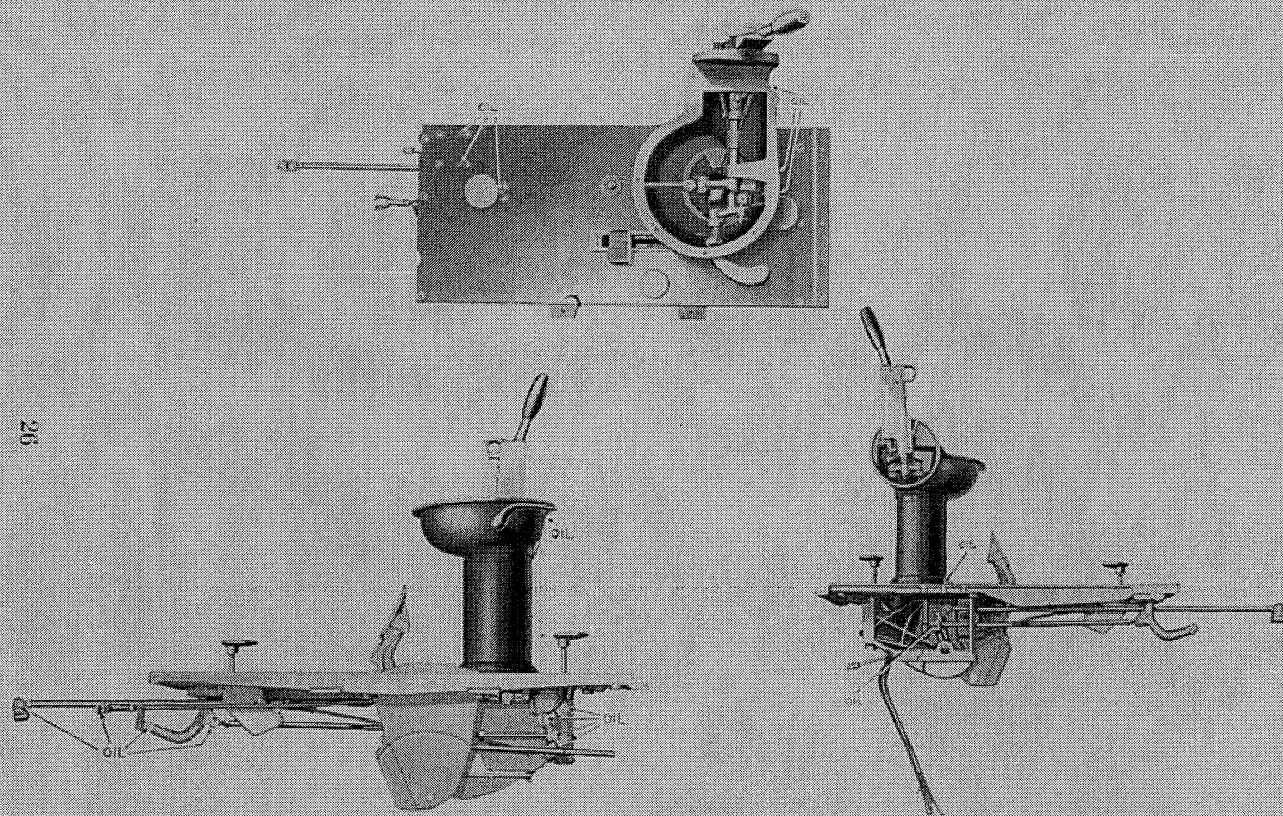
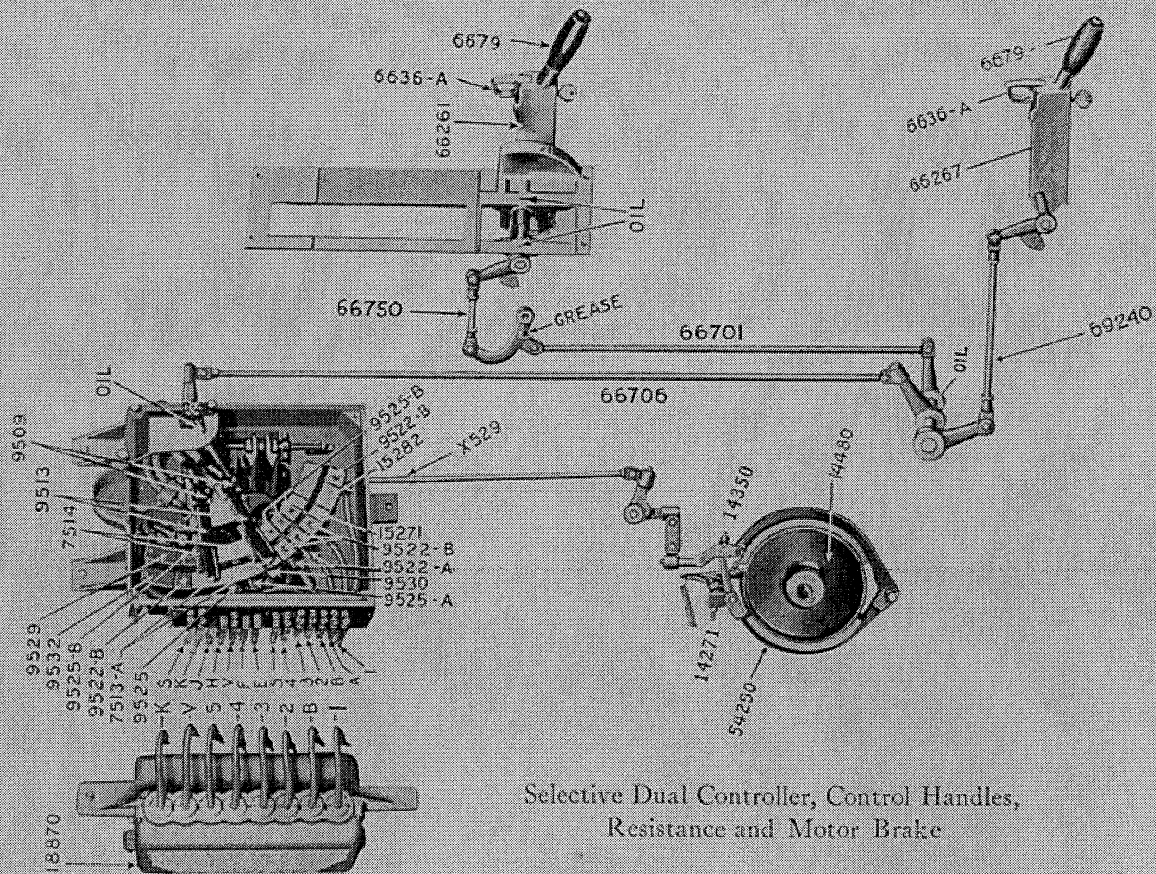




Three Views of the Pedestal Controller
Mechanism

The forward driving seat pedestal and controller handle together with the interlocking foot brake and reverse levers and shifting clutch that connects controller to the controller handles are all assembled to a section of metal flooring, forming a complete unit.

27 The three views shown above are intended to clearly indicate the general arrangement as viewed from above and from each side. The various joints necessary to accomplish results are so small that it would have been impractical to equip them with oilers. As far as possible, they have been enclosed in casings, provided with covers, which may be removed at convenient times of general car inspection and the joints oiled with a pump oiler. Experience has shown that oiling the parts that are enclosed about every four months and the exposed joints about every two months is sufficient unless abnormal conditions exist.



Selective Dual Controller, Control Handles, Resistance and Motor Brake

General Care

Keep the plates Nos. 9522-B and 9525-B on the face of the controller and the shoes No. 7513-A on the movable arm clean and free from burned and rough edges. The contact plates Nos. 9522-B and 9525-B and the shoes No. 7513-A are the ones that become damaged first. They are removable and when badly worn may be replaced with new ones.

Instructions for Adjustment of Motor Brake and Controller to Controller Handle

Set the controller arm fingers No. 9513 in neutral position, as shown in cut, remove key from controller handle No. 66267 and pull handle back to brake position and then push it forward to the stop, which is its neutral position. Have the driver's seat locked in forward running position and then the connecting rod No. 66706 may be adjusted to such a length that the handle No. 66267 and the controller arm fingers No. 9513 will be in their respective neutral positions at the same time.

After the above adjustments have been correctly made, the forward driver's seat should be turned to the position it will assume when car is to be operated from the rear seat and the length of the connection rod No. 66750 adjusted to such a length that both controller arm fingers No. 9513 and the rear controller handle No. 66261 will be in their respective neutral positions at the same time. When these adjustments are correctly made the front driver's seat will turn freely from forward driving position to rear driving position at the time that both controller handles Nos. 66267 and 66261 are in their neutral positions.

Adjust motor brake shoes for wear by means of the winged nut No. 14350. Clearance of shoes is obtained by the adjusting screw No. 14271. These adjustments should be such that the brake is perfectly free when controller arm fingers No. 9513 are in their neutral position, as shown in cut. When brake is applied the top finger No. 9513 will have traveled upward across the contact plate No. 9525-B and just to the plate No. 9529.

The wires leading from the controlling resistance 18870 are marked to correspond to the connectors on the side of the controller into which they are connected.

To Operate Electric

- (1) Be seated.
- (2) Place steering lever in position to give ready control.
- (3) Insert key in controller handle and unlock.
- (4) Pull controller handle back to brake or off position and raise slide. (This closes the circuit and electric is ready to move.)
- (5) Be sure that the foot brake is released.
- (6) Forward movement of the controller handle gives two starting speeds and three running speeds.
- (7) To stop electric, pull controller handle backward past off position. First the electric brake will come into action and then a mechanical motor brake.
- (8) To reverse, bring electric to standstill. Press down the foot lever. Move controller handle forward same as when running forward. Two starting and one running speed will be obtained when backing up.
- (9) To stop reversing, pull controller handle to extreme backward position. Take foot off reverse lever, which will automatically return to forward position and electric is ready to be operated in a forward direction.
- (10) Steering: Push steering arm from you to turn to the left and pull steering arm toward you to turn to the right.
- (11) When leaving the electric, be sure to always force down slide of controller handle and take key out of lock.
- (12) Release foot brake before applying power.

(13) To charge batteries:—

- (1) Be sure that slide of controller handle is down and key out of lock.
- (2) Insert charging plug in socket at rear of electric and if the connections from the plug to the charging source are correct the Ampere meter should show reading below the zero on the scale.
- (3) Follow the instructions for charging and care of battery that are furnished by the manufacturers of the battery regardless of what we or any one else may say.

Note.—There are two push buttons in the floor of the car that may be operated by a slight pressure of the left foot. One increases the speed of the car and the other lights the meter lamp.

To Locate Trouble

If vehicle runs too slow, look for the following:—

Deflated tires.

Slow tires, due to other makes having been substituted for those furnished by the manufacturer of the vehicle.

Broken bearings in wheels, countershaft or motor.

Shoes not making perfect contact on face of controller.

Brushes not making perfect contact on commutator due to being too short, or commutator being dirty.

Broken battery jar, solution having partly leaked out.

Brakes rubbing when they are supposed to be thrown off.

Battery exhausted.

If the current "AMPERES" is higher than usual when running on the level, look for the following:—

Tight bearings.

Brakes rubbing.

Silent chains too tight.

Front wheels out of alignment.

Tires deflated.

If needle on AMMETER vibrates more than usual, moving up and down very rapidly, look for the following:—

Blackened commutator.

Commutator brushes worn too short.

Loose connections at battery terminals or at connections on controller.

Or broken wire leading to meter.

If vehicle refuses to run at all, look for the following:—

Broken jar in battery.

Broken connections between cells.

Broken terminals.

Open motor leads.

Broken connections on any part of vehicle.

In case vehicle does not run on any of the speeds, we strongly urge upon the user of the vehicle a policy of examining those connections that are easiest to get at. The connections that we refer to are:—

Those at the end of the batteries.

The connecting straps, connecting one cell to another.

The wires going into the circuit closing switch.

The springs No. 9513 on the controller arm and the copper shoes No. 7513-A.

Be sure that they make contact with plates on the controller face.

See that there are no wires hanging loose, that appear to belong in the controller.

If the trouble is not found in some one of these points, it would be best to have an expert examine the machine.

If the usual graduation of speeds are not obtained when running on the level, read carefully the instructions accompanying illustrations of controller.—If AMMETER on the vehicle does not register properly, look for the following:—

Broken or partly broken connections in the wire leading from meter to shunt block, under floor of carriage.

The ammeter pointer sticking or working irregularly, due to dirt inside of ammeter, in which case it must go to the factory.

If the voltmeter does not register at all, look for broken connections in wires leading to connection points under floor.

If voltmeter reads too high, there is something wrong inside of it and it should immediately be sent to the factory.

No meter on an electric vehicle is infallible as the service is very hard and the adjustments liable to get

loose; and, as the general instructions as to care of battery, especially in charging, are to charge until voltage reads a certain amount, it is of the highest importance that the meter should read correctly.

As soon as any irregularities are noticed in its readings, have it examined immediately by an expert, or send it to the factory.

When it is necessary to return it to the factory, be sure to send the shunt block with it, as this is part of the meter.

Even if no irregularities are noticed, it would be well to have the meter examined at the factory and recalibrated at least once every year.

If none of the lights burn and the bell refuses to ring, look for a burnt fuse wire.

If one light refuses to burn while the others are working correctly, try a new lamp, or examine connecting theater plug that connects body wiring to chassis wiring.

If both side lights refuse to burn, all other lamps being in working order, the trouble is sure to be in the connector.

If bell refuses to ring, all lamps being in working order, examine the theater plug connecting body and chassis wiring and make sure that the wires leading to the switch contacts at bottom of controller handle have not been taken out or broken off. The bell can be tested by disconnecting from it the wires that are there, connecting two temporary wires to these same binding posts and touching these to the battery terminals. If the bell does not ring then it should be taken off and replaced with a new one or readjusted.

Mileage and Battery

If you do not obtain proper mileage when all mechanical parts are working freely, it is undoubtedly due to the battery being undercharged and not being brought up to full voltage as indicated on the meter. In this case, it is best to discharge the battery until voltage indicates 1.8 per cell; open the hoods over the battery, remove plugs from cells and cover the plates with pure water to within one-half inch of the inside top cover. Charge the battery in

usual way until it reaches a maximum voltage as given on your charging card, then charge 4 hours longer at the lowest rate shown on the charging card. Try the battery; if this does not improve the mileage sufficiently, repeat the operation as before. If, after repeating this operation three times, you do not get the mileage you should, and after examining the vehicle thoroughly you do not find the trouble elsewhere, consult the maker of the battery at once.

A storage battery can be ruined in three hours after it has been put in use by being left on charge at a high rate after it is full. This is one of the most common causes of trouble. The user of the vehicle should keep careful track of the charging and, if possible, watch it personally.

In all cases follow strictly the instructions that are furnished by the battery maker.

Battery

Keep the battery and connections clean.

Go over the same and see that they are bolted up tight.

If there are any low cells in the battery, attend to them at once.

Keep the electrolyte, or battery solution at the proper height above the tops of the plates.

Keep the density of the electrolyte, or battery solution, at the proper point.

Do not charge at a rate that will make the cells exceed 100 degrees F. in temperature.

Do not let your battery stand completely discharged.

Do not let your battery stand in a partly discharged condition for any length of time.

Do not go away on a visit and allow your batteries to stand inactive.

A battery must be worked constantly to get satisfactory services and when going away for two weeks or more, it is best to make arrangements to have the battery looked after by some one familiar with it.

In charging, always connect the positive wire of the charging source to the positive terminal of the battery and vice versa.

Be careful not to overcharge at a high rate.

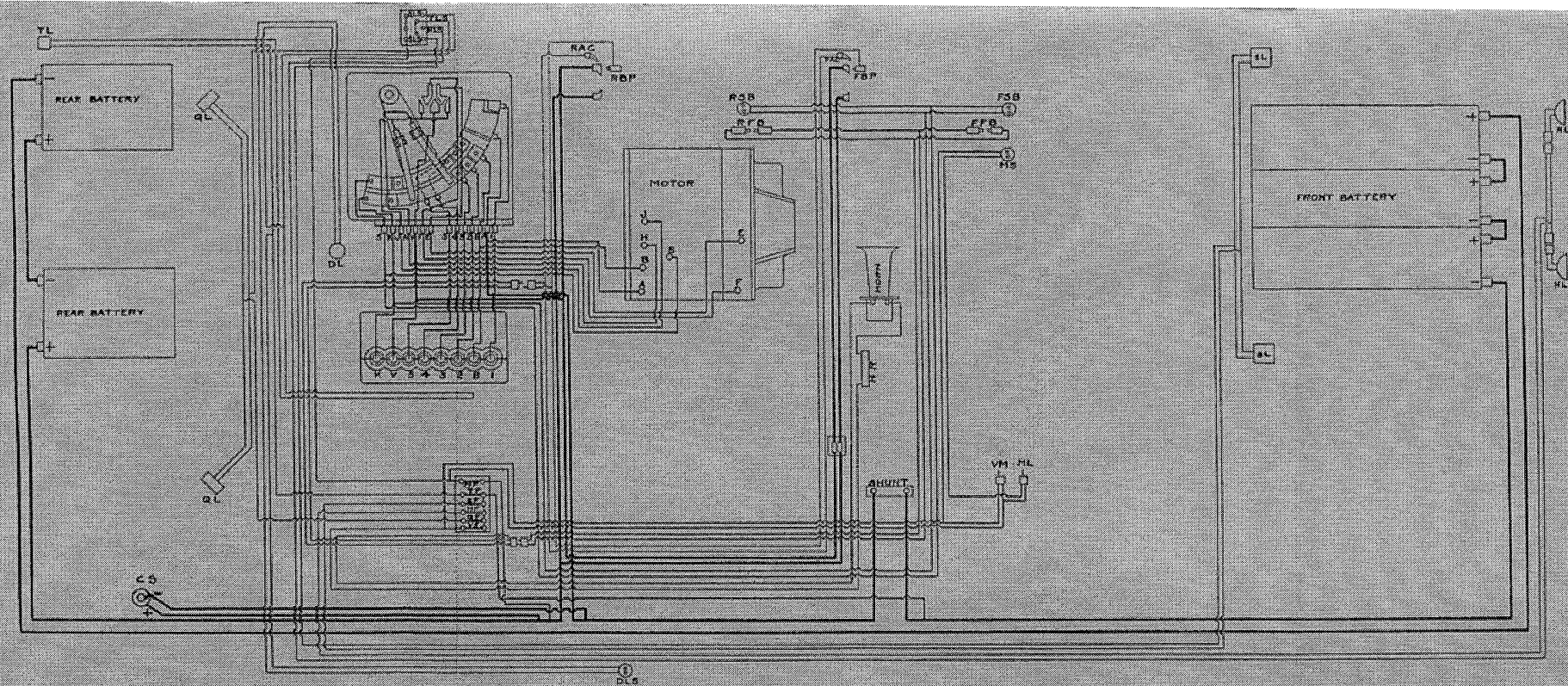
If the battery becomes dead, or loses mileage, consult the makers.

Charge battery in a warm room in winter.

In consulting the makers, be sure to give full particulars.

THE RAUCH & LANG CARRIAGE CO.
CLEVELAND, OHIO

All above information applies to lead batteries. Whenever car is equipped with Edison Batteries either consult the Edison Battery Co., of Orange, New Jersey, or the Rauch & Lang Carriage Co.



AB-SERIES FIELD LEADS
CS-CHARGING SOCKET
DL-DOME LAMP
DLS-DOME LAMP SWITCH
EF-ARMATURE LEADS

FAC-FRONT AUTOMATIC CUT OUT
FBP-FRONT BELL PRESS
FFB-FRONT FOOT BRAKE BELL CONTACT
FSB-FRONT SPEED BUTTON
HF-HEAD LAMP FUSE

HJ-SERIES FIELD LEADS
HL-HEAD LAMPS
HLS-HEAD LAMP SWITCH
HR-HORN RESISTANCE
MF-MAIN FUSE

ML-METER LIGHT
MS-METER LIGHT SWITCH
QF-QUARTER LAMP FUSE
QL-QUARTER LAMP
QLS-QUARTER LAMP SWITCH

RAC-REAR AUTOMATIC CUT OUT
RBP-REAR BELL PRESS
RFB-REAR FOOT BRAKE BELL CONTACT
RSB-REAR SPEED BUTTON
S-SHUNT FIELD LEAD

SF-SIDE LAMP FUSE
SL-SIDE LAMP
SLS-SIDE LAMP SWITCH
TF-TAIL LAMP FUSE
TL-TAIL LAMP

TLS-TAIL LAMP SWITCH
VF-VOLT METER FUSE
VM-VOLT METER
PB-2-3-RESISTANCE TERMINALS
4-5-V-H-RESISTANCE TERMINALS

1915 DOUBLE DRIVE WIRING DIAGRAM