

No. 892,167.

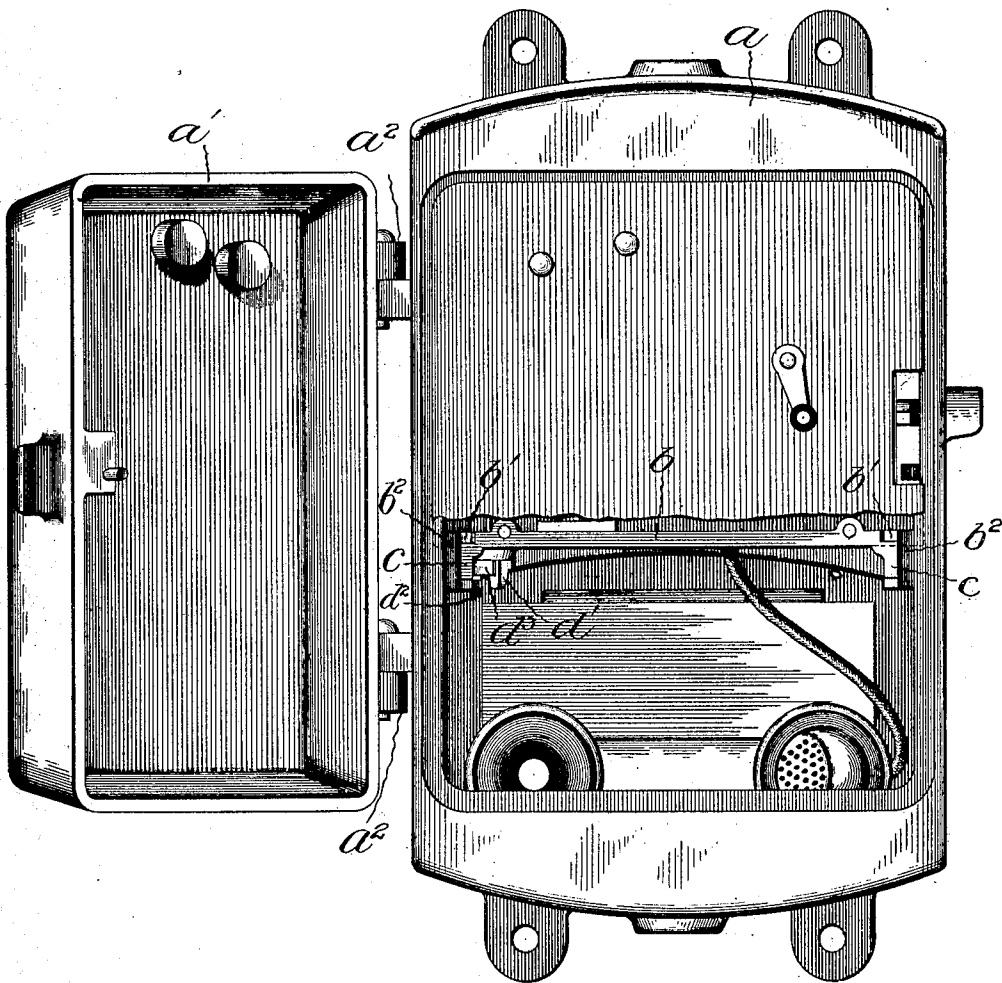
PATENTED JUNE 30, 1908.

M. E. LAUNBRANCH.
MOUNTING FOR ELECTRICAL APPARATUS.

APPLICATION FILED DEC. 7, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Geo C. Dyer
W. H. Leach

Inventor:
Malcolm E. Launbranch
By Barton G. Yanner
Attys.

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2 SHEETS—SHEET 2.

Fig. 2.

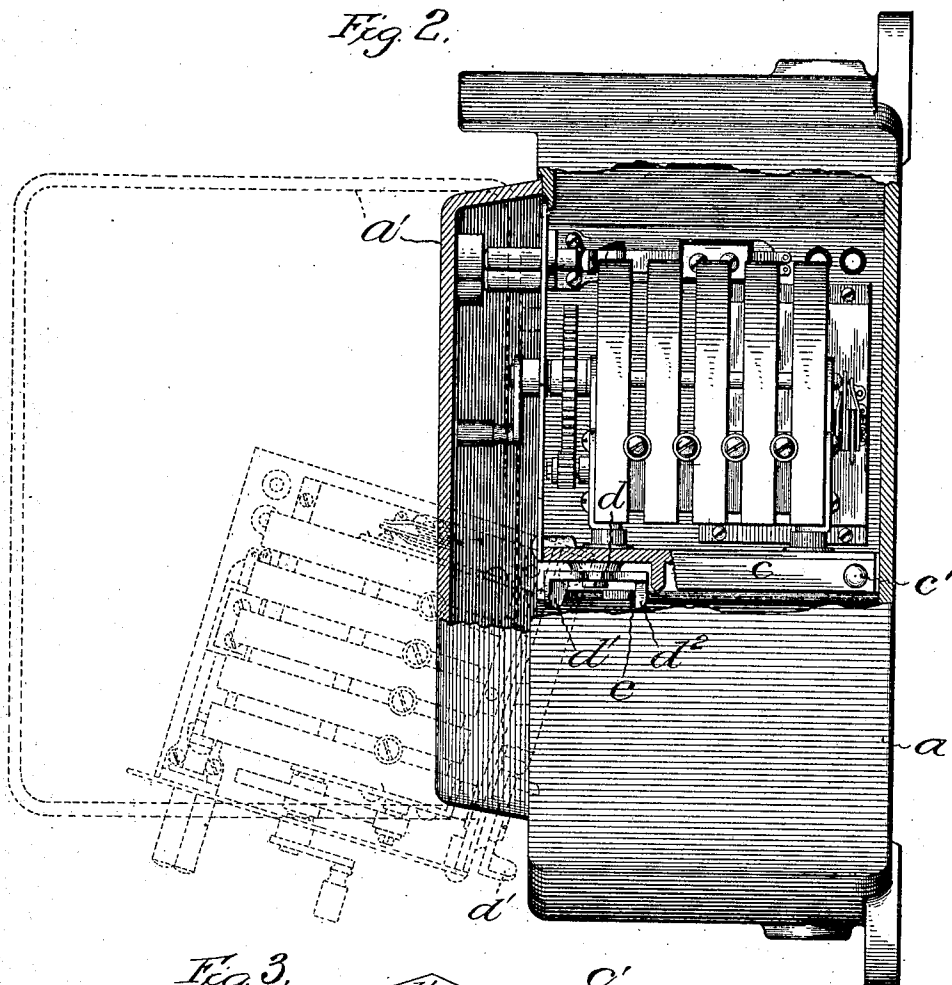


Fig. 3.

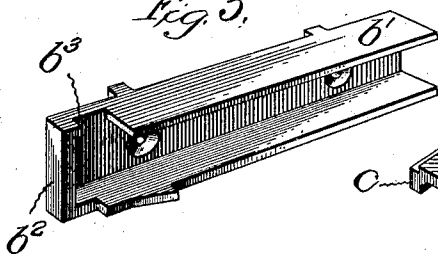


Fig. 5.

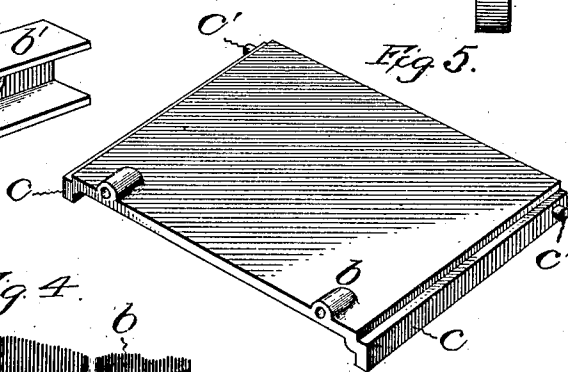
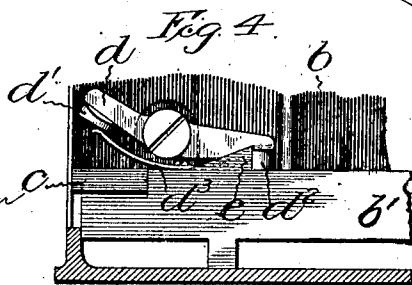


Fig. 4.



Witnesses:
G. C. Gordon
H. H. Leach

Inventor:
Malcolm E. Launbranch,
By Barton Tanner
Atty.

UNITED STATES PATENT OFFICE.

MALCOLM E. LAUNBRANCH, OF CHICAGO, ILLINOIS, ASSIGNOR TO WESTERN ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

MOUNTING FOR ELECTRICAL APPARATUS.

No. 892,167.

Specification of Letters Patent.

Patented June 30, 1908.

Application filed December 7, 1904. Serial No. 235,885.

To all whom it may concern:

Be it known that I, MALCOLM E. LAUNBRANCH, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Mountings for Electrical Apparatus, of which the following is a full, clear, concise, and exact description.

My invention relates to electrical apparatus, such as telephone sets and the like, which are provided with containing cases or boxes.

My object is to provide an improved mounting for such apparatus whereby the same may be readily removed from its inclosing case for inspection or repairs.

More particularly, my invention contemplates a removable shelf for the containing case or box of such electrical mechanism, upon which the operating parts may be mounted, together with means for locking the shelf in position within the box.

A further feature of the invention consists in means which I have provided whereby the shelf may be drawn out of the box and tilted at an angle to permit convenient inspection of the apparatus mounted thereon without being actually disengaged from its guideways. The shelf may be wholly removed from the box if desired, in case the apparatus mounted thereon be deranged and it be necessary to take the same to a distant point for repairs.

I will describe my invention particularly by reference to the accompanying drawings, wherein,

Figure 1 is a view in front elevation of a telephone box provided with the removable shelf of my invention, with the door of the case partly open; Fig. 2 is a side view thereof, with the shelf shown in dotted lines in its alternative position; Fig. 3 is a detail perspective view of one of the guideways of the shelf; Fig. 4 is a detail view illustrating the means which I have provided for locking the shelf in position within the box; Fig. 5 is a detail perspective view of the shelf.

The same letters of reference are used to designate the same parts wherever they are shown.

The telephone set illustrated comprises a containing case *a*, within which is placed the usual telephonic apparatus, said case having a door *a'* hinged at *a²* *a³* to the side of the box. A shelf *b* is provided for the case upon which may be mounted certain of the apparatus thereof, said shelf being adapted to be re-

ciprocated in guideways *b' b'*, (preferably of U-shaped cross section) secured to the sides of the box, said shelf having flanges *c c* at its side upon each of which is mounted near its rear end a lug *c'*. Each of the guideways is provided with a stop *b²* at its front end, and the upper member of each guideway is cut away at *b³* to form an opening or passageway into the guideway. When it is desired to insert the shelf in the box, the lugs *c' c'* are caused to enter the said openings *b³*, and the shelf is then forced inwardly, the flanges *c c* of the shelf riding in said guideways.

Upon the under surface of the shelf *b* is pivoted a locking lever *d* having an ear *d'* adapted to serve as a handle by which the lever may be rotated. The lever carries a downwardly projecting arm *d²*, and a spring *d³* is arranged to bear upon said lever, tending to move the end carrying said arm against the inner face of one of the flanges *c*. When the shelf is moved along its guideways *b' b'* into place within the box the arm *d²* rides over a lug *e* carried by one of said guideways and is forced by the spring *d³* into engagement with the inner face of said lug, thus locking the shelf in position.

When it is desired to remove the shelf *b* from the containing case for inspection or otherwise, the ear *d'* of the locking lever *d* is operated to rock said lever and remove the arm *d²* from engagement with the lug *e*. The shelf may then be drawn outwardly until the lugs *c' c'* engage the stops *b² b²* of the guideways, when the shelf may be allowed to fall into an angular position, as shown in dotted lines in Fig. 2, permitting a convenient inspection of the apparatus mounted upon said shelf without actually disengaging the shelf from its guideways. The shelf may be easily and quickly restored to its position within the box by simply moving the shelf to a horizontal position and forcing the same inwardly along its guideways.

The shelf may, of course, be totally removed from the case by simply drawing the same out until the lugs *c' c'* register with the openings *b³* in the guideways and then lifting the shelf to carry the lugs through said openings. This is of advantage where the apparatus upon the shelf is deranged and must be removed to a distant point for repairs, since the workman may simply remove the shelf and carry the same with the apparatus thereon to the proper place. The act of pulling

out the shelf may serve to automatically disconnect the apparatus thereon from the line or circuit with which it is associated.

I claim:—

- 5 1. The combination with a containing case, of guide ways secured to opposite sides of said case, said guide ways being provided with upper and lower horizontally extending flanges, said lower flanges being reduced at their forward ends, stops at the front ends of said lower flanges, a shelf slidably mounted in said guide ways, said shelf being provided with flanges fitting between the flanges of said guide ways, lugs carried by said shelf at the rear thereof and adapted when said shelf is drawn out to engage said stops, whereby said shelf may be drawn out and tilted downwardly.
- 20 2. The combination with a containing case, of a removable shelf for said case, electrical mechanism mounted upon said shelf, guideways for said shelf secured to the sides of the case, a stop carried at the front end of each guideway, flanges for said shelf adapted to ride in said guideways, lugs carried by said flanges adapted when the shelf is drawn out to engage said stops; whereby the shelf may be drawn out and tilted to permit ready access to the apparatus mounted thereon,
- 30 without being disengaged from its guideways.
3. The combination with a containing case, of a removable shelf for said case, electrical mechanism mounted upon said shelf, guideways for the shelf secured to the sides of the case, a lug carried by one of said guideways, a lever pivoted upon said shelf, an ear d' carried thereby and adapted to serve as a handle for operating said lever, a downwardly projecting arm d^2 carried by said lever, and a spring d^3 adapted when the shelf is in place within the case to force said arm into engagement with said lug and lock the shelf in place.
- 45 4. The combination with a containing case, of a shelf therefor, electrical mechanism mounted upon said shelf, guideways of U-shaped cross section for said shelf carried

by the case, each guideway having an opening therein near its front end, flanges upon the sides of said shelf, lugs upon said flanges at the rear of the shelf adapted to enter said openings to permit said flanges to ride in said guideways, and stops carried by the front ends of said guideways against which said lugs engage when the shelf is drawn clear out, permitting the shelf to be tilted into position for convenient inspection of the apparatus thereon without disconnecting the same from its guideways, said shelf being adapted to be drawn outwardly and lifted to bring its lugs through the openings in the guideways; whereby the shelf may be completely removed from the case.

5. The combination with a containing case, of a door therefor, a removable shelf for the case, guideways for said shelf secured to the inner walls of the case adapted to permit the shelf to reciprocate and rotate thereon, parts of said guideways being arranged to prevent rotation of the shelf until it reaches the forward limit of its reciprocation, a lug secured within the case, and a lever carried by the shelf adapted to engage said lug to lock the shelf in its position within the case.

6. The combination with a metal containing case, of a hinged door therefor, a removable metal shelf for said case, guideways for said shelf secured to the inner walls of the case adapted to permit the shelf to reciprocate and rotate thereon, parts of said guideways being arranged to prevent rotation of said shelf until it reaches the forward limit of its reciprocation, a lug carried by one of said guideways, and a spring-actuated lever carried by the shelf adapted to engage said lug to lock the shelf in its normal position within the case.

In witness whereof, I hereunto subscribe my name this 21st day of September A. D., 1904.

MALCOLM E. LAUNBRANCH.

Witnesses:

E. H. SMYTHE,
E. F. BEAUBIEN.