

American Telephone and Telegraph Company

BELL SYSTEM PRACTICES  
Teletypewriter and Manual  
Telegraph Station and PBX  
Installation and Maintenance

SECTION P30.908  
Appendix 2  
Issue B, 2-1-52  
Long Lines Department  
Dist. Class. 600AC

PRIVATE LINE SERVICE-TELEGRAPH

DEPARTMENT OF COMMERCE -

CIVIL AERONAUTICS ADMINISTRATION

TELEGRAPH TERMINAL APPARATUS, ARRANGEMENT,  
INSTALLATION AND EQUIPMENT HOUSING

1. GENERAL

1.00 This issue supersedes Issue A in its entirety.

This Appendix is reissued for the purpose of including matters pertaining to the arrangement, installation and housing of telegraph terminal apparatus in CAA stations, which was formerly contained in Appendix 7. The information formerly outlined in Appendix 2 relating to the provision of a demarcation strip for the purpose of providing a dividing line between circuits and equipment of the Telephone Company and circuits and equipment of the CAA, now appears in Appendix 5.

1.01 This appendix describes the telegraph apparatus cabinet arrangements required for the installation at CAA stations.

1.02 All Telephone Company owned telegraph terminating apparatus installed at a CAA station shall be housed in a floor mounted, inclosed metal cabinet or standard open type relay rack in accordance with the rules and regulations governing CAA station installations as outlined in Appendix 5 of this Section.

1.03 The type and amount of telegraph apparatus to be provided at a given CAA station varies considerably depending upon the method of circuit operation used, the number of circuits involved, the requirement for receiving only extension service and other factors. The choice of a cabinet or relay rack to mount this terminal apparatus is therefore dependent upon local requirements and a knowledge of local conditions at each station. The requirements for a particular station should be accordingly determined locally and the installation made under the general supervision of the field forces concerned.

1.04 In the selection of a cabinet or cabinets consideration should be given to providing the next larger size cabinet rather than providing two or more of the smaller cabinets.

All cabinets selected for a given installation shall be finished in a color similar or equal to the standard Gray-Green Winkle Finish. Items constructed of wood, such as the base of mounting cabinets on the floor shall be finished in a color similar or equal to the Gray-Green Smooth Finish.

1.05 Whenever possible both telephone and telegraph terminating equipment should be installed in a common cabinet to conserve floor space and reduce overall costs. Where the Long Lines provides the telegraph equipment for its services, telephone equipment used with an Associated or Connecting Company Service "F" interphone network or other local service may be installed in spare space in the Long Lines cabinet. However, the Long Lines should not make space available by providing a cabinet larger than necessary for its telegraph requirements. In cases where spare space is not available in a Long Lines cabinet, but use of a larger common cabinet is feasible, mutually agreeable arrangements for joint use should be made, if possible, by the Long Lines and the Associated or Connecting Company concerned.

1.06 Mounting arrangements have been developed for the various types of telegraph auxiliary equipment in apparatus cabinets and are covered later in this appendix. In general, these arrangements have been so designed as to be interchangeable between the various types of cabinets available and except for the heavier and more bulky apparatus such as 128B2 subscriber sets and rectifiers, the units are mounted on standard 19 or 23 inch mounting plates.

## 2. CABINETS

2.01 Cabinets in four different sizes are available for housing the telegraph terminal apparatus. These cabinets will be referred to as A, B, C and D and have dimensions as follows:

<u>Cabinet</u>	<u>Inches Deep</u>	<u>Inches Wide</u>	<u>Inches High</u>	<u>Mounting Plate Spaces</u>
A	11	22	12	4
B	11	26-1/4	23-1/8	11
C	11	26-1/4	35-1/4	18
D	17	26-1/4	84	45

2.02 The A, B and C cabinets have swinging gates upon which the apparatus is mounted, thereby giving access to both sides of the equipment. The A cabinet is designed for 19 inch mounting plates, and in this application 19 inch plates are normally used with the B and C types. When the D cabinet is used, additional floor space is required to permit access to both front and rear. It is designed for 23 inch mounting plates but can be arranged to handle 19 inch as well. A wooden baseboard is available for mounting cabinets B and C on the floor. A metal stand 3 feet high is also available for mounting the A and B cabinets.

## 3. APPARATUS

3.01 Line Test Jack Unit. A line test jack unit shall be provided at each station with one of the above cabinets. This unit is provided to

expedite testing and to permit interchange of conductors. In the past a demarcation strip was also furnished as a part of this unit, however, in accordance with arrangements covered in Appendix 5 of this section, a demarcation strip is now furnished by the CAA and is mounted externally to the Telephone Company cabinets. The terminal strip mounted on the Line Test Jack unit will no longer be required or furnished for future installations. Wiring information omitting this strip is covered in new sections listed later in this Appendix. Existing installations need not be modified to agree with the new wiring information.

3.02 Wave Shaping Equipment. Wave shaping equipment should be provided in accordance with standard practices, except that the units that make up the equipment should be mounted as covered in new Bell System Sections listed later in this appendix.

3.03 13Z1 and 13Z2 Repeaters. Information on the 13Z1 and 13Z2 repeaters is covered later in this appendix. The 13Z1 repeater should not be used in future CAA installations.

3.04 Rectifiers. On the provision of rectifiers some thought should be given to providing adequate reserve for both protection, future growth and economy of operation. In general, where one or two circuits are involved individual .200 ampere rectifiers should be provided for each circuit, however, in larger offices consideration should be given to the provision of larger rectifiers depending upon local requirements.

3.05 128-B-2 Subscriber Set. Only the C and D cabinets have sufficient space for housing the 128-B-2 set. The "C" cabinet can house 2 complete units including rectifiers, as illustrated in Figures 3 and 4 of Attachment 1. Four complete units may be mounted in the D cabinet. When the D cabinet is used provision for sufficient floor space to permit access to both the front and rear must be arranged. Ordering, assembly and wiring information is covered later in this appendix.

At the time of issuance of this appendix, to avoid relay troubles with the 128-B-2 set when used in conjunction with the KS-5663 List 4 or 5 rectifier, it is necessary to modify the 128-B-2 set in accordance with drawing SD-70220-01 Issue 8-B or later.

#### 4. INSTALLATION

4.01 The circuits of the CAA operate on a 24 hour basis with a release period daily as covered in Bell System Practices Section E12.758, Appendix 4. In placing the equipment in service it will be necessary to plan the work so that service is not interrupted. Lack of space at most CAA stations necessitates assembling and wiring the equipment and cabinets on Telephone Company premises and moving and placing it in the CAA station as a complete unit. The Telephone Company shall be responsible for making proper arrangements with the CAA to select a mutually satisfactory location for the equipment and for its installation and placing in service.

It is expected that 2 trips to the CAA station will be required, the first to determine a mutually satisfactory location for the equipment and the second to actually install it. The CAA Regional Office will arrange for a representative of the CAA to accompany the Telephone Company representative in choosing the equipment location. He will also arrange for any work that has to be done by the CAA in connection with the installation project.

4.02 Aside from the factors mentioned heretofore in connection with the selection of the proper type of apparatus cabinet, future growth at a given station should be considered in order to avoid the necessity of replacing the cabinet at some future date with a larger unit. In this connection the type of station and its location determine the probability of future growth. A weather observing station at a remote location without a landing field probably will never employ a 13Z type receiving only extension repeater and is not likely to have much circuit growth. It does not appear advisable to choose a cabinet for such locations much in excess of present requirements. A station at a commercial airport, however,

may expect future growth, particularly in extension service. This possibility should be given weight in choosing the cabinet.

4.03 The apparatus cabinet or cabinets shall be installed in the CAA station in accordance with the rules and regulations governing installations at CAA stations as outlined in Appendix 5 of this section.

The cabinet shall be so located that it is not subjected to avoidable physical hazards such as under open windows, against radiators or other heating appliances etc. The location selected must be mutually agreeable to the CAA and to the Telephone Company.

4.04 In connection with installations at new CAA Type "S" Watch Hcuses, the equipment protection cabinet and apparatus cabinet locations as well as the conduit runs as shown on the current CAA Drawing D-21175 which may be seen at the CAA station involved, shall be utilized for all Telephone Company wiring and apparatus.

4.05 Wiring between the cabinet and the entrance terminal box shall be shielded by conduit, lead covered cable or other shields to reduce to a minimum interference to the CAA high gain short wave radio receivers. The CAA has agreed that the wiring which they provide between their "Demarcation Strip" and equipment will also be suitably shielded.

Standard practices shall be followed for wiring the equipment in the cabinet. All power wiring and fittings shall meet the standard underwriters requirements and local electrical codes.

4.06 All equipment in the cabinet shall be identified by stencil markings, designations or other suitable means. A schematic and wiring drawing shall be prepared to cover any apparatus or wiring installed but not covered by BSP Sections specified herein. At least one copy of all such drawings or BSP sections shall be kept in the cabinet and kept up to date at all times in sufficient detail to enable any maintenance men or installer to locate and identify all apparatus and wiring.

5. REFERENCES

5.01 The following information is provided for use as required:

<u>Subject</u>	<u>BSP Section or Drawing</u>	
Cabinet A	AA381.315	ED-91472-01
Cabinet B	AA381.315	ED-91194-01
Cabinet C	AA381.315	ED-91180-01
Cabinet D		ED-91981-01
128-B-2	P31.240	SD-70220-01
	P95.001	
* 13-Z-1	P31.917	20295-T-113
	P30.908 App. 4	20295-SD-124
13-Z-2	P31.917	20480-T-113
	P30.908 App. 4	20480-SD-124
Two 128-B-2 in C Cabinet	P91.931	
Two 128-B-2 in D cabinet	P31.936	
Wave shapers, Line Jack Unit, etc.	P91.930	

\* Should not be used for future installations.

Attached  
Attachment #1 - 6 pages

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App. 2  
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7 Pages

CAA  
TELEGRAPH  
TERMINAL APPARATUS

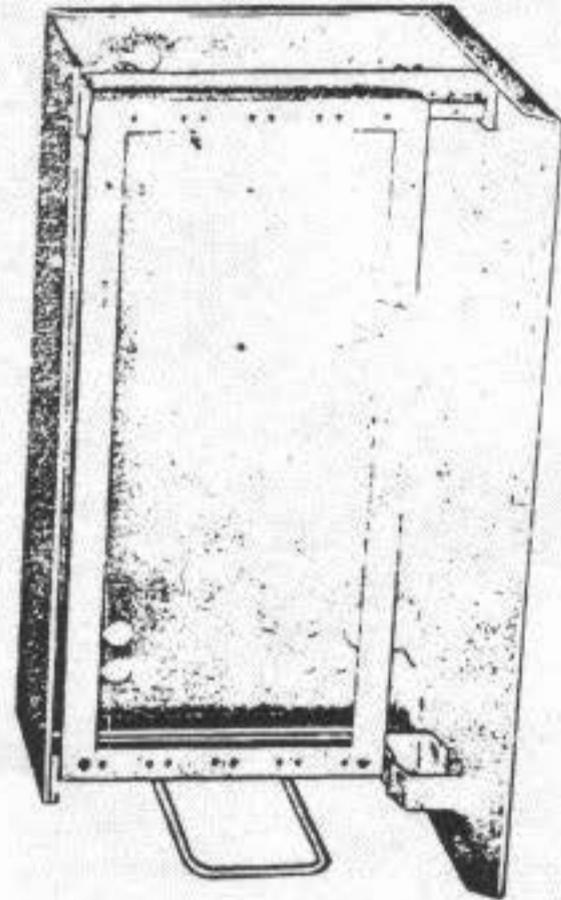
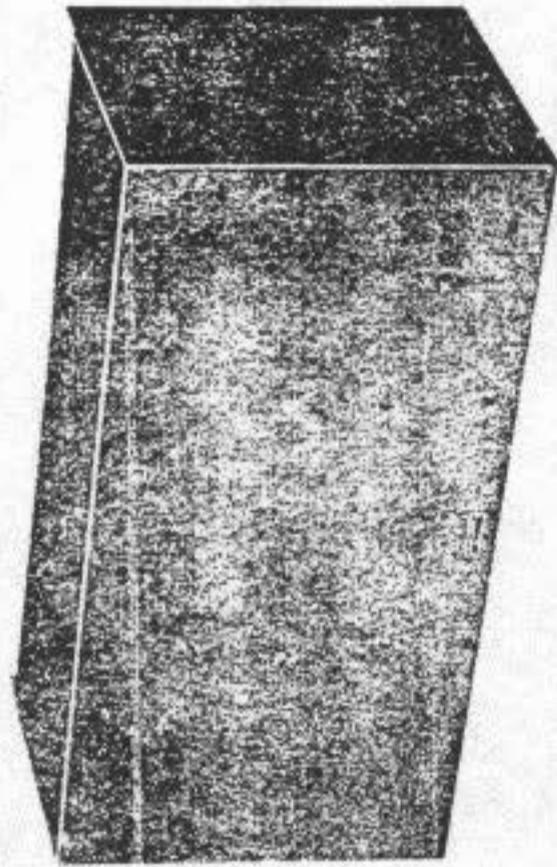


Fig. 1-4 Plate Cabinet Type A-Cover Removed

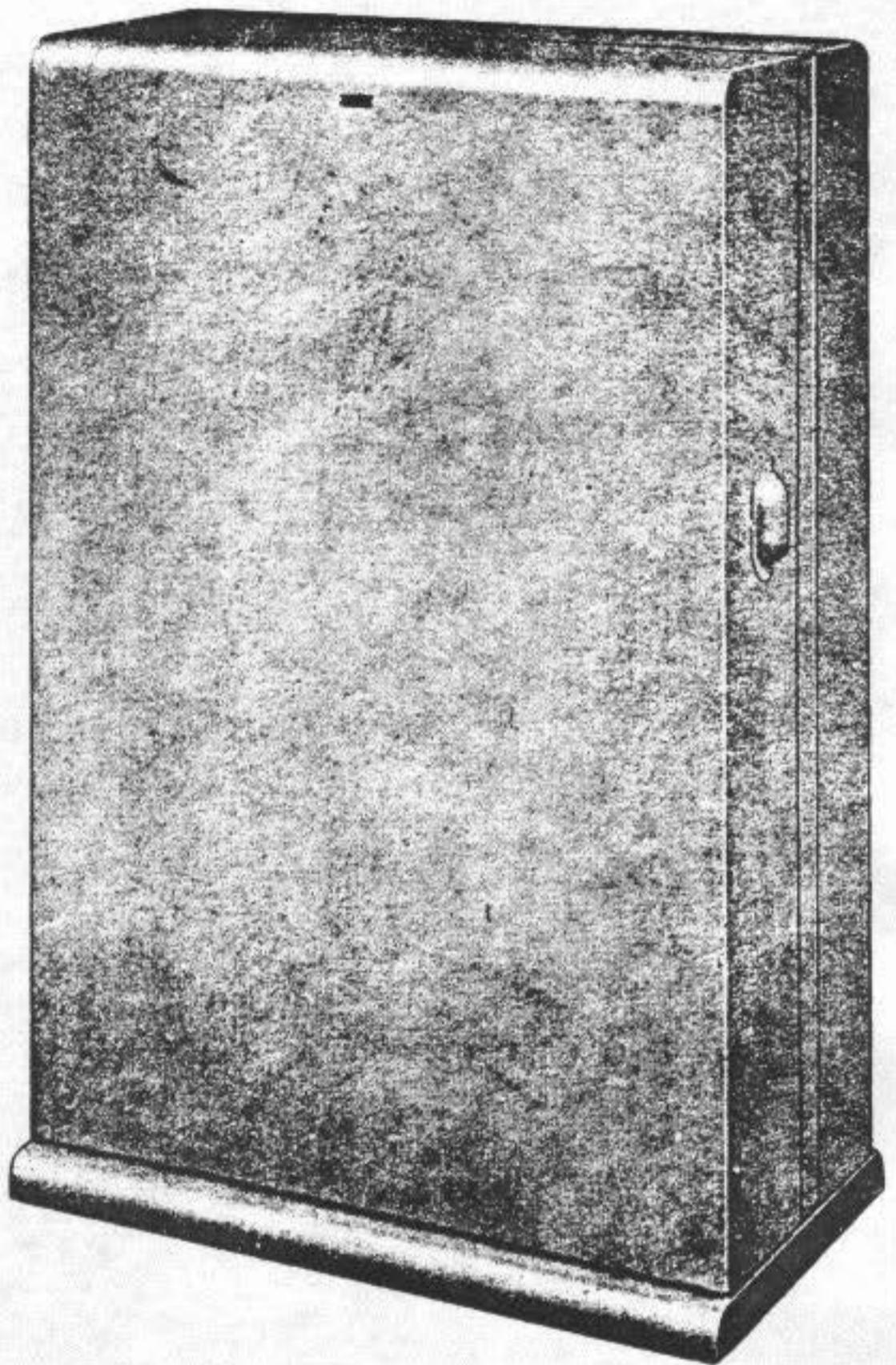


Fig. 2-18 Plate Cabinet, Type C

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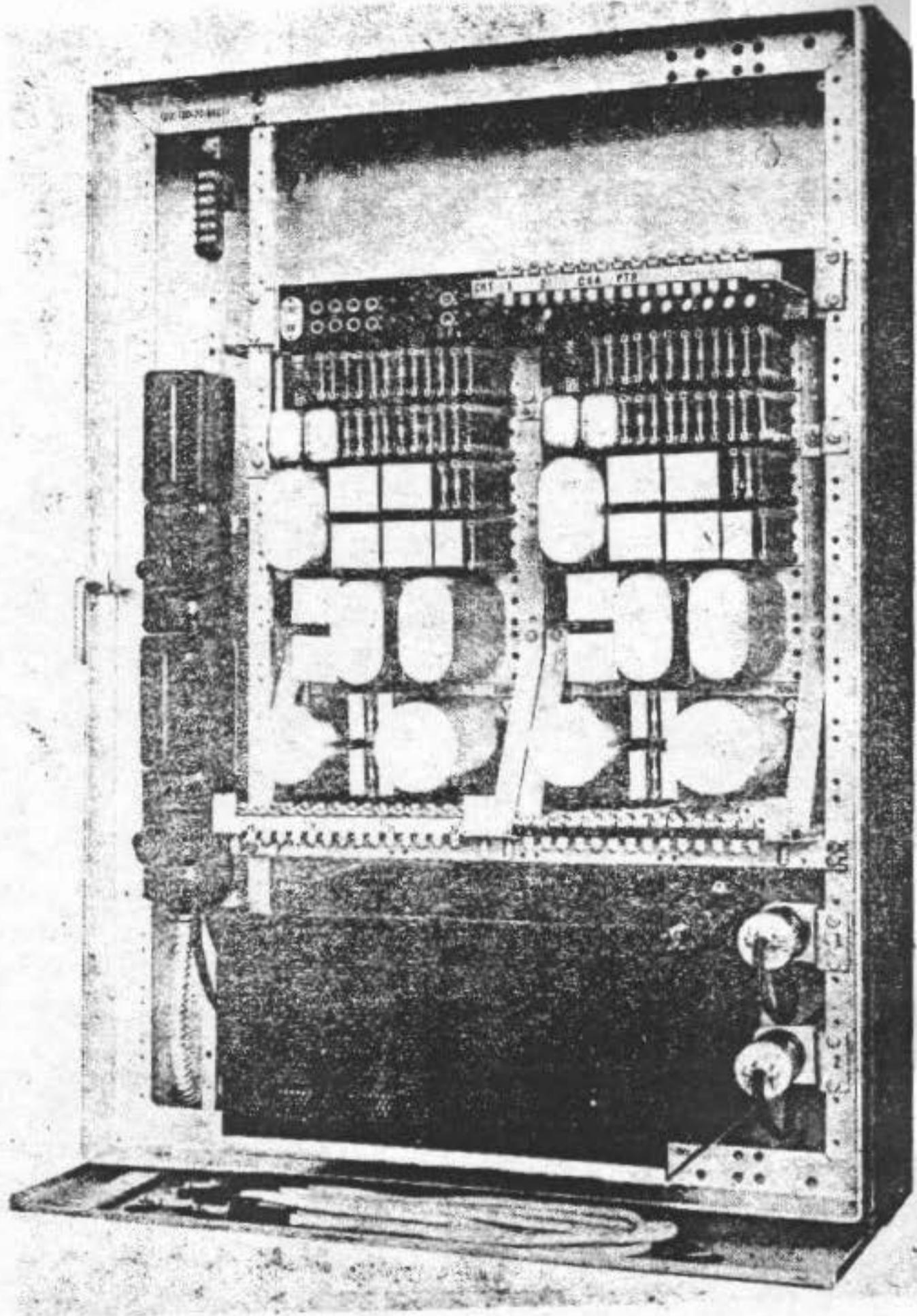


Fig. 3 - Typical Installation of 18 Plate  
Cabinet Type "C" with Gate Closed

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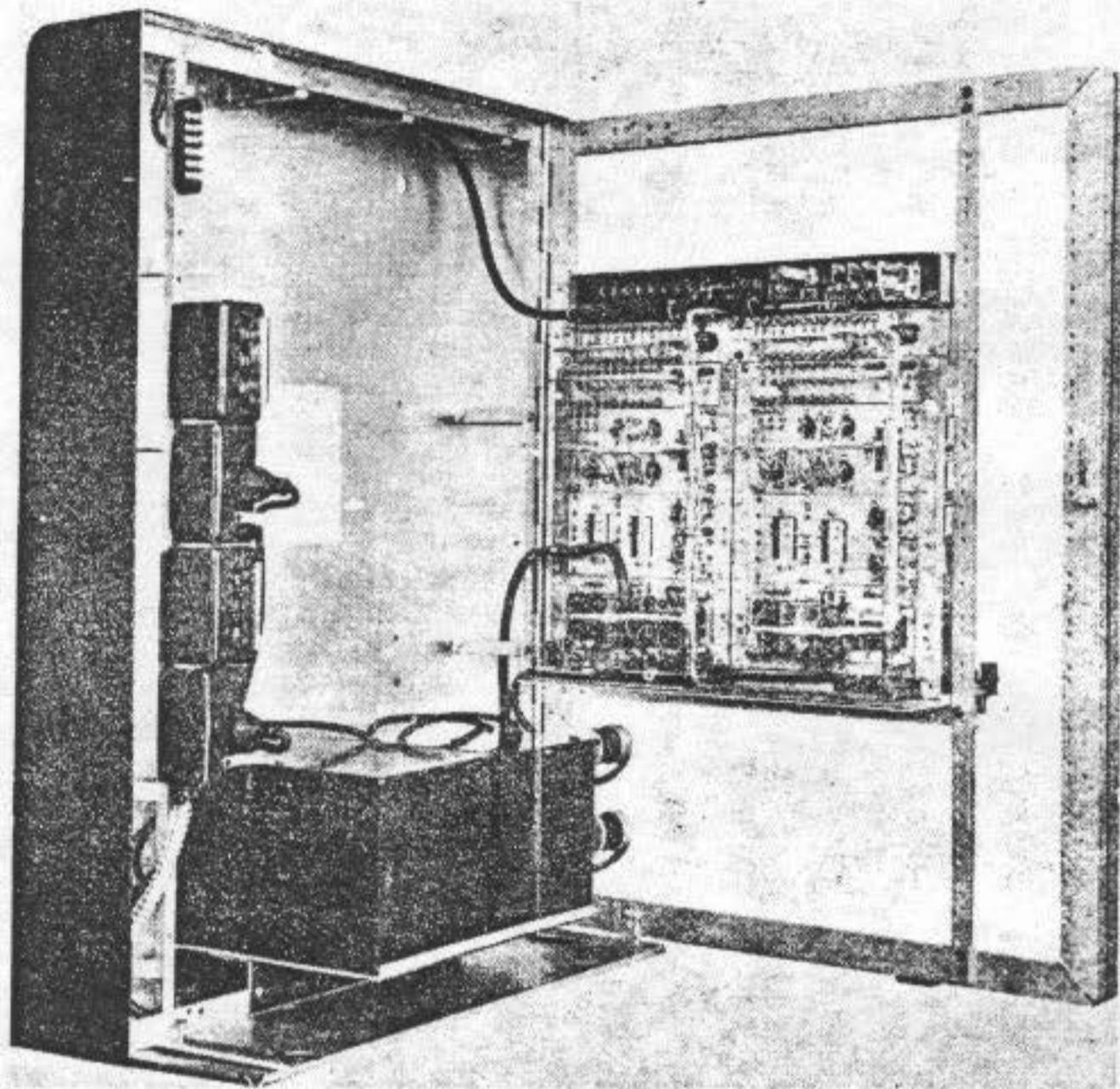


Fig. 4 - Typical Installation of 18 Plate  
Cabinet Type "C" with Gate Open

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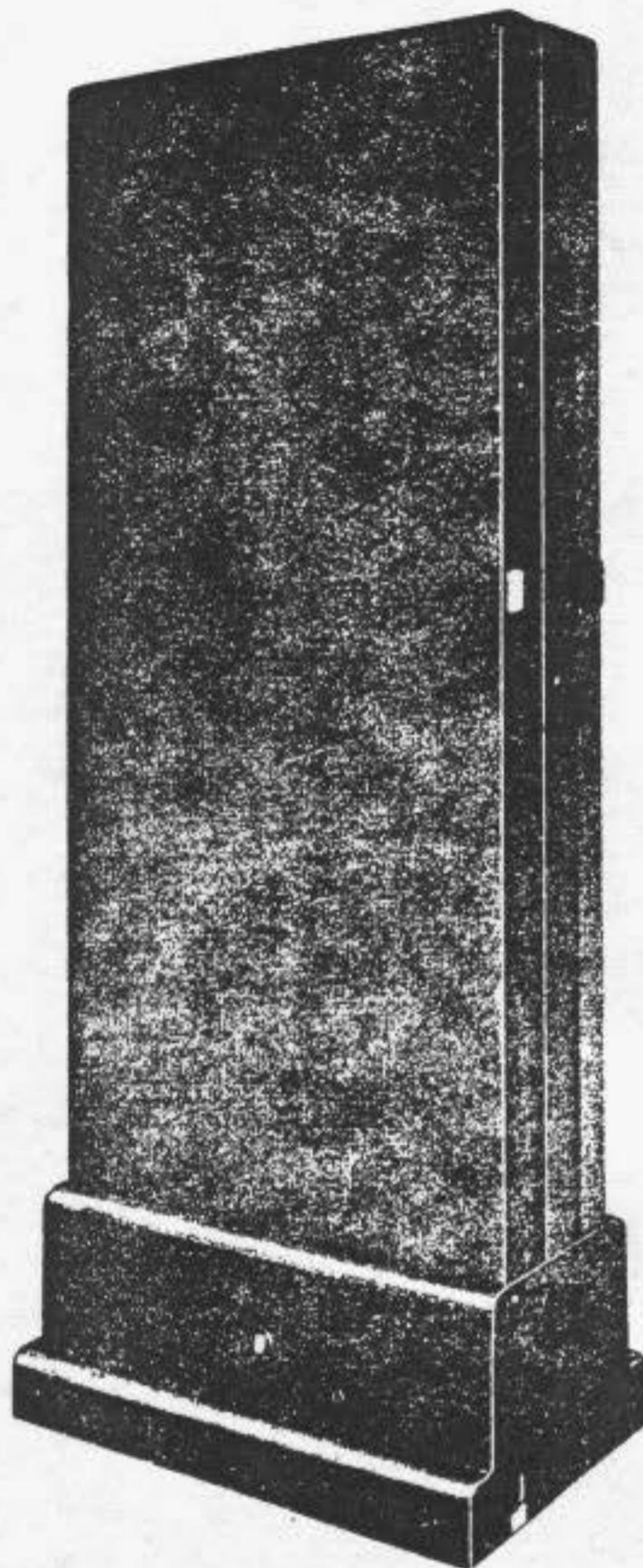


Fig. 5 - Formerly Known as "D" Cabinet.  
Replaced by Cabinet shown in Figure 6.

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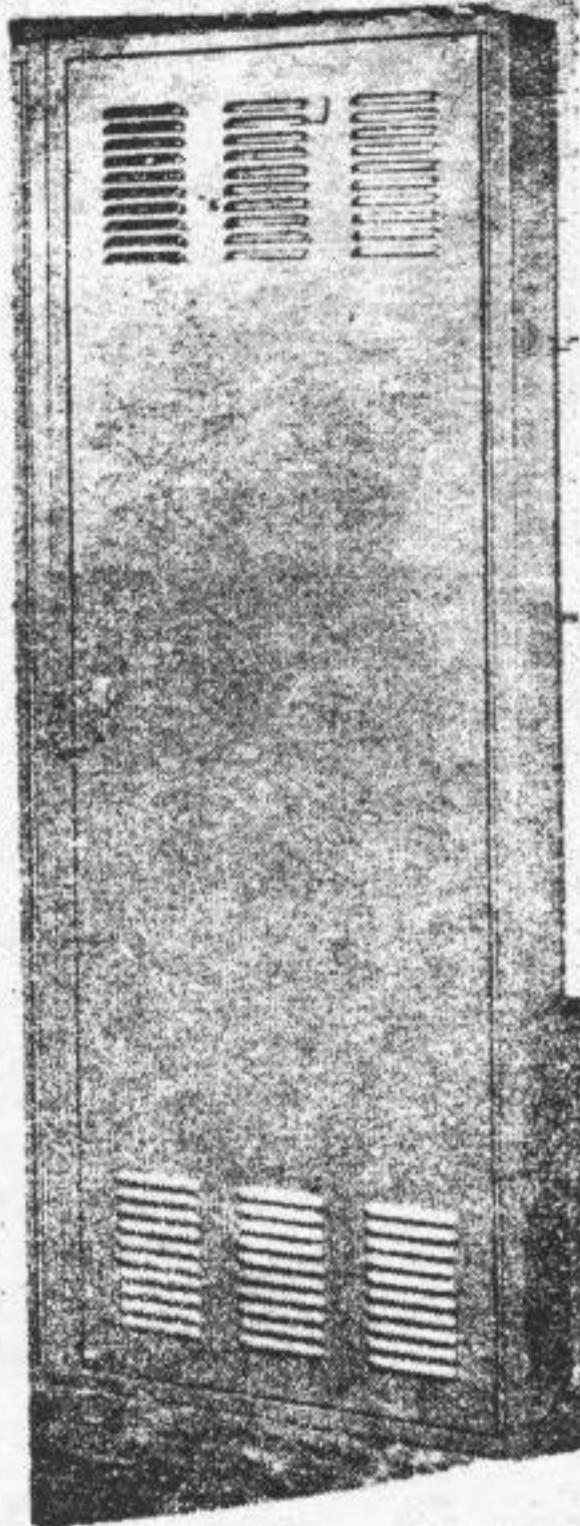


Fig. 6 - "D" Cabinet

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