

CARD MATCHING DEVICE

General—The Card Matching Device is an attachment for the Horizontal Sorter which is used to select matched cards from a group of cards by means of contrasting corner cuts, or from a punched hole. This device may be readily installed on any horizontal sorting machine.

A representative use is the reconciliation of bank statements for tabulating card checks. A punched duplicate of each check is created on a square corner card and retained in the tabulating department. The original checks (distinguished by a corner cut) when returned are sorted along with the duplicates in check number sequence. They are then matched; the paired originals and duplicates fall into the 12 pocket, while the duplicates not preceded by original checks fall into the R or reject pocket. The latter unmatched cards represent outstanding bank checks.

The foregoing general description requires an offset brush holder and also that the detail cards have a 3/8" 45° corner cut. The cards are fed face down with the "9" edge toward the feed rolls with the detail cards in advance of the master cards.

Master card matching may also be accomplished by a twelve perforation in the detail cards, in which case it is not necessary to use an offset brush holder, as any predetermined column may be punched with this twelve perforation. The regular sorting brush would be used.

NOTE—When placing cards in the card magazine to be matched, operator must check to see that the first card to go through machine is a detail card, otherwise the first card will be sorted incorrectly.

Principle of Operation—The detail and master cards should be first sorted into class or identification number groups by placing the master cards ahead of the detail cards. This is standard sorting procedure.

Replace the regular card brush holder with the offset brush holder provided and set same on either the first or last column to correspond with cut corner on the detail card. If a 12 perforation is used to identify the detail cards, set the regular brush holder in the predetermined column selected for the 12 perforation.

Place sorted master and detail cards in the magazine face up with the "9" edge leading, turn matching device switch to its "ON" position and depress start key. Cards sorted into the "12" pocket represent detail cards followed by a single master card. All cards rejected represent master cards for which there were no detail cards.

Units—The Matched Card Matching Device consists essentially of the following:

- 1 MCI relay
- 1 Commutator Assembly MCIR
- 1 Control Switch
- 2 Resistances.

The relay and resistances are mounted inside of the standard relay cabinet. The switch is mounted on the right hand end cover. The MCIR commutator and brush holder assembly are mounted on the rear of the machine adjacent to the card feed worm gear housing.

Circuit Description—Wiring diagram (Fig. 3) shows the complete wiring of circuits for the Horizontal Sorter equipped with the master card matching device.

All sorting and total card counting circuits remain the same as heretofore, the only difference being the addition of the card matching control circuit which functions as follows:

When a corner cut or 12-punched detail card passes under the brush, the sorting magnet will be energized in the usual manner as the card brush makes contact at "12" and this card will pass into the "12" pocket. At the same time the card brush makes contact the MCIR setup brush completes a circuit through MCIR commutator, common brush, switch, relay coils, R-6 resistance and 1 ampere fuse.

During the first cycle this latter circuit energizes the coils of MCI relay closing its points which will complete a holding circuit from 1 ampere fuse, R-6 resistance, MCI relay coils, switch, common brush, holding brush, R-5 resistance, MCI relay points, main switch. The MCI holding circuit remains closed until after the 12 position of the second or following cycle. During this second cycle if the card has a square corner or is not punched with a "12" in the controlling column, the card

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brush circuit will not be completed at "12" and the card would normally be rejected, but in this case the MCI setup brush will make contact at "12" completing a circuit from the MCI commutator, setup brush, R-1 resistance, sorting magnet and 1 ampere fuse, energizing the sorting magnet until the MCI holding brush opens the circuit on this second cycle. This card will be sorted into the "12" pocket with its preceding detail card.

After the MCI holding circuit has been broken on any cycle following the last detail card, it will not be energized again except from the card brush circuit. This latter condition explains why a second master card not preceded by a detail card will be rejected.

Adjustments—1. Adjust MCIR commutator brushes to have 3/16" projection from the holder.

2. Time MCIR commutator in accordance with chart shown on wiring diagram, Fig. 3.

3. Time special selecting commutator holding brush in accordance with chart shown on wiring diagram, Fig. 3.

4. MCI relay should be adjusted for .005" clearance between armature and cores, and .005" clearance between points.

5. Time the special offset card brush so that when the index indicator is set on the first or last column according to customer's requirements, the card brush will make contact at the edge of the cut corner when the card is 1/64" to 1/32" under the #11 chute blade.

Installation—Four holes should be drilled in left side of relay cabinet to accommodate two special resistance coil panels as shown in Fig. 1.

Remove stud and spring cover from rear side rail and remove cover assembly, as shown in Fig. 2.

Install mechanism bracket assembly complete, including MCI commutator, also brush holder assembly. (See Fig. 2).

Replace selecting commutator brush holder with special brush holder.

Install new worm shaft cover.

Install cable assembly and connect same as shown on diagram, Fig. 3.

FIG-1

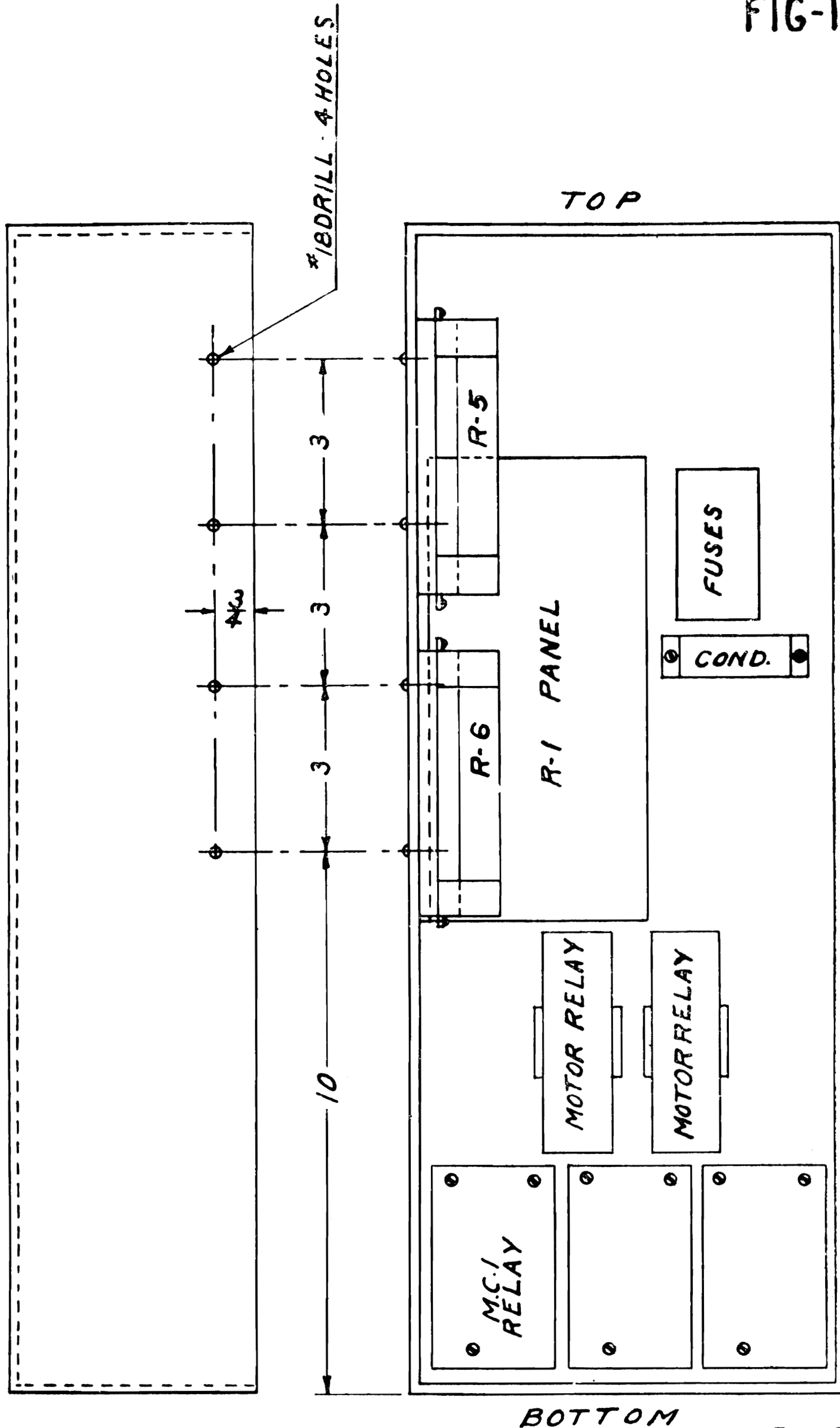
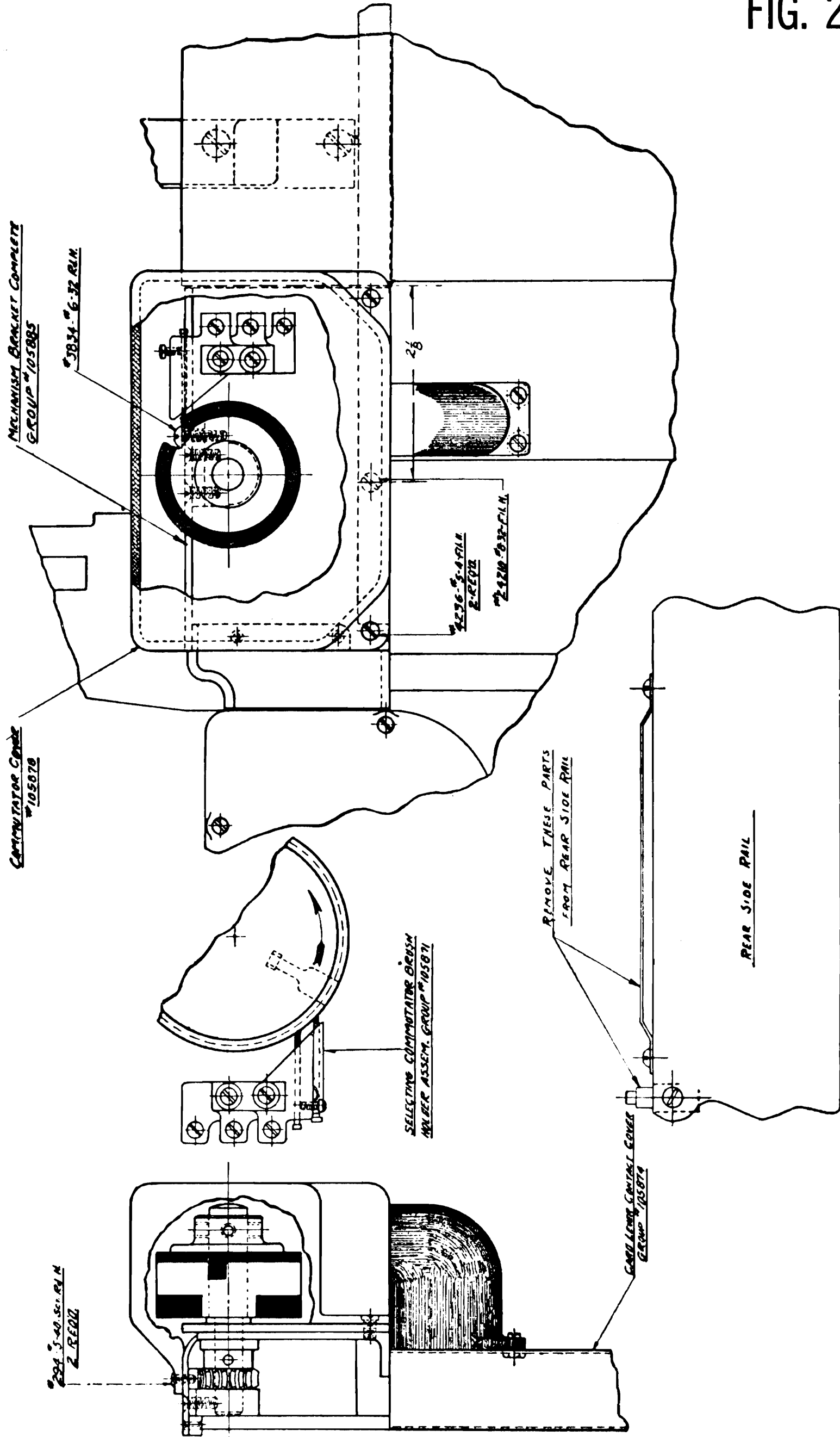


FIG. 2



HOLDING
COMMON

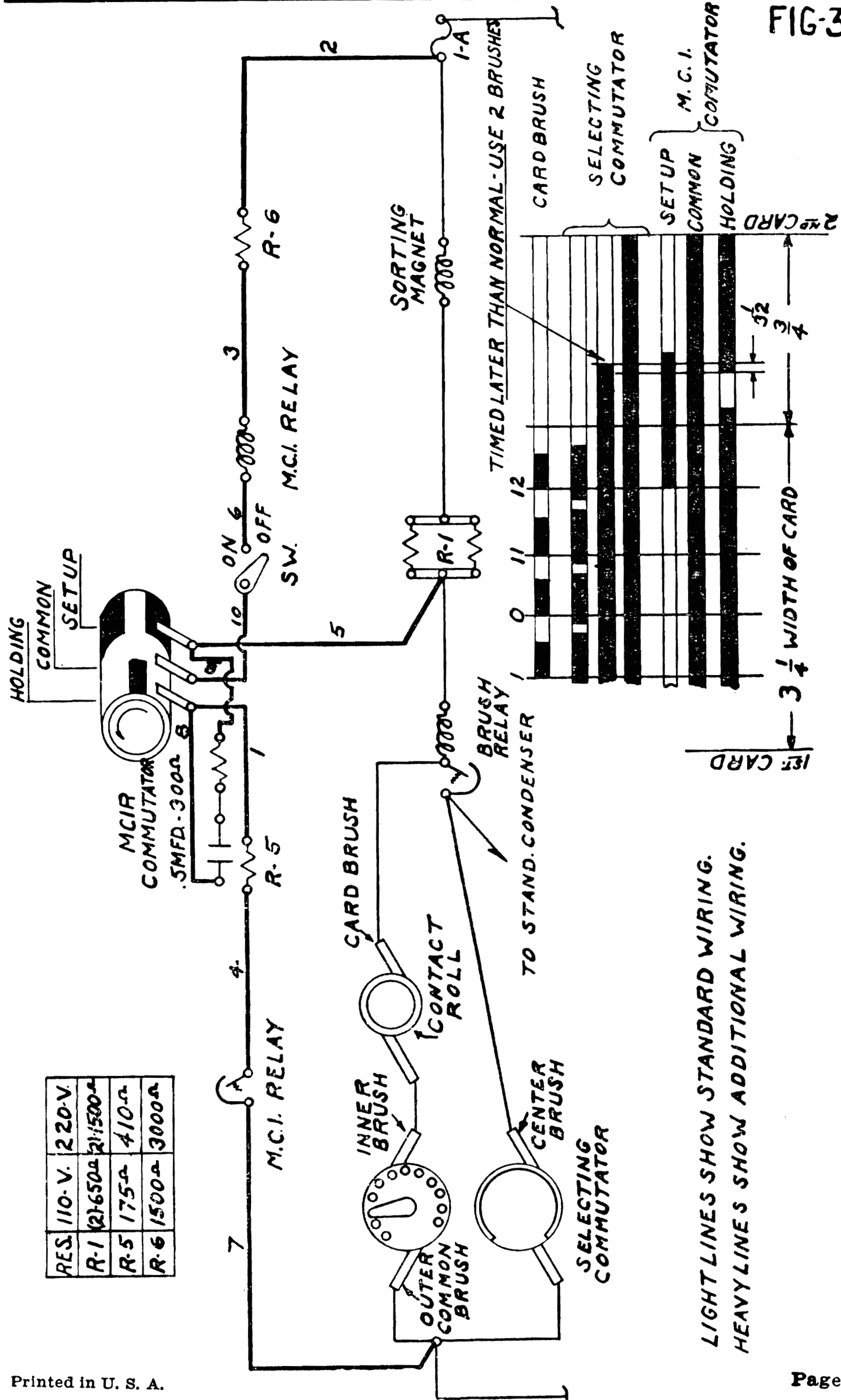


FIG-3

LIGHT LINES SHOW STANDARD WIRING.
HEAVY LINES SHOW ADDITIONAL WIRING.