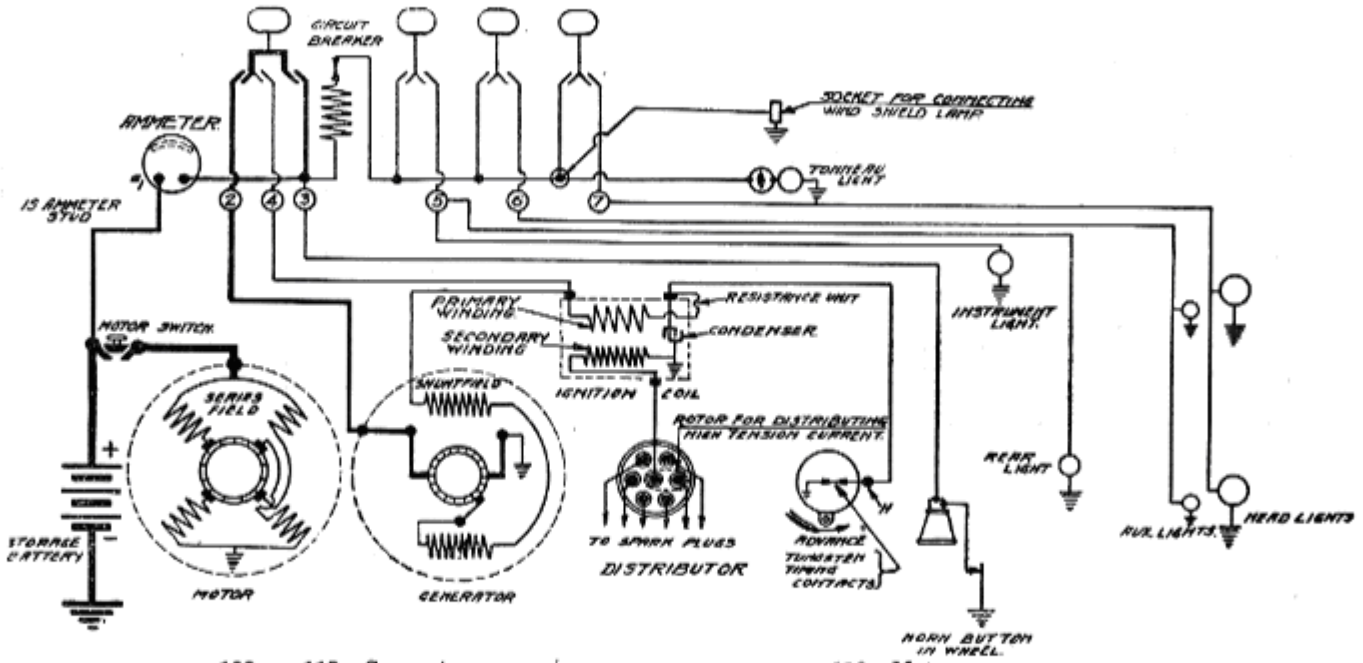


PILOT MOTOR CAR COMPANY—MODEL 6-45 1917



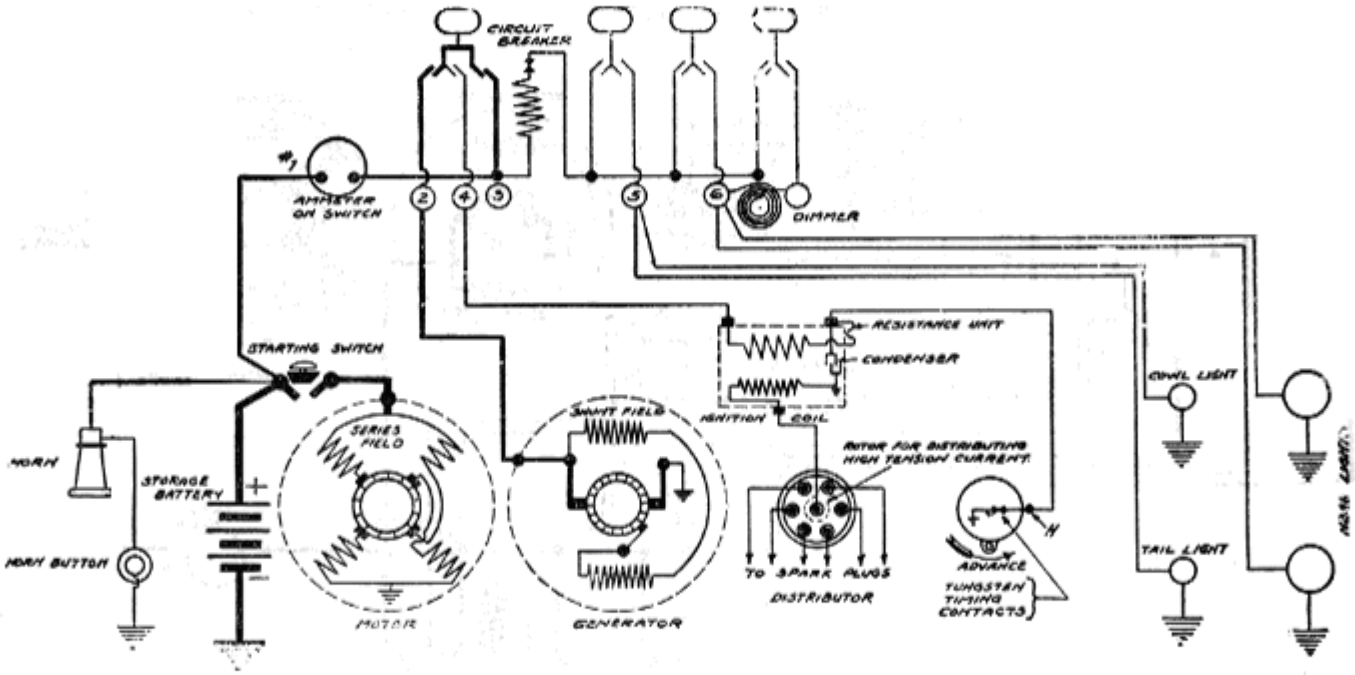
103 Generator
1067 Combination Switch
2139 Ignition Coil
104 Motor
1965 Motor Switch

PREMIER MOTOR CORPORATION—6-B 1917 MODEL



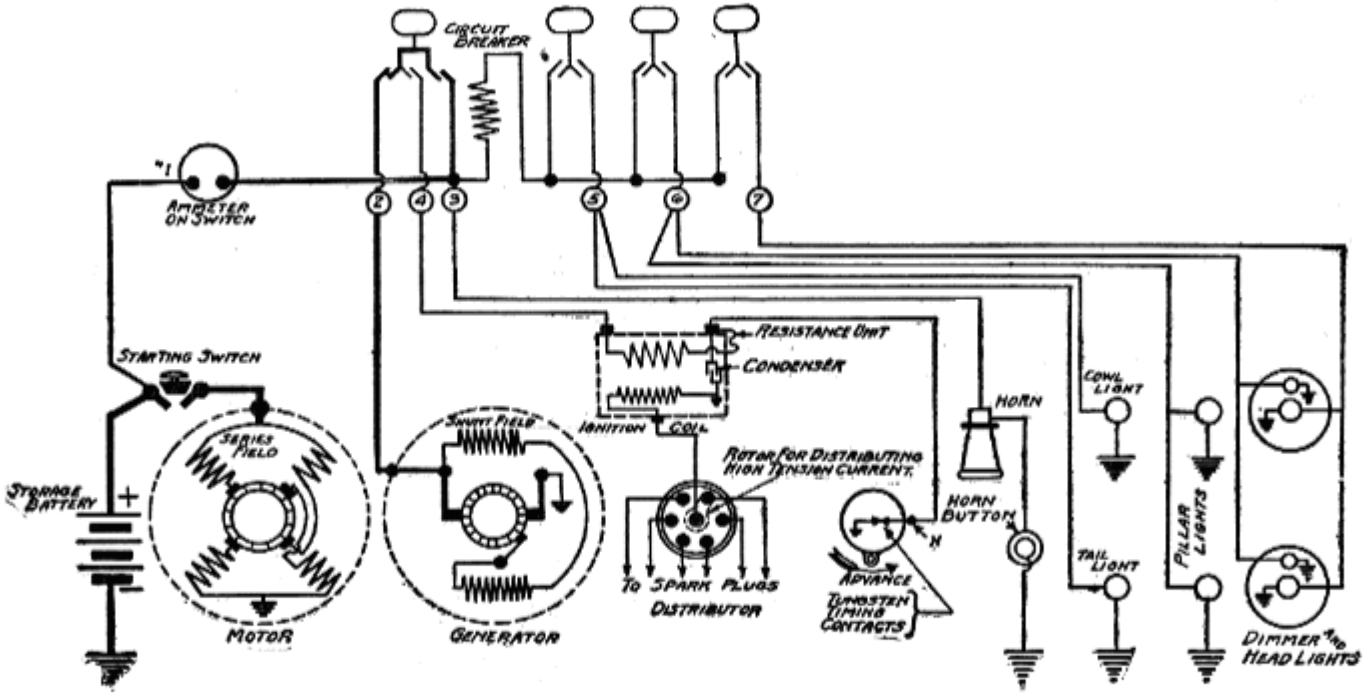
109 or 118 Generator
1086 Combination Switch
110 Motor
1965 Motor Switch
2145 Ignition Coil

RIDDLE COACH & HEARSE COMPANY—1917 MODEL



101 Generator
.067 Combination Switch
1964 Moto r Switch
2139 Ignition Coil
102 Motor

SAYERS & SCOVILL COMPANY—MODEL 1917

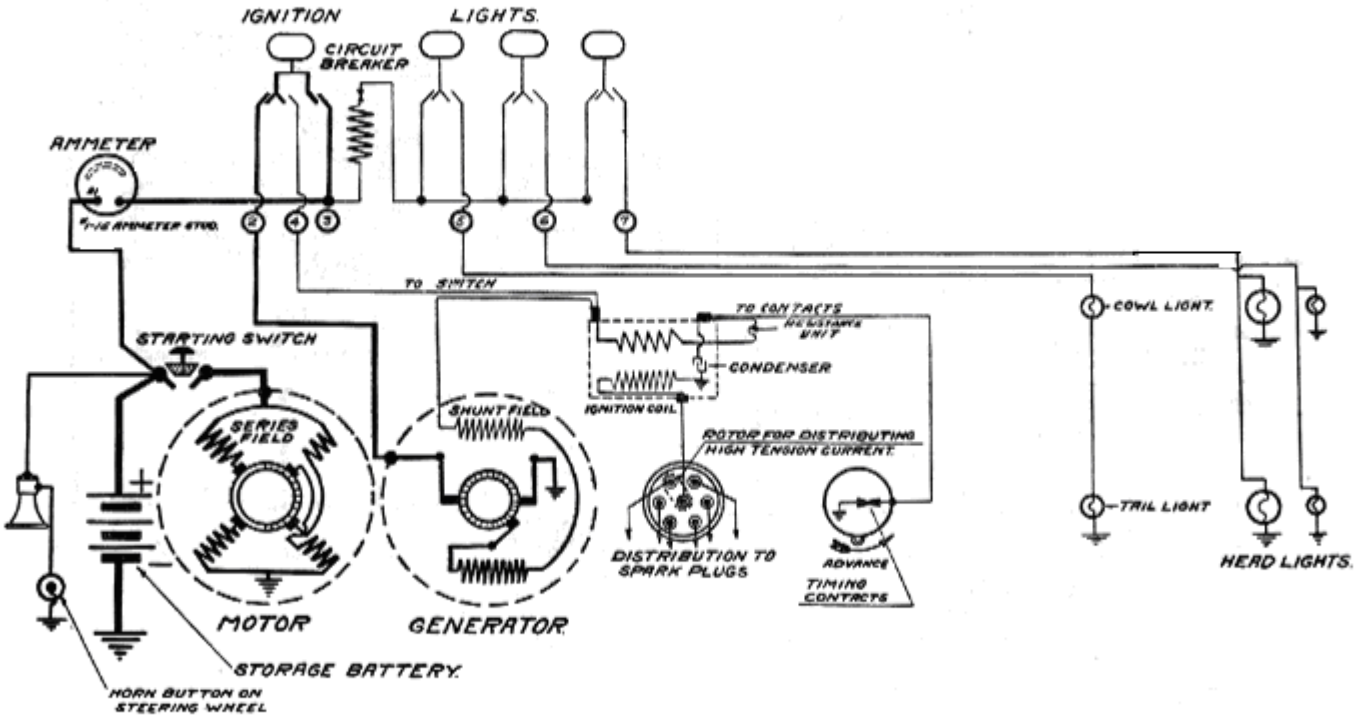


101 Generator
1066 Combination Switch

2139 Ignition Coil

102 Motor
1965 Motor Switch

STEPHENS MOTOR BRANCH OF MOLINE PLOW CO.
1917 MODEL

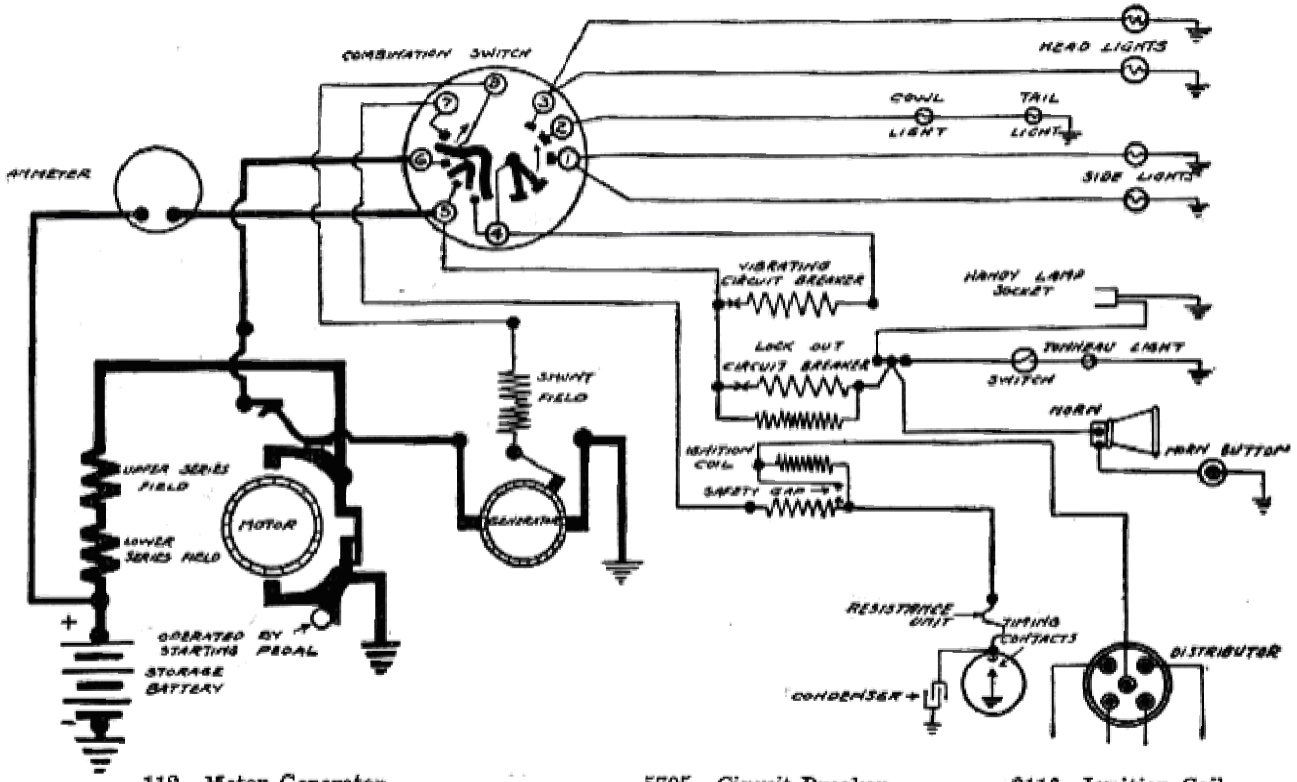


105 Generator
1081 Combination Switch

1964 Starting Switch

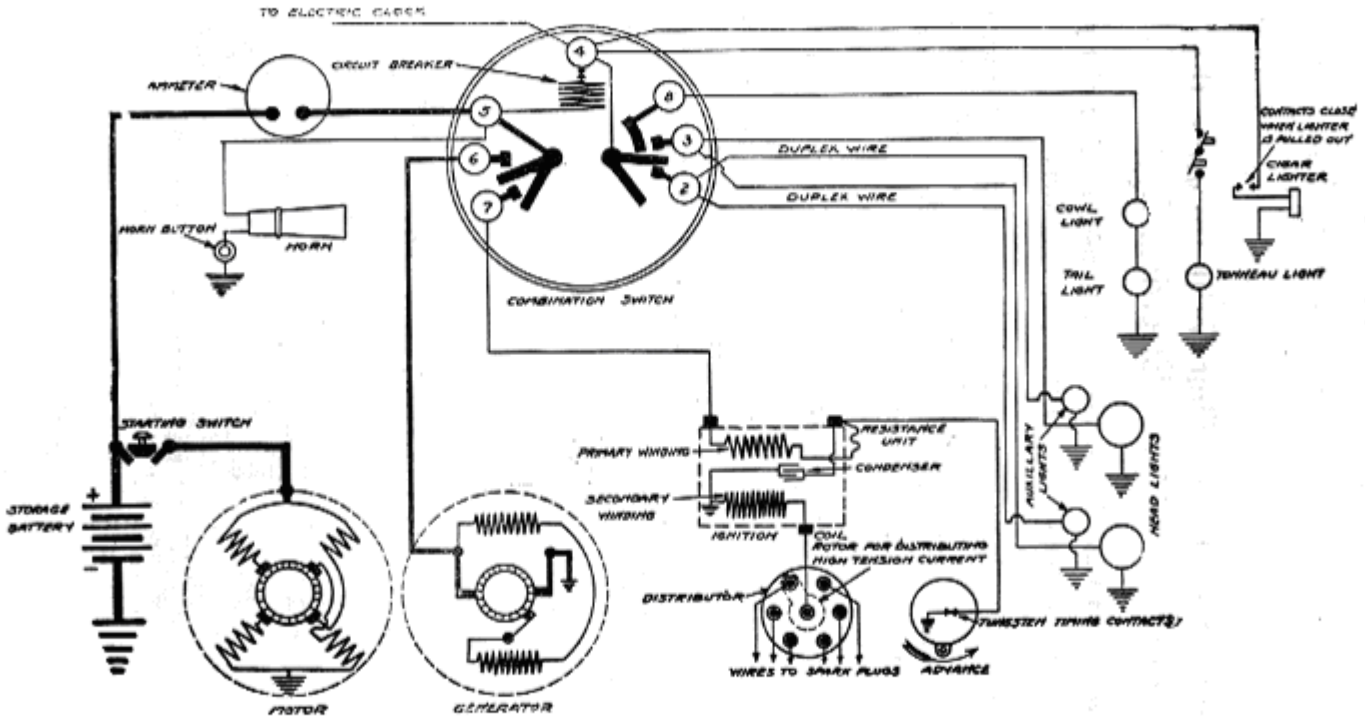
2139 Ignition Coil
106 Starting Motor

TROMPENBURG—AMSTERDAM, HOLLAND



112	Motor Generator	5705	Circuit Breaker	2116	Ignition Coil
1084	Combination Switch	5157	Distributor	11663	Motor Clutch

WESTCOTT MOTOR CAR COMPANY—SERIES 17



101 Generator
1079 Combination Switch

2139 Ignition Coil
6058 Ammeter

1964 Motor Switch
102 Motor

Important Hints That Will Improve the Operation of the Electrical System

When starting the engine in very cold weather always release the Clutch during the cranking operation.

This is important on account of the energy required to rotate the gears in the transmission which usually is filled with a heavy grease, and in cold weather this sometimes requires as much energy for the initial rotation of these gears am it does to crank the engine.

The starting apparatus is severely taxed in cold weather, due to the lowered efficiency of the storage battery and the condition of the motor caused by the cold lubricant on the connecting rods and pistons, and the continued cranking which is usually required to vaporize the fuel sufficient for starting.

The amount of improvement that the releasing of the clutch makes can easily be determined by allowing the starting motor to crank the engine over a few compressions and then release the clutch and notice the difference in the cranking speed.

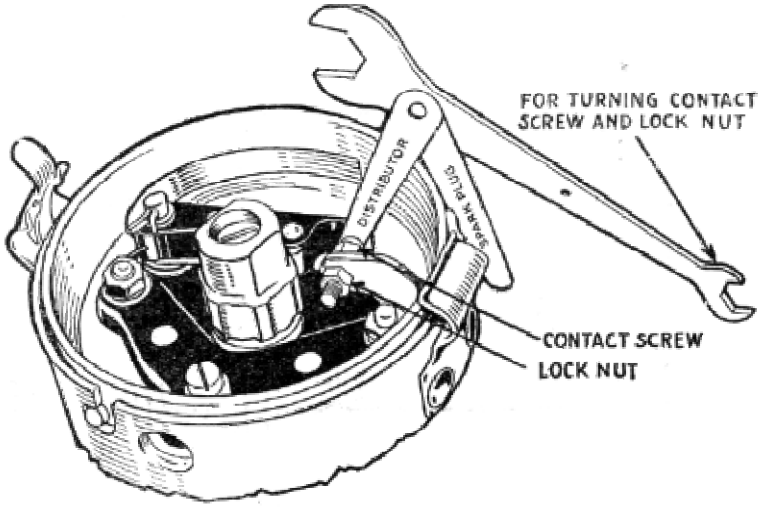


Fig. 1—Adjusting timing contacts.

TIMING CONTACTS

Figure 1 shows the proper method of adjusting the timing contacts. The proper break of these contacts when held apart by the breaker cam is eighteen thousandths of an inch (.018"). The gauge on the distributor wrench marked "Distributor" gives this adjustment. DURING THE FIRST FEW HUNDRED MILES' DRIVING THE WEAR OF THE FIBRE BLOCK ON THE BREAKER ARM IS MUCH GREATER THAN AFTER THIS BLOCK HAS WORN TO A SEAT.

These contacts should be adjusted once or twice during the first season's operation of the car, after which they will require practically no attention.

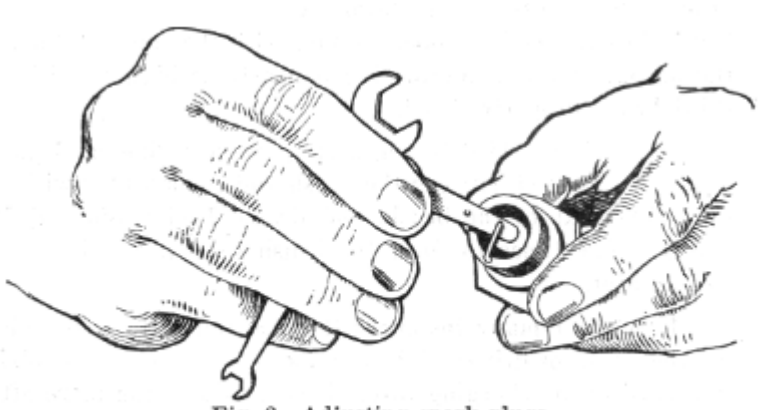


Fig. 2—Adjusting spark plugs.

SPARK PLUG ADJUSTMENT

Figure 2 shows the proper method of adjusting the spark plug electrodes. These should be adjusted to about thirty thousandths of an inch (.030"), that being the thickness of the gauge on the distributor wrench, marked "Spark Plug." On some engines a slightly wider adjustment is permissible.

ADJUSTING THE CHARGING RATE

On all Delco generators provided with third brush regulation there is a considerable variation in the charging rate made permissible by the adjustment of the third brush. This is done in order that the charging rate may be adjusted to suit the different driving conditions of the various cars. The range of adjustment usually varies from twelve to twenty amperes at the maximum output. By means of this adjustment it is possible to provide a charging rate that is satisfactory for almost all conditions of driving. And on some cars it is

advisable to change this adjustment for winter and summer driving. This adjustment is quite fully explained in nearly all instruction books for the various models, but can be made by any mechanic by observing the following:

To increase the charging rate the third brush must always be moved in the direction that the armature rotates; and, of course, moving the brush in the opposite direction decreases the output.

When the third brush is moved in either direction it is important, and usually necessary to sand the brush slightly in order to fit it to the commutator. If this is not done the third brush does not make proper contact with the commutator and the output of the generator is not nearly so high as with the third brush properly fitted.

To sand the third brush, a strip of very fine sand paper should be inserted between the brush and commutator with the sand side next to the brush, and drawn backwards and forwards a few times to form the brush so that it will fit the commutator.

In a great many instances the charging rate is too high, yet the owner or driver of the car does not make any complaint in regard to the charging rate, his complaint being more often in regard to the short life of his lamps, and the necessity of frequent additions of water to the storage battery.

By studying the driving conditions of the individual cars it is usually possible to adjust to a charging rate that will give very satisfactory service for all driving conditions.

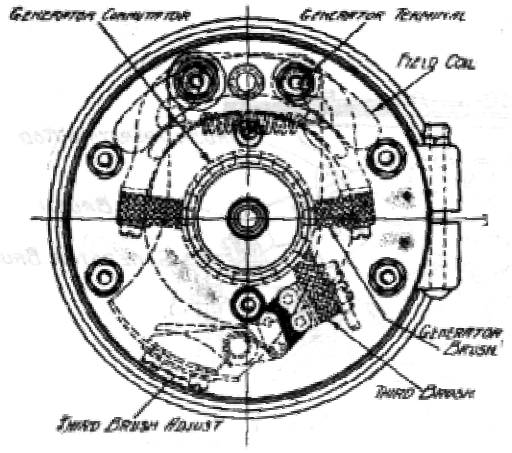


Fig. 3. Shows the third brush arrangement on all the round type generators. These generators operate counter-clockwise from the commutator end.

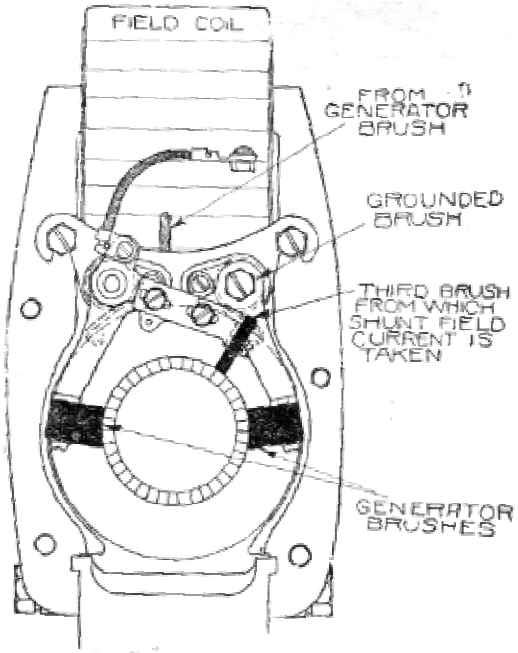


Fig. 4. Shows the third brush arrangement on the Cadillac, Hudson and Auburn motor generators. These generators operate clockwise when viewed from this end.

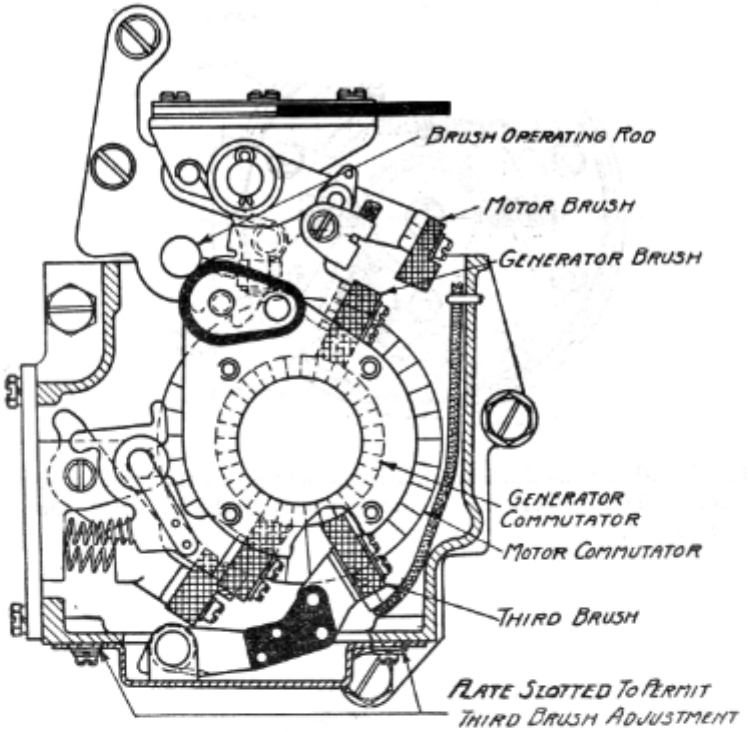


Fig. 5. Shows the third brush arrangement on the Buick motor generators. These operate clockwise from this end.