

M. S. CONNER.
SWITCHBOARD.

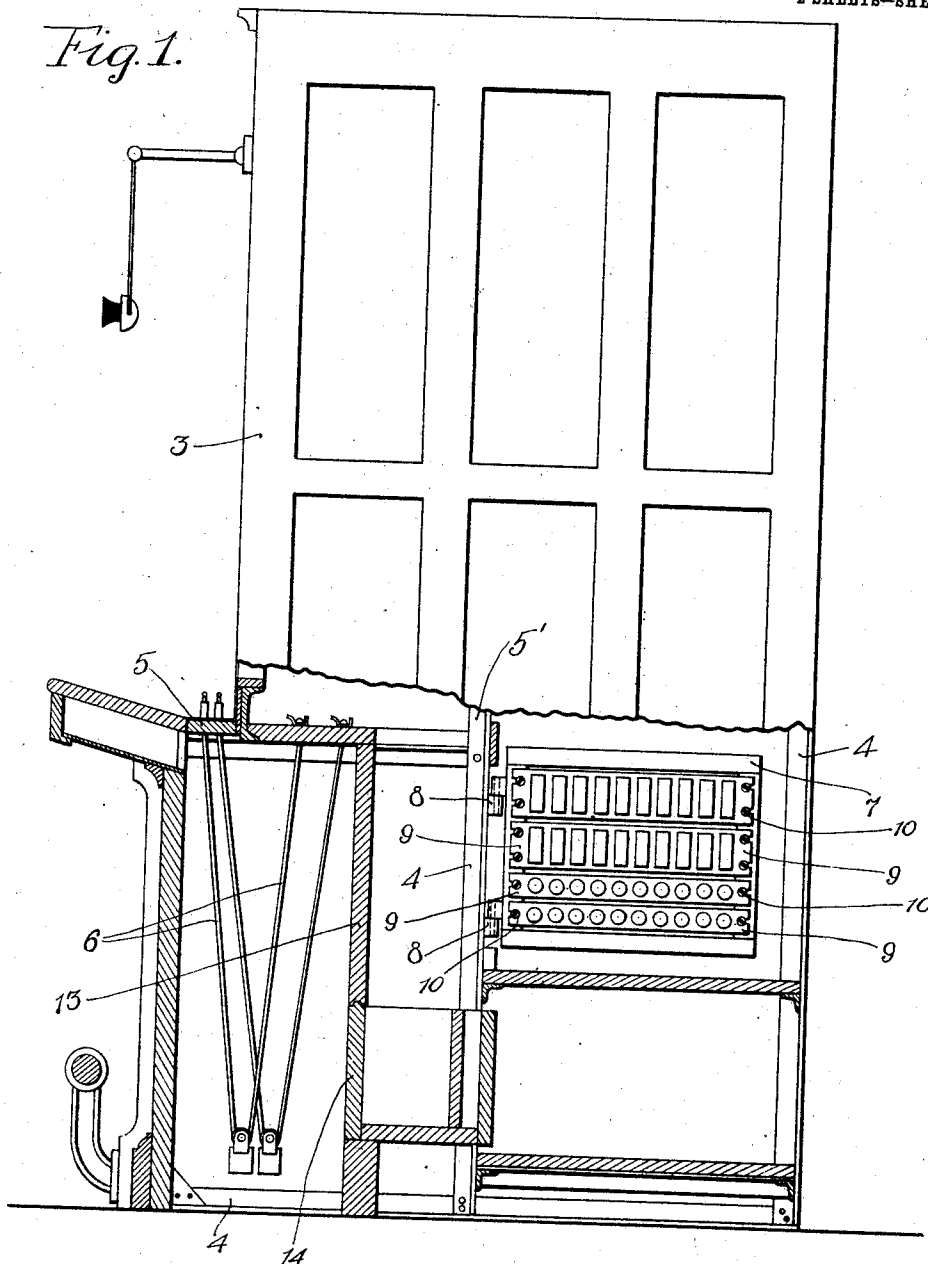
APPLICATION FILED DEC. 18, 1908.

901,688.

Patented Oct. 20, 1908.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

Arthur L. Bettcher,
George C. Higham.

Inventor
Merritt S. Conner
By Charles A. Brown
Attorney-

M. S. CONNER.

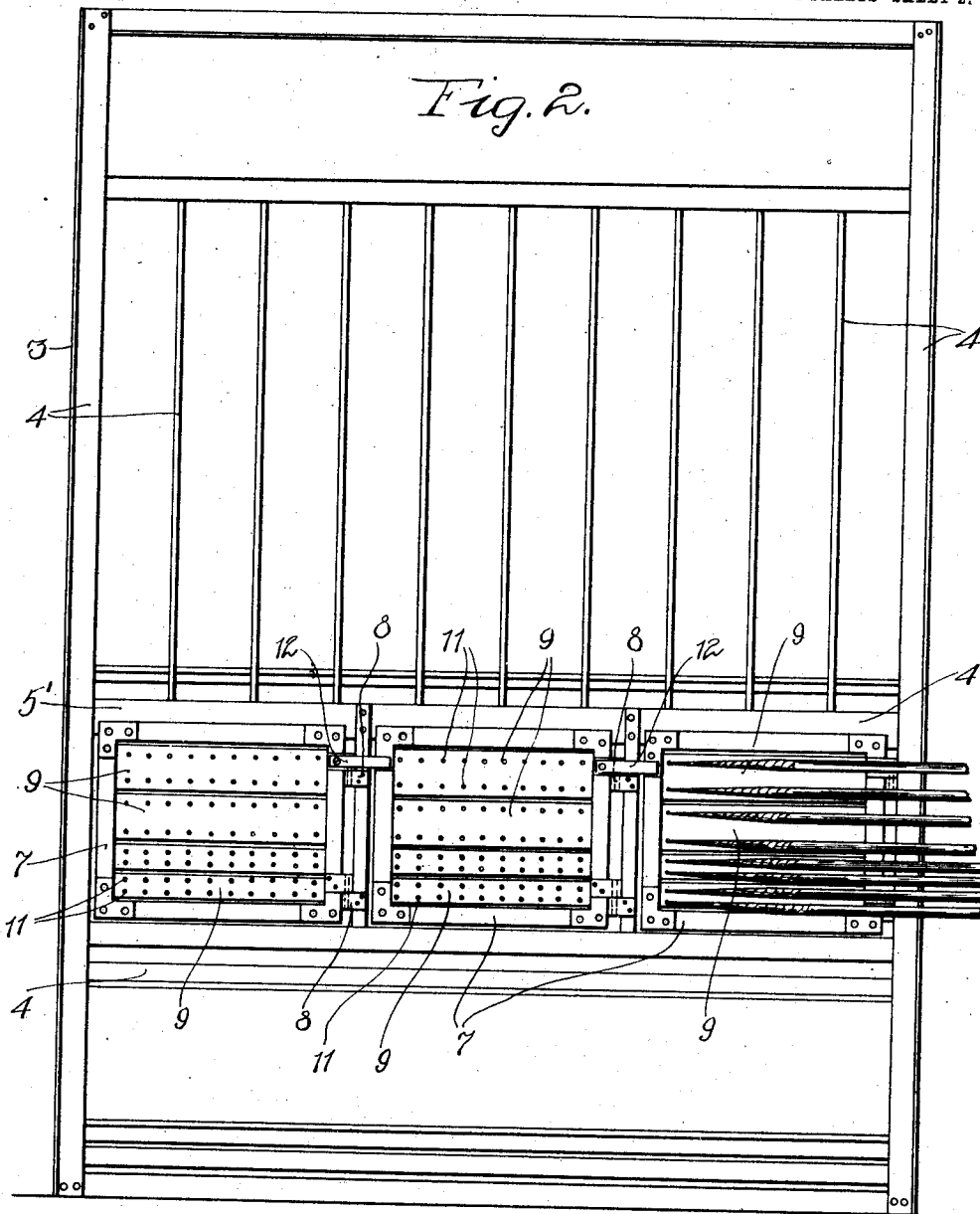
SWITCHBOARD.

APPLICATION FILED DEC. 18, 1906.

901,688.

Patented Oct. 20, 1908.

2 SHEETS—SHEET 2.



Witnesses:

Arthur H. Boettcher,
George C. Higham.

Inventor
Merrill S. Conner

By Charles A. Brown
Attorney

UNITED STATES PATENT OFFICE.

MERRITT S. CONNER, OF ROCHESTER, NEW YORK, ASSIGNOR TO STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

SWITCHBOARD.

No. 901,688.

Specification of Letters Patent.

Patented Oct. 20, 1908.

Application filed December 18, 1906. Serial No. 348,456.

To all whom it may concern:

Be it known that I, MERRITT S. CONNER, citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Switchboards, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to switchboards, such as telephone switchboards, and contemplates an improvement whereby all the devices and apparatus disposed therein may be easily and readily reached for inspection and in case of necessity of repair. As is well known, switchboards of this type are commonly divided into sections, each of the sections having associated therewith various devices and apparatus such as relays, condensers, coils and the like, and these various devices are commonly grouped together according to their different and relative uses.

In switchboards of the prior art it has been the practice to locate all such devices as relays, impedance coils, condensers and the like at the rear of the switchboard, and to arrange them so that the terminals of the devices may project through the supporting plates on which they are mounted, and into the inside of the switchboard, while the device itself extends rearwardly, the wiring therefore being located entirely within the switchboard. This construction necessitated access to the wiring of the various devices from the front of the switchboard, and as inspection of such wiring is frequently desirable and sometimes necessary in case of the improper operation of the various electrical devices, the operator at the front of the board is frequently disturbed by the inspectors and repairmen who gain access to the interior of the board whereby the wiring may be reached by removing a panel in the lower part of the front of the board. This frequent disturbance of the operators by inspectors and repairmen greatly impairs the proper operation of the entire exchange, and it is the object of my invention to provide a construction whereby these various devices may be reached from the rear of the board either for inspection of their terminals and wiring, or of the devices themselves. Thus the various apparatuses may be inspected and repaired without interfering with the

operator and without even temporarily preventing the operation of that particular section of the board.

Furthermore, my invention contemplates an improvement which not only enables the inspectors and repairmen to gain access to these various devices, but also to gain access into other parts of the board, which is often desirable and sometimes necessary, from the rear of the switchboard and without therefore disturbing the operator.

Broadly my invention consists in providing a series of hinged or swinging gates or racks supported by the framework of the switchboard, the various devices and apparatuses being adapted to be disposed upon said gate or rack. These gates are placed proximate to openings in the back of the switchboard or may, in fact, swing on hinges secured to a skeleton framework whereby the gates or racks themselves form the wall of the switchboard. This description, however, will be more readily understood by reference to the accompanying drawings in which

Figure 1 is a side elevation view of the switchboard of my invention, the cabinet being broken away and parts being shown in section so as to more clearly disclose the various parts; Fig. 2 is a rear view thereof.

The cabinet of the switchboard is shown at 3 and is built about the metal skeleton framework 4, 4. The plug shelf is shown at 5 and the flexible cords suspended within the board are shown at 6. The skeleton framework 4 has the central partition wall 5' to which the various supporting frames or gates, as will be hereinafter described, may be hinged. These supporting frames are shown at 7, 7 hinged at 8, 8 to the framework. The supporting frames are of substantially rectangular shape and the supporting bars 9, 9 are adapted to be secured thereto by any suitable means, for instance, the screws 10, 10. These supporting bars may be of any width in order to accommodate the devices desired to be secured thereto. As shown in Fig. 2 the terminals of the various electrical devices mounted on the supporting bars project through the bar as indicated at 11, 11, and they are adapted to be connected in their respective circuits by means of wiring and cables disposed at the back of the frames.

While it is not an essential feature, as will

readily appear, I find it convenient to have several hinged frames or gates for each of the switchboard sections, this construction being clearly shown in Fig. 2. I have omitted the wiring and cabling from these supporting frames except in one, but it is evident, in order to facilitate the proper wiring of the terminals, that the rear of these frames will become almost completely covered with conductors which would prevent access to the devices themselves from the rear unless the supporting frames were made so as to be removable from their respective positions when it is desired to inspect or repair the apparatuses. When this is desirable the gates or supporting frames may be swung open into the position shown in Fig. 1 when, as is readily seen, the various devices will be in full view and within easy access by the inspectors or repairmen. If desired the normal position of these supporting frames may be as shown in Fig. 1, that is, extending rearwardly from the supporting frame. This will leave the various devices constantly in view and will, by not necessitating the swinging in and out thereof, prevent wear and tear upon the wires and cables. This it is evident, however, is arbitrary and either position may be assumed as normal, according to which is the most advantageous or convenient with regard to the surroundings. If the frames are made to assume their normal position as shown in Fig. 2, spring clamps 12, 12, as shown in the drawing, may be employed to retain them in position. When it is desired to swing the frames outwardly the spring clamps may be lifted therefrom and the gate will be free to swing about its hinges.

This device is not only extremely useful where it is desired to frequently inspect the devices in the electrical circuits or where it becomes necessary to repair the apparatuses, but it is also very useful in that it admits of ready access to the various parts disposed entirely within the switchboard. For instance, it is often desirable to inspect or change or repair the cord circuits and their associated plugs, and I therefore make a panel 13 in the dividing wall 14, as shown in Fig. 1, removable so that when access is desired to the plugs and cords the supporting gate may be swung outwardly and the panel 13 may be removed, thus enabling the inspector or repairman to change or manipulate any certain plug or plug and cord within the switchboard without interfering with the operator or without even interfering with the operation of any of the other plugs and cords on the board. This obviously is a very desirable feature, as not only may the electrical apparatuses located on the swinging gate be readily reached, but also access may be easily gained to any of the other apparatuses located with the board.

While I have herein shown and described but one embodiment of my invention, it is evident that changes and modifications could be made by those skilled in the art without departing from the spirit and scope of my invention, and I do not, therefore, wish to be limited to the precise construction shown.

I claim as new and desire to secure by Letters Patent:

1. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, supporting plates on said auxiliary frame, said supporting plates being adapted to support the various switchboard apparatuses, the terminals of which are adapted to project through said plates whereby the wiring for said apparatuses may be disposed on the back of said frame.

2. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, and supporting plates for said auxiliary frame upon which the switchboard electrical devices may be mounted, the terminals of such devices being adapted to extend through said plates whereby the wiring therefor may be located on the back of said auxiliary frame.

3. In a switchboard the combination with a main supporting frame, of an auxiliary frame hinged thereto, and supporting plates secured to said auxiliary frame, the switchboard devices being adapted to be disposed on said supporting plates with their terminals extending therethrough whereby the wiring for said devices may be located on the back of said auxiliary frame.

4. In a switchboard the combination with a main supporting frame, of a plurality of auxiliary supporting frames hinged thereto, and supporting plates for each of said auxiliary supporting frames to which the switchboard devices may be secured, the terminals of said devices extending through said plates and the wiring therefor being located on the back of the auxiliary frame.

5. In a switchboard the combination with a main supporting frame, of a plurality of auxiliary supporting frames hinged thereto, and supporting plates for each of said auxiliary supporting frames to which the switchboard devices may be secured, the terminals of said devices extending through said plates, the wiring therefor being located on the back of the auxiliary frame, and clamping means for retaining said frames in their normal position.

In witness whereof, I hereunto subscribe my name this 2nd day of November A. D., 1906.

MERRITT S. CONNER.

Witnesses:

H. C. STEINER,
F. W. KING.