TM 9-2615

WAR DEPARTMENT

TECHNICAL MANUAL

INSTRUCTION GUIDE

GENERATING UNIT M1

November 15, 1941

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No. 9–2615

WAR DEPARTMENT,
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INSTRUCTION GUIDE

GENERATING UNIT M1

Prepared under direction of the
Chief of Ordnance

1. General.—*a. Purpose.*—This manual is published for the information of both the using arms and services and ordnance maintenance personnel.

b. Scope.—This manual covers a general description of the generating unit M1, a detailed description of its parts, and the necessary care and maintenance of same. Maintenance operations described may be performed by personnel of the using arms.

c. References.—The appendix lists the publications pertaining to the equipment described herein.

2. Identification.—The generating unit M1 described in this manual is the Homelite generating set, model SS–12, and associated equipment.

3. Function and limitations.—*a.* The generating unit M1 is used to furnish power and illumination for the plotting room and the battery commander's station or command post of mobile coast artillery batteries.

*This manual supersedes TM 9–2615, February 8, 1941.

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b. If the battery commander's station is not adjacent to the plotting room, one of the storage batteries may be disconnected and carried to the distant point to supply the lighting current.

4. Description.—*a.* The generating unit M1 (figs. 1 to 16) is a portable, gasoline-driven, 650-watt, 12-volt, direct current generating unit, complete with storage batteries, conductors, panels, extension cords, lamp reflectors, and switches necessary to supply current for a lighting system consisting of six 3-candlepower, and eight 21-candlepower incandescent lamps.

b. Normally the charged storage batteries will supply the lighting current for the lamps; however, if the noise of the gasoline motor is not objectionable, power may be taken directly from the generator, in which case the batteries will act as a voltage stabilizer and will assume the load should the generator stop for any reason.

5. Operation.—*a. Engine.*—The engine may be started either by spinning by means of a sash cord attached to the pulley (1, fig. 7), or by depressing the starting button (2, fig. 8). When the starting button is depressed, current flows from the batteries to the generator which acts as a starting motor to turn over the engine.

(1) To start the engine, the following steps should be taken:

(*a*) Open fuel line shut-off cock (3, fig. 6) under fuel tank (4, fig. 6).

(*b*) Close carburetor choke (5, fig. 6). (The choke is open when the lever is against stop pin.)

(*c*) Depress the starting button in the switch box (6, fig. 8). Release the button as soon as the engine starts and immediately open choke partially, easing to full open position as engine warms up.

(2) To stop engine, press stop button (7, fig. 6) mounted on fuel tank and hold firmly until engine stops. It is good practice to close fuel line shut-off cock so that gasoline will not leak out through carburetor.

b. Electrical circuit.—After the engine has been started, adjust the rheostat (8, fig. 8) to give proper charging rate which may be determined by the ammeter (9) in the switch box.

(1) When in operation, the charging panel (fig. 10) is hooked up to the generator and the socket panel (fig. 11) connected to the charging panel. The storage batteries are then connected by means of the cable provided. The current can be supplied to the lighting system either directly from the generator by flipping the generator switch (10, fig. 10), or the generator can be used to charge the batteries and the current supplied from the batteries.

(2) When the current is being supplied from the batteries, the generator can be operated to charge auxiliary batteries by flipping on the auxiliary charging switch (11, fig. 10).

6. Major units.—The generating unit M1 consists principally of a generator (figs. 6 to 9), a charging panel (figs. 10 and 13), three 6-volt, 120-ampere-hour storage batteries, a socket panel (figs. 11 and 14), and 28 lamps (twelve 3-candlepower, sixteen 21-candlepower) with the necessary extension cords and reflectors.

7. Generator.—*a.* The generator (figs. 6 to 9) is a portable, gasoline-driven, 650-watt, 12-volt, d-c generator, and is a weatherproof commercial unit.

b. A field rheostat (8, fig. 8) is mounted on the yoke to regulate the voltage output.

c. The switch box (6, fig. 8) contains a standard commercial ammeter (9), a 250-volt, 60-ampere fuse (12, fig. 9), and a standard commercial cut-out switch (20).

d. The unit is also equipped with a commercial, two-pole receptacle (13, fig. 7) with cover.

8. Charging panel.—*a.* The charging panel is installed in a steel cabinet. The contents and the circuit of the charging panel are illustrated in figures 10 and 13, and the wiring diagram in figure 15.

b. It contains the following equipment:

(1) A single-pole, 50-ampere toggle type generator switch (10, fig. 10). (Circuit breaker, to open circuit if overcharged.)

(2) A standard commercial 30-volt voltmeter (14).

(3) A standard commercial 50-ampere ammeter (15).

(4) A single-pole, 50-ampere toggle type auxiliary charging switch (11) to permit charging of auxiliary batteries. (Circuit breaker, to open circuit if overcharged.)

(5) A series rheostat (16) connected to the auxiliary charging switch to permit regulation of the voltage desired when charging an auxiliary battery.

(6) A dash or pilot lamp (17) and switch for same, to indicate the presence of voltage and to afford panel illumination at night.

(7) Six two-pole receptacles (18) and two binding posts for each receptacle. (Posts are for emergency purposes.)

(8) Three 0.4-ohm resistors (fig. 10) to prevent overcharge on lights.

c. The charging panel is connected to the generator by means of a 50-foot, two-conductor cable and plug assembly.

d. Two eyebolts (19, fig. 10) are fastened at the top of the panel box, one on each side to permit fastening to or hanging from the wall or other support provided.

e. The switches and receptacles are indicated by engraved lettering on the panel to facilitate the use of same.

9. Storage batteries.—*a.* The three 6-volt, 120-ampere-hour storage batteries, connected in parallel, are wired to the charging panel by means of three 9-foot, two-conductor cable and plug assemblies.

b. The cable has a two-pole plug connected at one end, which is plugged into the receptacle (18, fig. 10) provided in the charging panel, and at the battery end each conductor is soldered to a terminal that is connected to a battery clamp. One of these cables is also provided for an auxiliary battery.

c. A switch (20, fig. 9) which is part of the generator, contained in the switch box, acts as a reverse current cut-out to prevent the batteries from discharging through the generator when the unit is not operating (or when the engine runs out of gas).

10. Socket panel.—*a.* The socket panel as shown in figures 11, 14, and 16 is also installed in a steel cabinet and includes the following equipment:

(1) One two-pole receptacle (21, fig. 11) and binding post for same to provide a means of connecting to the charging panel.

(2) A dash or pilot lamp (22) and switch for same to indicate presence of voltage and to afford panel illumination at night.

(3) A standard commercial 15-volt voltmeter (23).

(4) A 50-ampere ammeter (24) similar to the one used in the charging panel.

(5) A single-pole, 50-ampere light switch (25) to disconnect all lamp circuits when the batteries are being charged. (Circuit breaker, to open circuit if overcharged.)

(6) Fourteen sockets (26) (double-contact automotive type) into which the extension cords are plugged.

b. Two metal instruction plates (27) are fastened onto the panel, reading as follows:

(1) "Do not turn on lights if voltage exceeds 6 volts."

(2) "Normal load: 7 3-cp lamps, .6 amps. each; 8 21-cp lamps, 2.5 amps. each. Maximum load: 3 batteries not to exceed 25 amps."

c. Two ¼-inch eyebolts (28) are fastened at the top of the cabinet, one on each side to permit fastening to or hanging from the wall or other support provided.

d. The socket panel is connected to the charging panel by means of a 25-foot, two-conductor cable and plug arrangement, having a plug connected at each end of the cable.

11. Lamps and accessories.—*a.* The number of lamps included in the equipment for the generating unit M1 is 28:

12 double-contact, 6–8 volts, 3-candlepower, 0.6 ampere.
16 double-contact, 6–8 volts, 21-candlepower, 2.5 amperes.

b. Six of the 3-candlepower and eight of the 21-candlepower lamps are utilized with the socket panel; the others are carried as spares.

c. Fourteen extension cords, each 15 feet long, connecting the lamps to the socket panel, are provided to facilitate the use of the lamps wherever needed. Each extension cord has a double-contact plug connected at each end. At the lamp end a double-contact socket, automotive type, is connected, and a 6-inch reflector is fastened to the socket by means of two hexagon nuts.

d. A hydrometer is furnished for testing the batteries.

12. Adjustments.—There are many things that may need adjusting or replacing if the generating unit fails to supply power to the batteries or light the lamps. The generator may be running, yet neither charging the batteries nor lighting the lamps, or the generator may fail to start, or perform properly.

a. In circuit.—(1) The generator may be running and charging the batteries yet not lighting the lights. In this case there may be defective wiring or switches, either in the socket or charging panel, or the batteries may not be hooked up properly. In either case a check through the circuit would easily determine the cause and the adjustment or replacement of same can be made.

(2) The generator may be running properly and not charging the batteries. There may be defective wiring from the generator or charging panel to the storage batteries, defective switches, poor contact, the batteries may be improperly connected, or the batteries themselves may have a dead cell and need replacing. A quick check through the circuit will easily determine the cause and the adjustment or replacement can be made.

(3) A hydrometer is provided to test the strength of the batteries. If any of the cells are dead the battery must be replaced.

b. Generating set.—(1) *Engine.*—The most important things to insure proper engine performance are ignition, carburetion, and compression. If the engine does not start or perform properly, look

for trouble in this order but always examine the spark plug first, after being sure there is gasoline in the fuel tank.

(2) *Spark plug.*—Failure of the plug (29, fig. 6) may be due to improper adjustment of points (0.022 inch is correct), to a piece of carbon across the points, or to cracked or dirty porcelain. If points are badly worn, replace with a new plug.

(*a*) To test the plug, place it so the steel body contacts (is grounded on) the engine frame at any point. Then spin engine to see if plug fires. A plug will sometimes fire in the open but will not fire under compression. For this reason, in locating trouble, it is always well to insert a new plug, thereby eliminating the possibility of being misled by a plug firing in the open but failing under compression.

(*b*) If the new plug fires in the open but apparently fails under compression, look for trouble due to weak ignition. (See (3) below.)

(*c*) Always use recommended plug or equal as this has been found through exhaustive tests to operate best in engines of this type. Spark plugs are made in a wide range of types to suit the temperature requirements of different engines. It is extremely important that a spark plug of the proper heat range be used.

(*d*) If spark plug is very wet it indicates excess fuel in cylinder. In such case, spin engine with choke off (wide open) and plug removed. Then insert rag or end of stick through spark plug hole and wipe cylinder head dry. Clean and dry spark plug.

(*e*) Fouling of the plug is caused by an excess amount of oil or an unsatisfactory type or grade of oil. For listing of correct oils see paragraph 13*b*(2). Too rich a setting of carburetor tends to foul plug and causes excess carbon.

(3) *Ignition.*—The ignition system (fig. 1) of the generating unit MI includes a high-tension flywheel type magneto. The spark should jump a gap of at least ¼ inch when the engine is spun quickly. The only adjustment in the ignition system is at the interrupter points which should be inspected occasionally to see that the gap is 0.020 inch with points wide open. To make this adjustment proceed as follows:

(*a*) Remove starting pulley end cap (1, fig. 7) to expose interrupter points (30, fig. 1).

(*b*) Turn flywheel until points are wide open. (Removal of the spark plug permits turning the flywheel easily as there is then no compression.) Loosen clamp screw (31, fig. 1), clean and file points, and set at 0.020 inch. Tighten clamp screw after adjusting.

(4) *Carburetor.*—(*a*) Keep strainer (32, fig. 2) in fuel inlet connection on top of carburetor bowl free from sediment. When this strainer is being inspected. it is good practice to open fuel line shut-

off cock (3, fig. 6) under fuel tank to make certain there is a free flow of fuel to carburetor. If fuel does not flow freely, remove shut-off cock and inspect strainer in fuel tank.

(*b*) The carburetor is furnished with a concealed needle valve which is set properly at the factory and seldom if ever requires readjustment. In case of carburetor trouble, before changing the needle valve setting, make sure that fuel flows freely to carburetor by inspecting both strainers as explained in (4) above.

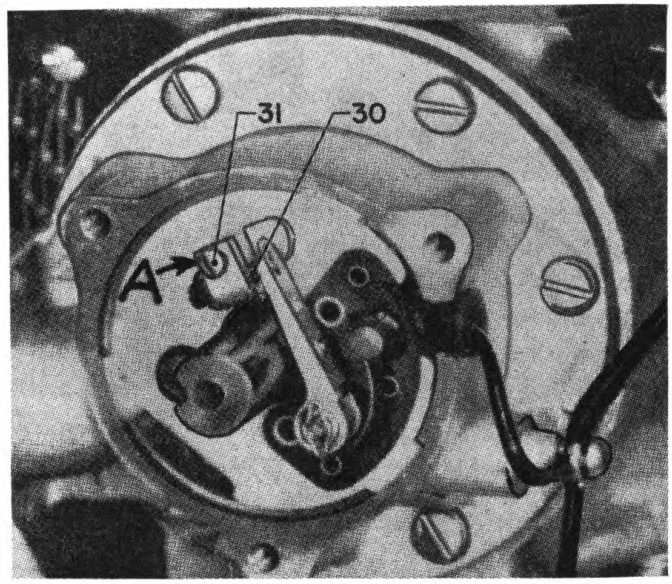


FIGURE 1.

(*c*) Where readjustment of carburetor is found necessary, the plug screw (33, fig. 2) at bottom of needle valve assembly should be removed and the packing nut (34) should be loosened slightly. (Hold gland nut (35) with wrench when loosening packing nut.) The needle valve which is concealed in packing nut can now be adjusted by inserting small screw driver in its slotted head (36, fig. 7). Turn clockwise for leaner mixture or counterclockwise for richer mixture. If the needle valve is completely out of adjustment the correct setting is approximately 1½ turns from the closed position. (Do not screw needle valve hard against seat as this will damage both valve and seat.) The engine can be started with this setting.

(*d*) The proper setting of the carburetor can be obtained only when engine is warm and operating under full load, which means the full electrical output of the generator. To obtain this condition the needle valve should be turned clockwise to lean mixture until engine speed just begins to fall off. (This can be noted by the sound of the ex-

haust.) Then turn the needle valve back, counterclockwise, very gradually until engine reaches full speed. The proper setting is approximately one-eighth turn richer than the leanest point at which maximum speed is obtained. (A slightly richer setting of one-eighth to one-fourth turn is advisable in extremely cold weather.)

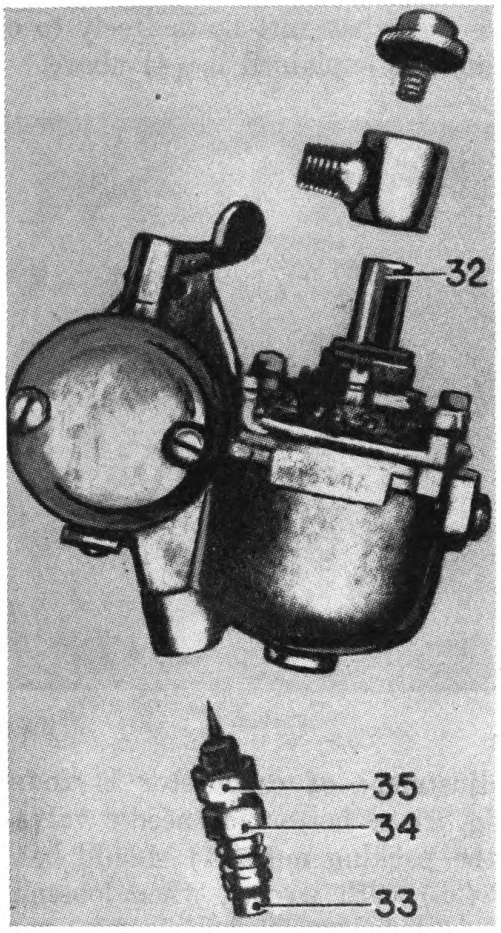


FIGURE 2.

(*e*) The engine will operate at full speed even when the carburetor is set considerably too rich, but under this condition poor fuel economy is obtained and excessive carbon is formed. For this reason the carburetor should be set near the lean side.

(*f*) After the needle valve is properly set, be sure that it does not turn when packing nut is tightened. Hold needle valve from turning with screw driver as packing nut is tightened.

(*g*) The needle valve and possibly the nozzle against which it seats may require replacement after considerable use. If the needle valve appears worn and difficulty is experienced in adjusting, replace. If

carburetor leaks, remove float bowl cover (37, fig. 7) and inspect float lever pin, inlet needle, and seat. Replace if worn.

(5) *Carbon removal.*—It is highly important that the cylinder ports (fig. 3) be kept free from carbon since an excess of carbon will reduce the engine power to a marked degree. To remove the carbon proceed as follows:

(*a*) Remove the muffler (38, fig. 6) and scrape the exhaust ports and head of piston by working through the exhaust ports with carbon scraper (fig. 3). Also scrape cylinder head by working through the

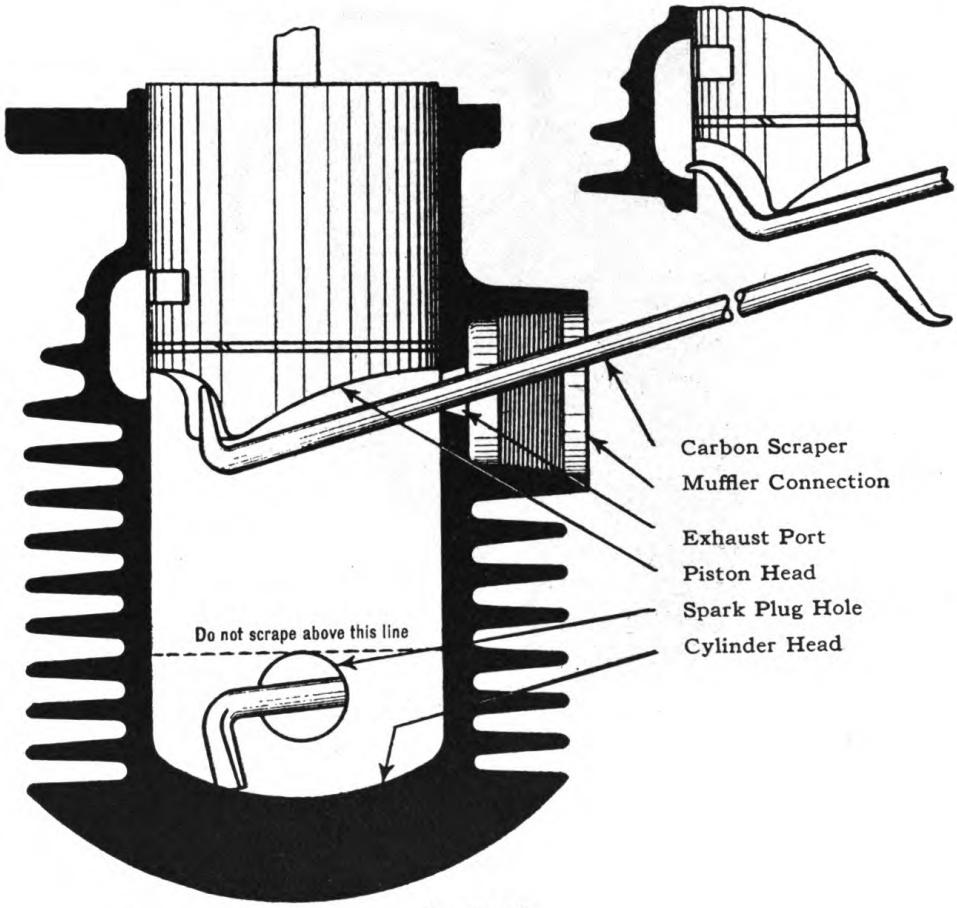


FIGURE 3.

spark plug hole. Spin the engine several times with plug and muffler removed to blow out loose carbon.

(*b*) If the exhaust ports are heavily choked with carbon, it indicates that there is a heavy carbon deposit on piston and cylinder head. In such cases it is advisable to remove cylinder for a thorough cleaning job. It is merely necessary to remove the four bolts (39, fig. 7) holding the cylinder to crank case and drop cylinder.

(*c*) With certain oils a carbon deposit will build up on the piston walls to such an extent that it may cause the engine to slow down and lose power. Such carbon deposit should be removed.

(6) *Piston ring.*—Ring (40, fig. 4) should be free in the groove. If a ring sticks, it should be removed and the carbon scraped from the ring groove before replacement with properly cleaned old ring or with new ring in the event the old ring is badly worn.

(*a*) When replacing piston ring, to avoid breaking, place ring around piston (fig. 4) with opening opposite intake ports (41), start-

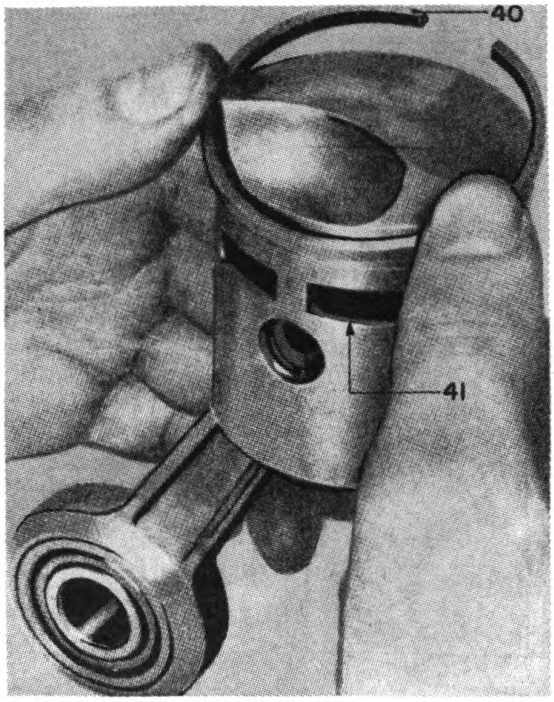


FIGURE 4.

ing ring in groove above intake ports. Then press ends of ring down around piston until they fit into the groove. Then turn ring to proper position where ends butt against locating pin. (Clearance is allowed between ends of ring and pin for expansion due to heat.)

(*b*) In reassembling piston in cylinder make sure that the intake ports of piston are on the same side as the intake ports in cylinder. While fastening cylinder to crankcase, piston should be at top dead center to aline cylinder gasket.

(7) *Governor.*—(*a*) No adjustments are to be made on the governor. Each governor is set exactly for the requirements of the individual unit, and should not require any attention during the life of the engine. Although to all appearances governors may look the same,

there is nevertheless a difference in the weights and springs used which control the engine speed. The springs are not common springs which may be purchased readily but are special heat-treated springs individually tested.

(*b*) Governors must be ordered as complete assemblies. Parts of the governors may not be purchased separately. It is necessary to give the serial number of the generator for which the governor is required.

(8) *Generator.*—The generating part of the unit may fail to generate current, deliver the rated output, or it may arc at the brushes. If any of these things happen, an adjustment or replacement is necessary. The trouble may be caused by improper adjustment of the rheostat, dirty commutator, worn-out brushes, brushes out of adjustment, broken connections, etc. A thorough check-up on the generator should reveal the cause, and the adjustment or replacement may then be made.

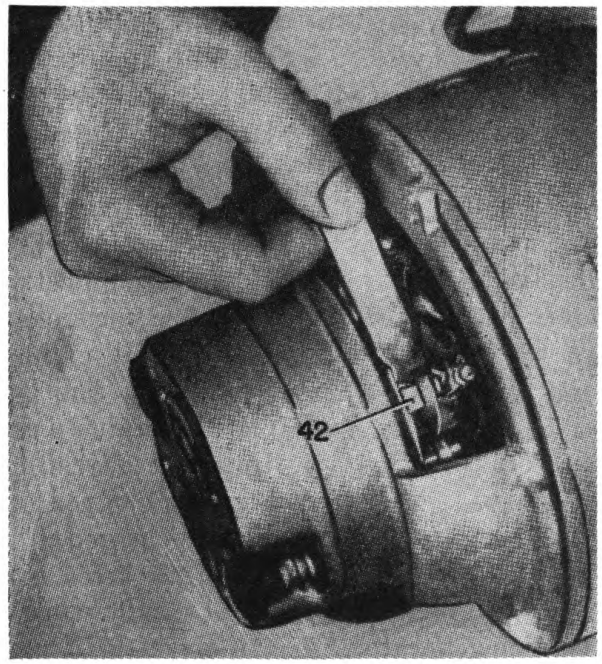


FIGURE 5.

(9) *Commutator.*—To clean commutator (fig. 5) insert a piece of fine sandpaper (not emery) beneath one of the brushes (42, fig. 16) with engine running. The tension of the brush spring will give the necessary pressure for cleaning the commutator. It is necessary to hold one end of the sandpaper to prevent its being carried around by the commutator.

(10) *Trouble chart.*—Following is a trouble chart to be used for a quick check-up when the generator fails to start or perform properly:

(*a*) *Engine.*—Fails to start; hard to start; runs and stops; not up to speed; overheats.

1. Defective spark plug.	*1.* Wrong type. Cracked or dirty porcelain. Carbon across points—remove and clean. Points too close or too wide—adjust to 0.022 inch. Wet from flooded engine—wipe dry.
2. Fuel supply.	*2.* No fuel in tank. Strainer in tank clogged. Fuel line clogged. Water or dirt in fuel.
3. Ignition.	*3.* Breaker points out of adjustment—adjust to 0.020 inch. Breaker points pitted—file or replace. Broken spark plug cable. Loose connections. Coil defective (very rare). Magnet weak (very rare). Condenser defective (very rare).
4. Carbon.	*4.* Cylinder ports clogged. Piston and cylinder head carbonized. Carbon built up on piston walls.
5. Carburetor.	*5.* Improper adjustment. Strainer clogged. Nozzle clogged. Float stuck. Float needle worn.
6. Overload on generator.	*6.* Capacity on name plate.

(*b*) *Generator.*

1. Arcing at brushes.	*1.* Dirty commutator. Worn-out brushes. Brushes out of adjustment—loosen terminal post nuts, line up marks on terminal plate and brush head.

2. Fails to generate current.	*2.* Brushes stuck—free up. Rheostat fully cut in. Worn-out brushes. Dirty commutator. Broken connections. Defective armature (very rare). Defective coils (very rare). Demagnetized field (very rare).
3. Fails to deliver rated output.	*3.* Rheostat incorrectly adjusted. Engine not up to speed. Dirty commutator. Worn brushes. Brushes out of adjustment.
4. Batteries fail to take charge.	*4.* Dead cell. Defective switch or wiring. Reversed leads.

13. Care and preservation.—*a. Precautions.*—The following precautions should be taken when using the generating unit M1:

(1) Never run the engine unless the unit is free to float on the four shock-absorbing foot springs (43, fig. 8). This is very important. If a wood base is to be used, fasten securely with screws or nails through the foot-spring eyes (thereby allowing springs to work freely).

(2) When the generator is used in an indoor installation the muffler tail pipe (44, fig. 6) should be provided with flexible tubing, connected to solid pipe, if necessary, to conduct the gases outside. Under no condition should a rigid connection be made from the muffler since the unit must be free to "float" on spring feet to absorb vibration. The motor must in no event be allowed to exhaust into closed buildings.

(3) Keep breaker points set at 0.020 inch.

(4) Always use a C–7 spark plug or equal.

b. Lubrication.—(1) The generator engine is a self-lubricating engine. Lubrication is obtained by mixing oil with gasoline, and it is extremely important that the oil is thoroughly mixed with the gasoline.

(2) Exhaustive tests have shown SAE No. 40 motor oils as being best suited for these engines. Mix thoroughly ½ pint SAE No. 40 motor oil with each gallon of gasoline used.

(3) The generator end requires no lubrication between overhaul periods.

c. Handling and transportation.—(1) The generating unit M1 is not exactly a delicate instrument, but care should be exercised in the handling and transportation of same.

(2) The generator is provided with a handle (45, fig. 8) so that it may be carried. All nuts and screws should be securely fastened before the generator is put into use to avoid vibration of the unit as much as possible.

(3) The panels are built in steel cabinets so that they may be transported without damage to the instruments and wiring within. Care should be exercised to see that they are securely fastened to or hung from the wall or other support provided.

(4) A metal box is provided for the lamps, cable and plug assemblies, reflectors, and the hydrometer. These accessories should be kept in the box when being transported or when not in use.

14. Data.—*a. Generating unit.*—General data pertaining to the generating unit used are as follows:

Model shown	Homelite SS–12.
Power	650 watts.
Voltage	12 volts.
Engine	One cylinder, gasoline-driven.
Fuel	Gasoline mixed with oil. (Mix ½ pint SAE No. 40 motor oil with each gallon of gas.)
Lubrication	Self-lubricating.
Ammeter	0–30 amperes.
Ignition	High-tension flywheel type magneto.
Receptacle	Ever-Lok type.
Spark plug	C–7 or equal.
Fuse	250 volts, 60 amperes.
Generator	Shunt wound.

b. Charging panel.—The following data pertain to the charging panel and cabinet:

Cabinet size	14¼ by 13¾ by 8½ inches.
Voltmeter	0–30 volts.
Ammeter	0–50 amperes.
Rheostat	1.25 ohms, 22–11 amperes.
Resistors	0.4 ohm.
Circuit breaker	Single-pole, 50 amperes, De-Ion Flush Style.

Dash lamp	Double-contact, automotive type.
Receptacles	Two-pole, with covers—30 amperes, 125 volts, polarized.
Toggle switch	Culver-Stearns' No. G–751 or equal.

c. Batteries.—The voltage and rating of the storage batteries are as follows:

Voltage	6 volts.
Rating	120 ampere-hours.
Type	Medium.

d. Socket panel.—The type and size of equipment used in the socket panel are as follows:

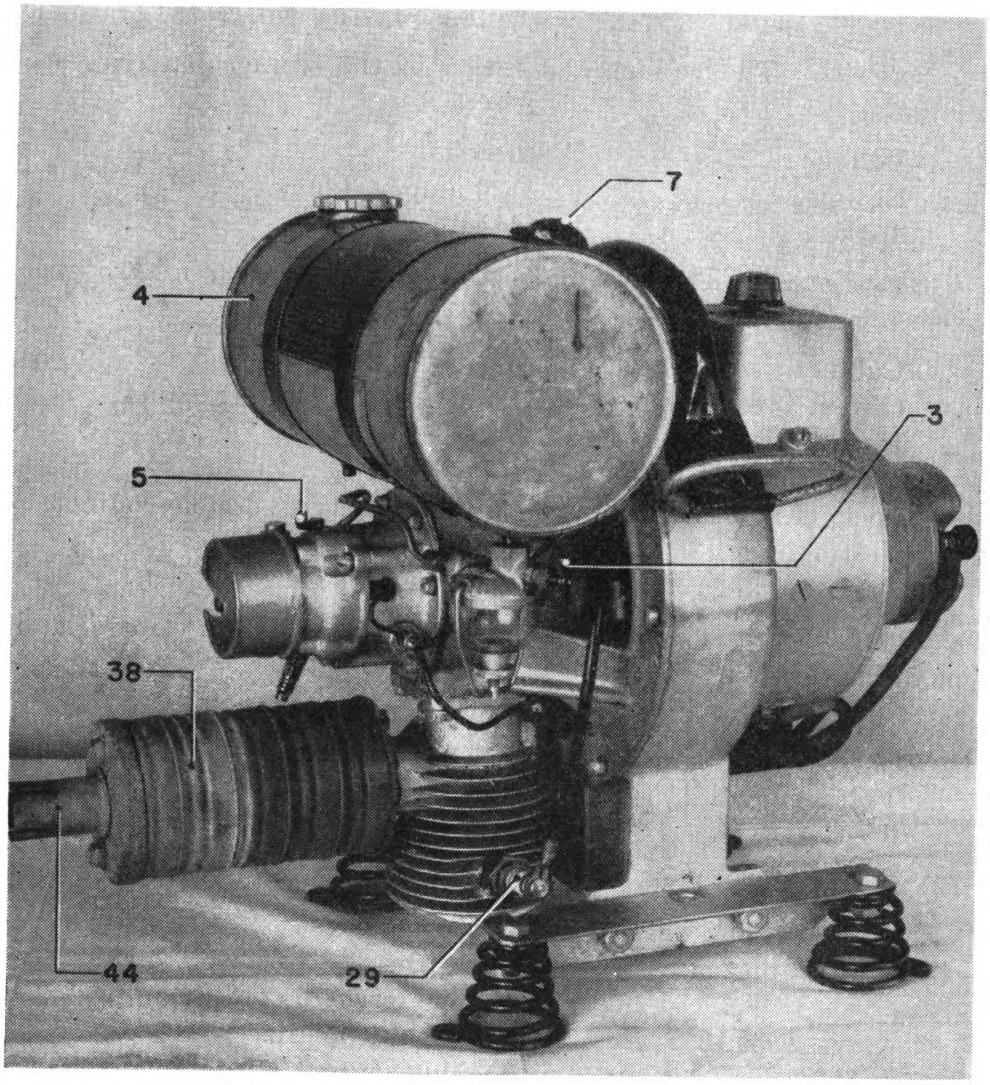
Cabinet size	14¼ by 13¾ by 8½ inches.
Circuit breaker	Same as on charging panel.
Dash lamp	Do.
Receptacles	Do.
Sockets	Automotive type, double-contact.
Voltmeter	0–15 volts.
Ammeter	Same as on charging panel.

e. Lamps and accessories.—(1) *Lamps.*—The number, voltage, and type of lamps are as follows:

Number used	(3-cp, 0.6 ampere) 6.
Do	(21-cp, 2.5 amperes) 8.
Voltage	6–8 volts.
Type	Automotive, double-contact.

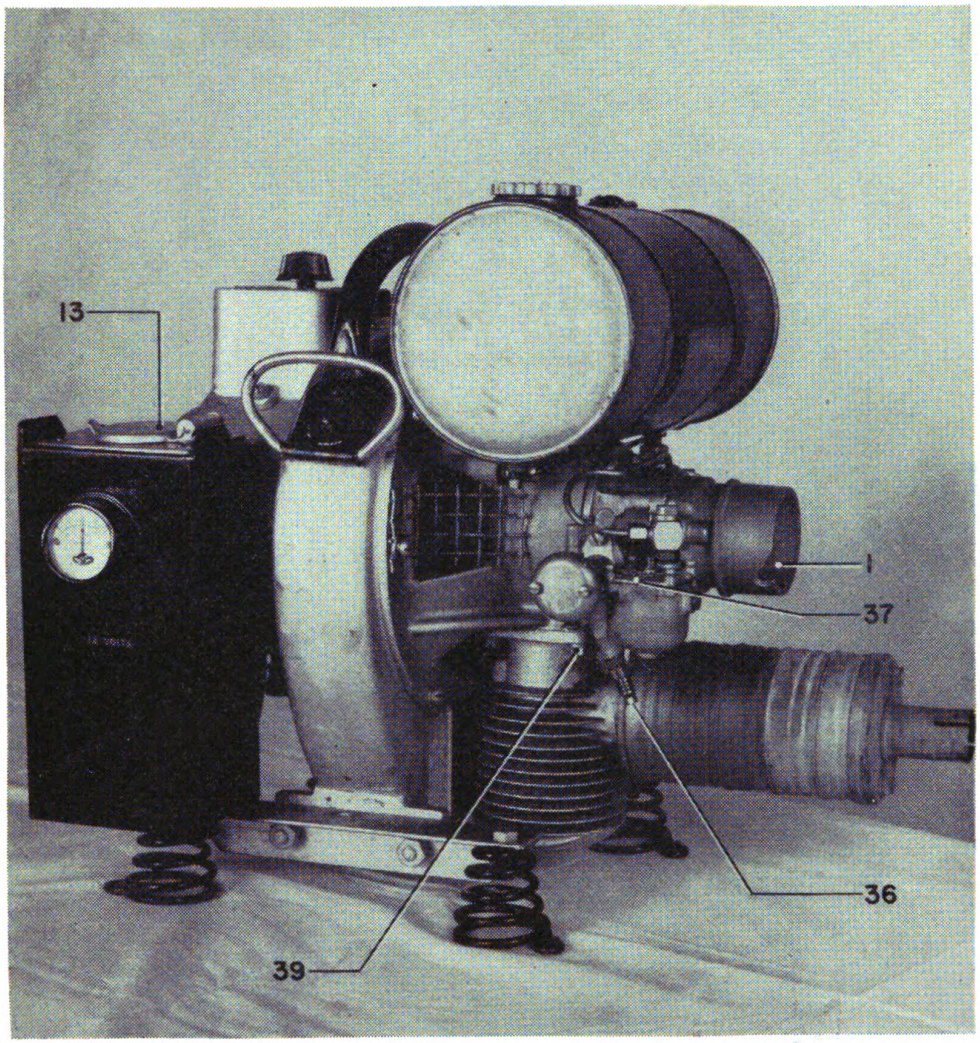
(2) *Accessories.*—The data on cables, plugs, sockets, and reflectors are as follows:

Type cable	No. 10 and No. 18 (No. 18 used for extension cord).
Plugs	Two-pole, polarized.
Do	Double-contact, automotive type (used with extension cord).
Sockets	Double-contact, with hexagon check nuts.
Reflectors	6-inch, nickel plated, commercial.
Battery clamps	Electric Storage Battery Company's No. 66 or equal.
Terminals	Electric Storage Battery Company's No. 20771 or equal.



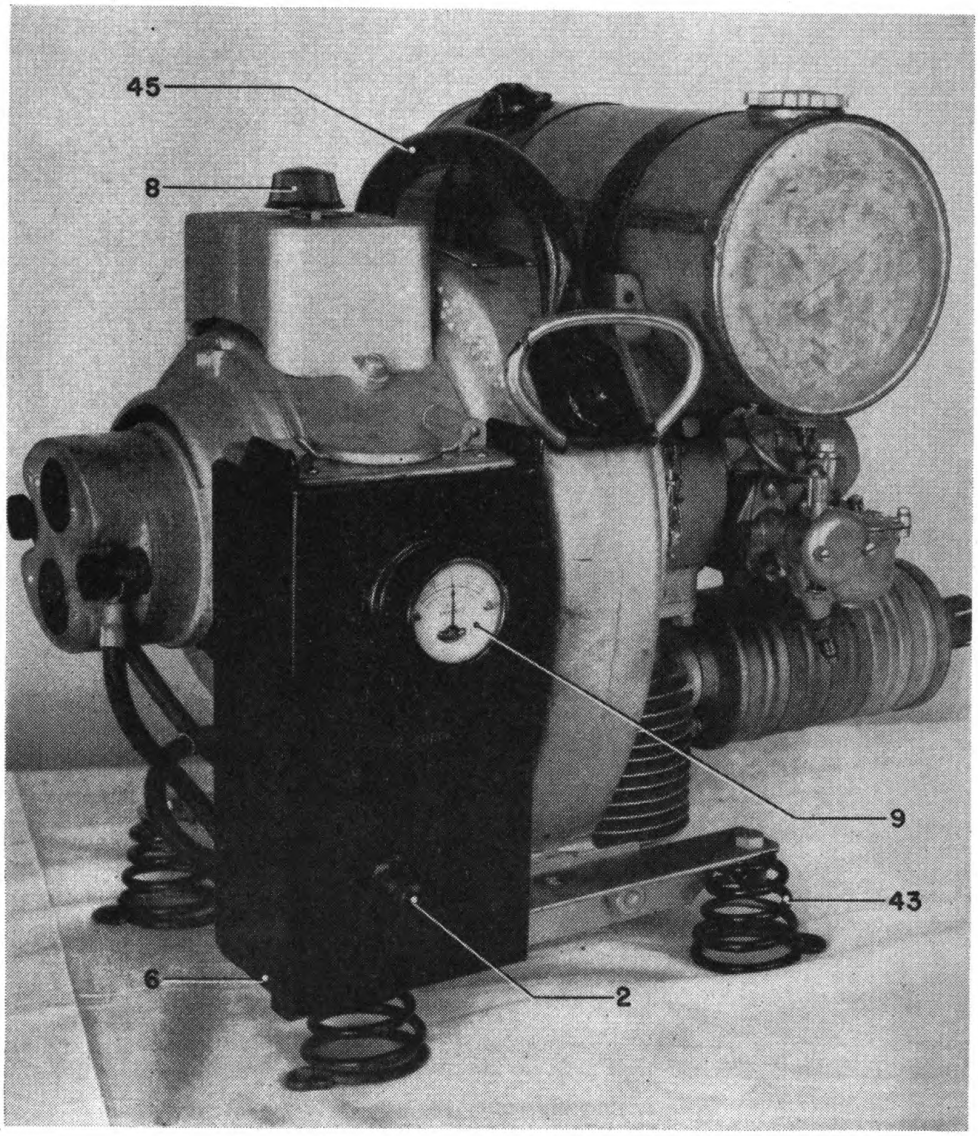
3. Fuel line shut-off cock.
4. Fuel tank.
5. Carburetor choke.
7. Stop button.
29. Spark plug.
38. Muffler.
44. Muffler tail pipe.

FIGURE 6.—Generating unit M1—rear view.



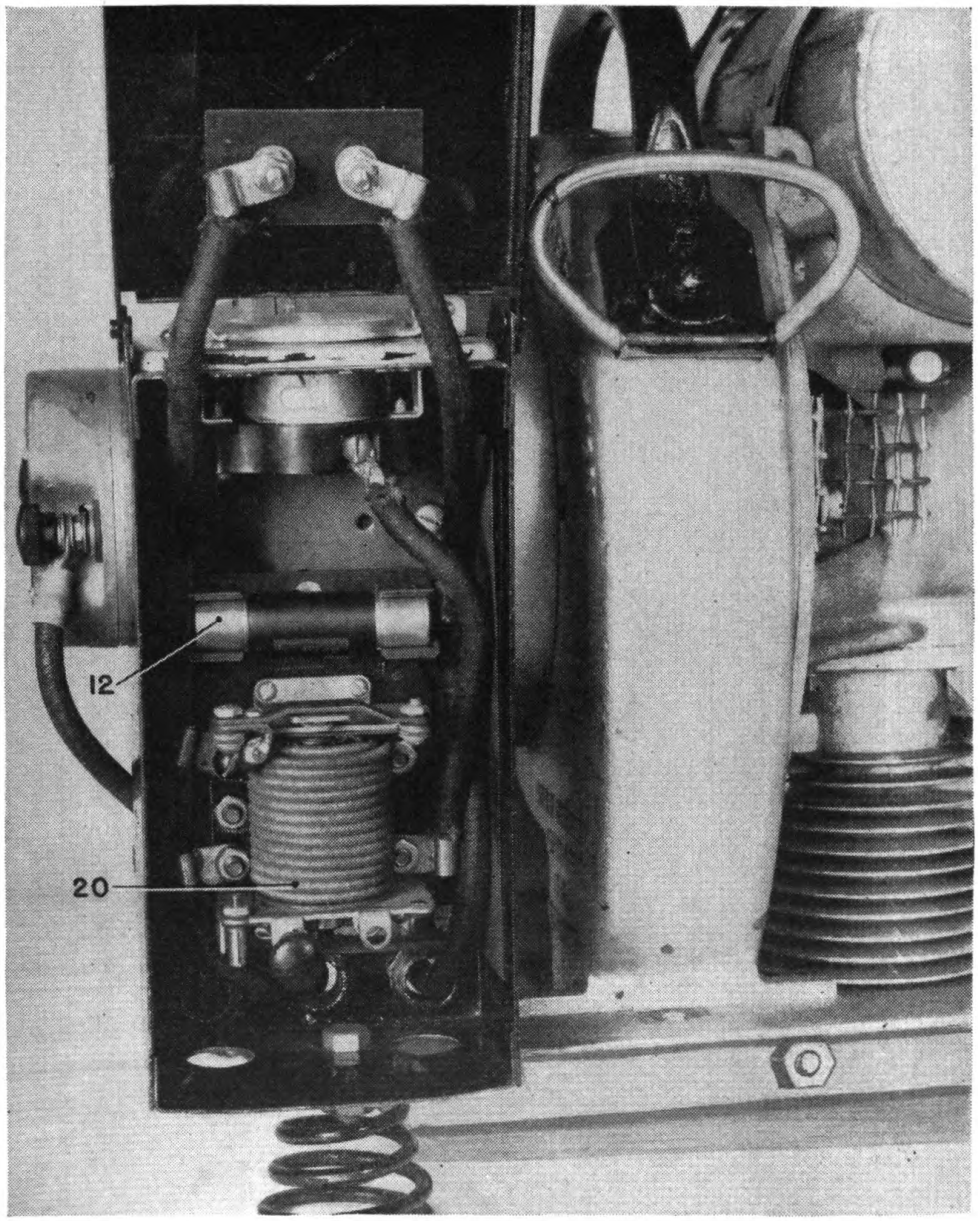
1. Starting pulley.
13. Ever-Lok receptacle.
36. Slotted head of needle valve.
37. Float bowl cover.
39. Bolt.

FIGURE 7.—Generating unit M1—front view.



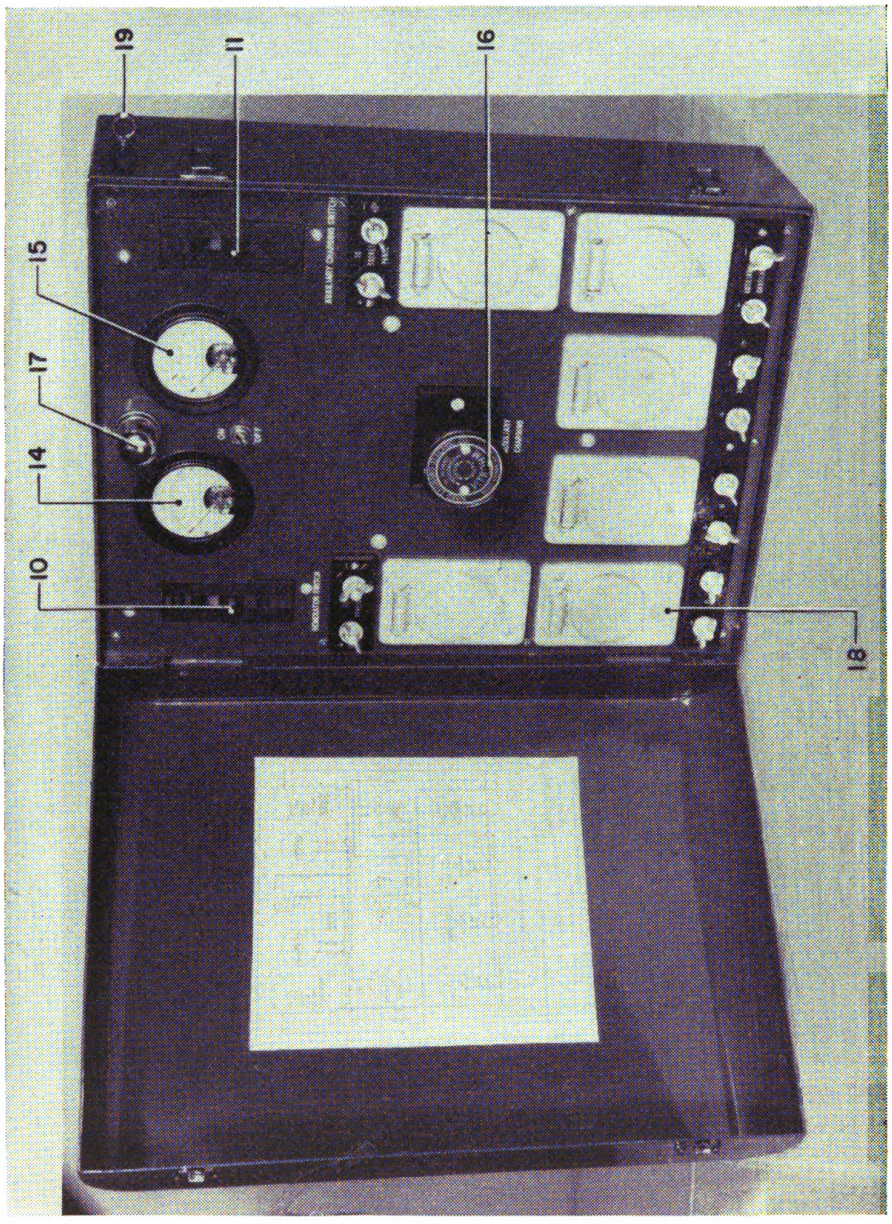
2. Starting button.
6. Switch box.
8. Rheostat.
9. Ammeter.
43. Shock-absorbing springs.
45. Handle.

FIGURE 8.—Generating unit M1—generator end.



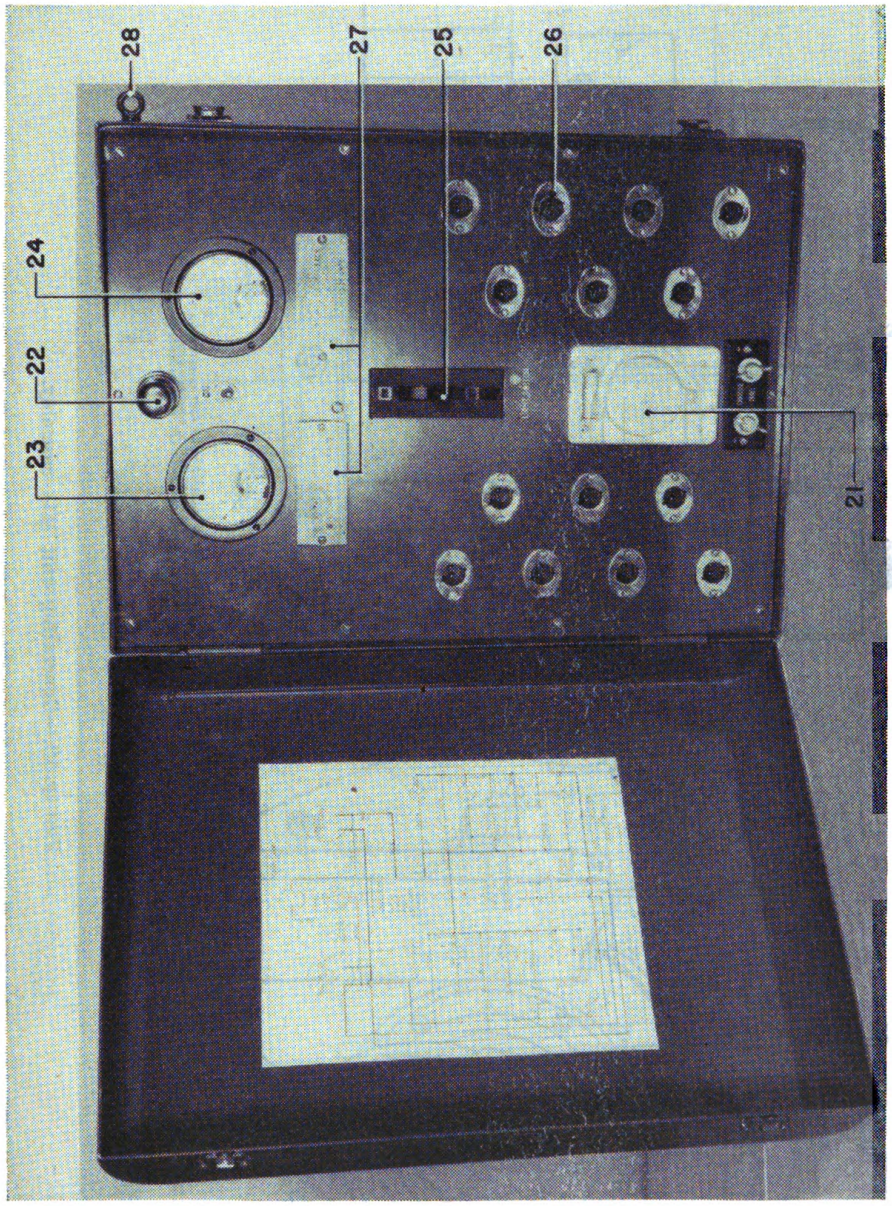
12. Fuse.
20. Cut-out switch.

FIGURE 9.—Generating unit M1—switch box.



10. Generator switch.
11. Auxiliary charging switch.
14. Voltmeter.
15. Ammeter.
16. Auxiliary charging rheostat.
17. Dash lamp.
18. Receptacle, with cover.
19. Eyebolt.

FIGURE 10.—Generating unit M1—charging panel.



21. Receptacle, with cover.
22. Dash lamp.
23. Voltmeter.
24. Ammeter.
25. Light switch.
26. Socket.
27. Instruction plates.
28. Eyebolt.

FIGURE 11.—Generating unit M1—socket panel.

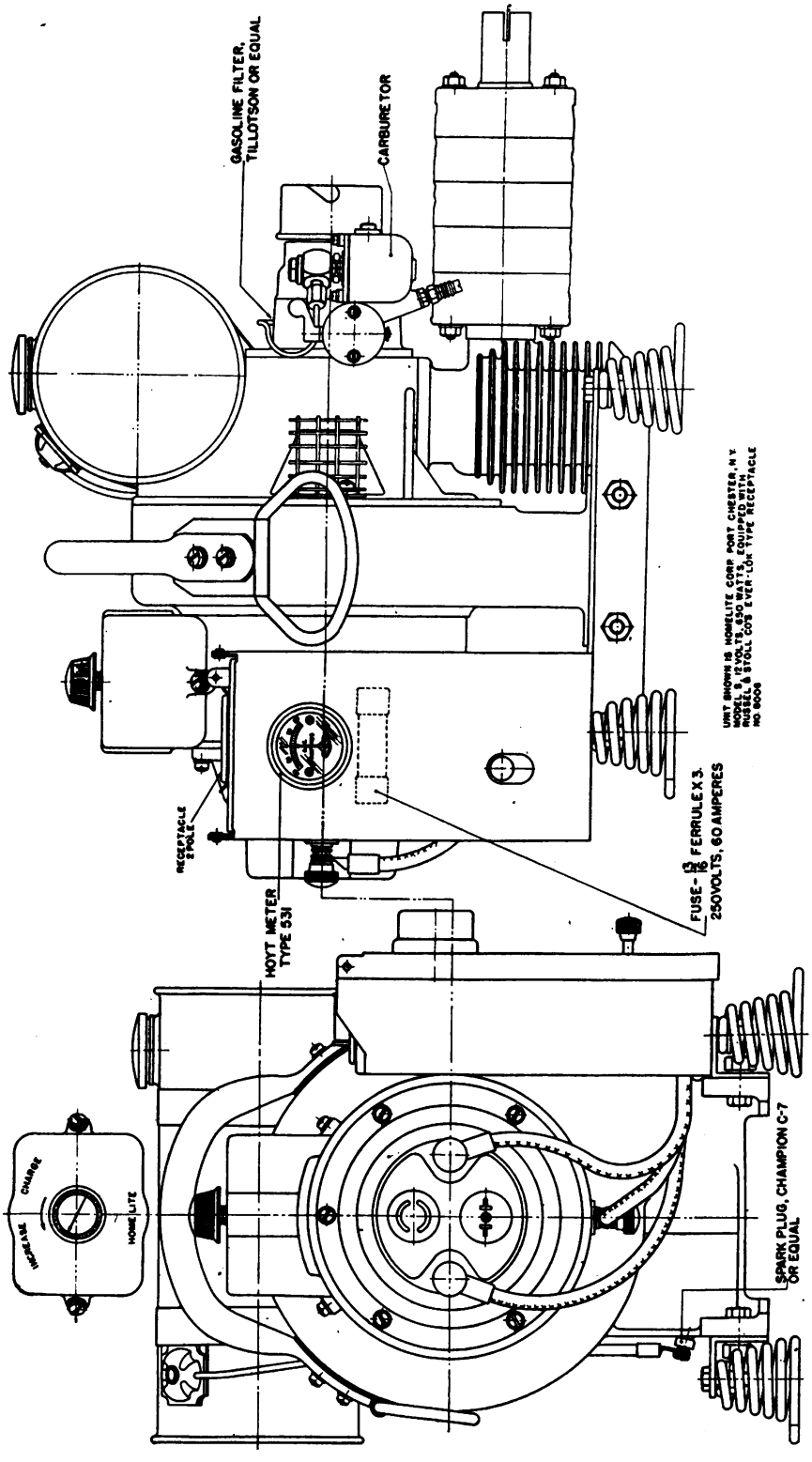


FIGURE 12.—Generating unit M1—assembly.

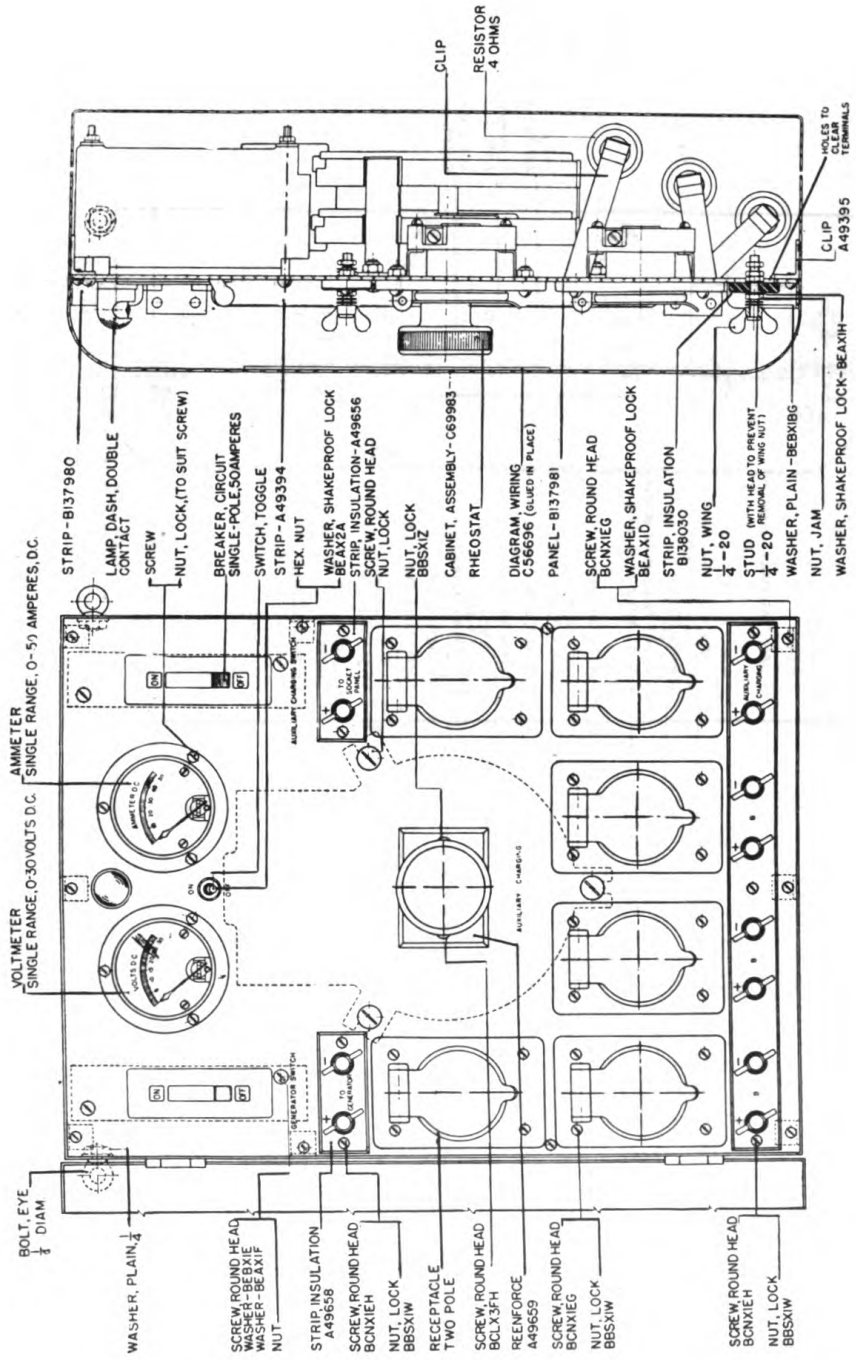


FIGURE 13.—Generating unit M1—charging panel.

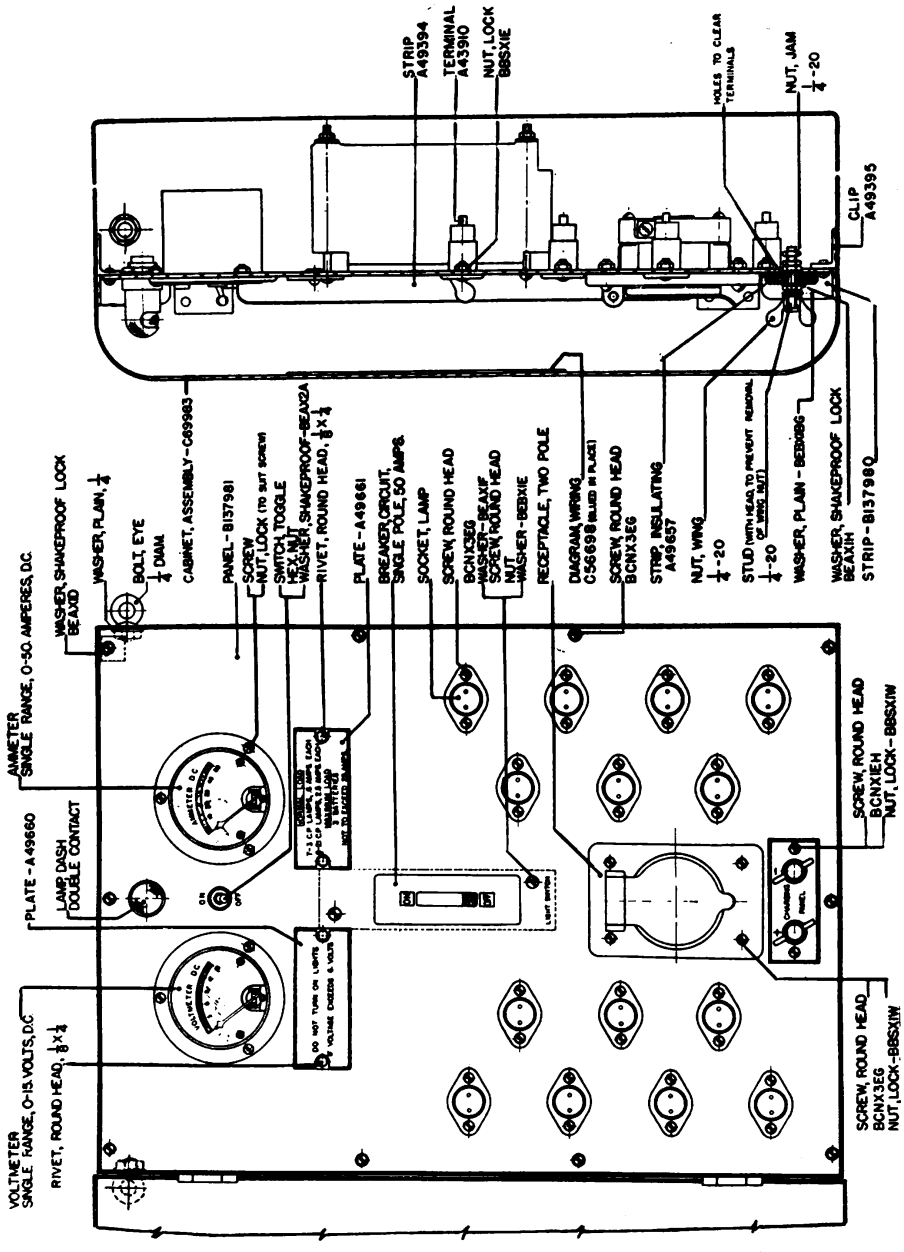


FIGURE 14.—Generating unit M1—socket panel.

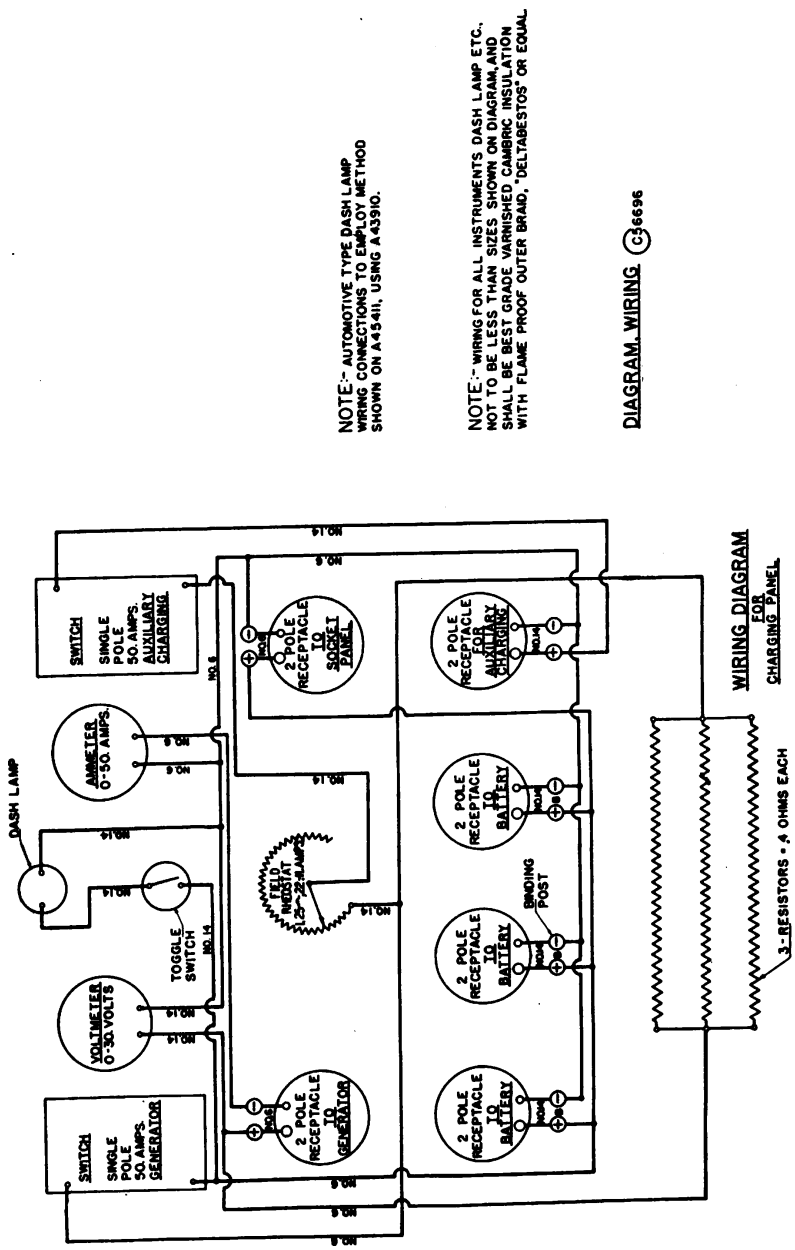


FIGURE 15.—Wiring diagram—charging panel.

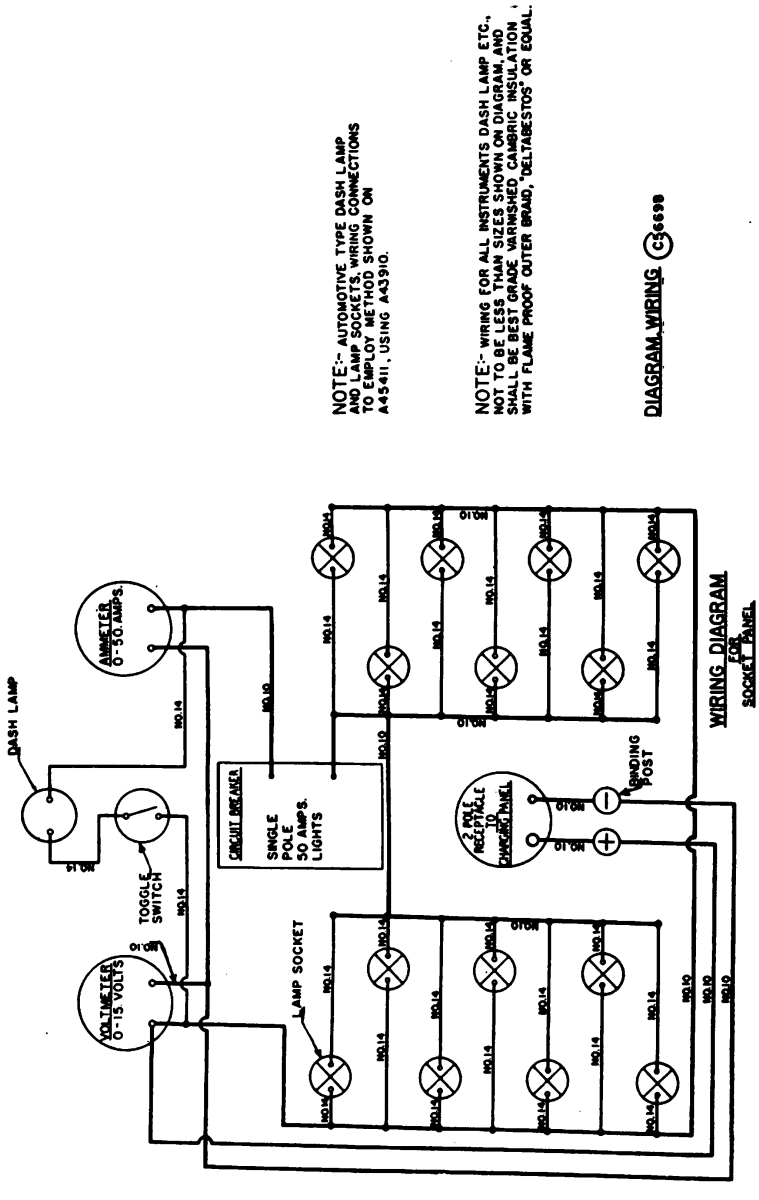


FIGURE 16.—Wiring diagram—socket panel.

APPENDIX

LIST OF REFERENCES

Standard Nomenclature List.

Unit, generating, M1---------- SNL M–1

[A. G. 062.11 (2–8–41).]

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(For explanation of symbols see FM 21–6.)

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