W. F. WEYRAUCH.

SWITCHBOARD.

APPLICATION FILED OCT. 16, 1911.

1,030,040.

Patented June 18, 1912.

2 SHEETS—SHEET 1.

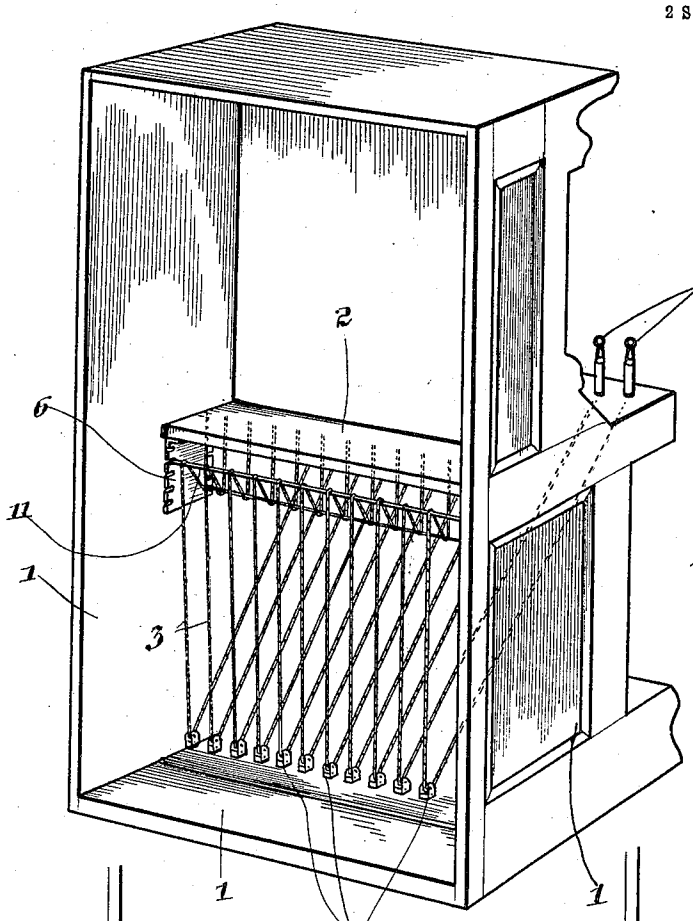

Fig. 1.

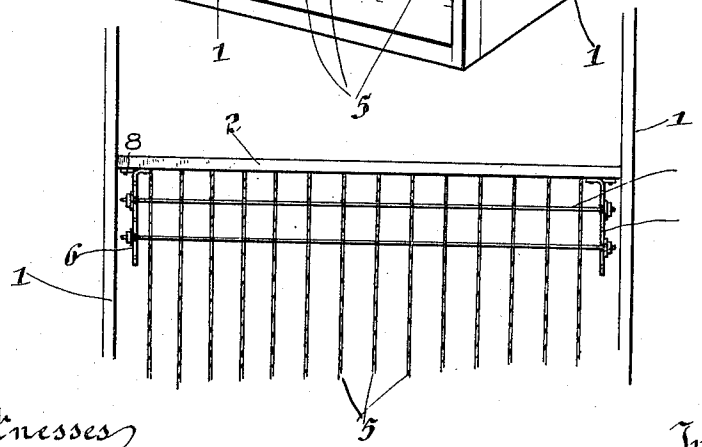

Fig. 2.

Witnesses

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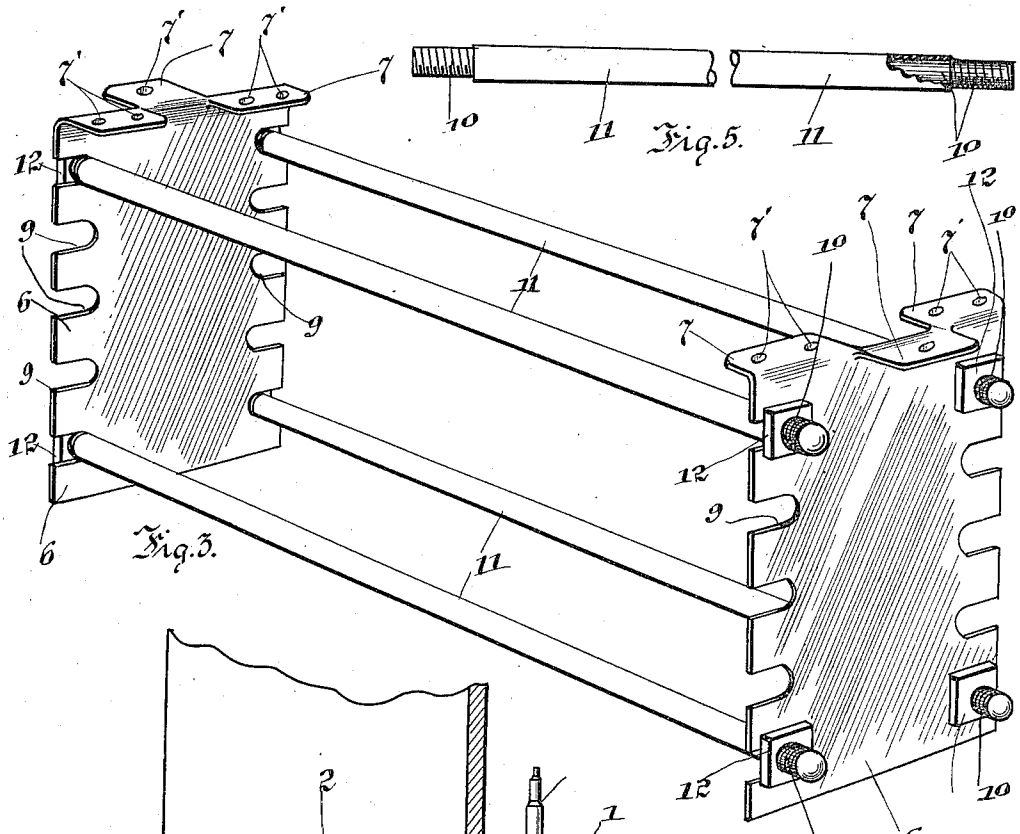

Fig. 5.

Fig. 3.

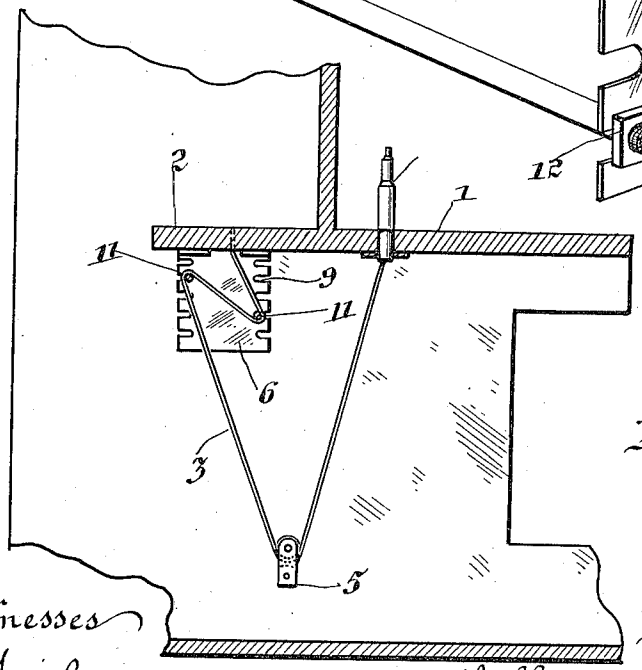

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. WEYRAUCH, OF CHICAGO, ILLINOIS.

SWITCHBOARD.

1,030,040. Specification of Letters Patent. Patented June 18, 1912.

Application filed October 16, 1911. Serial No. 655,039.

To all whom it may concern:

Be it known that I, WILLIAM F. WEYRAUCH, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Switchboards, of which the following is a specification.

My invention relates to improvements in telephone switch boards and more particularly to a device for shortening or taking up the unnecessary slack in the calling or switch cords which depend from the cord rack of the switch board.

The object of the invention is to provide a cord shortening device of the character stated which shall be so constructed as to provide adequate and convenient means for shortening the switch cords without tying knots therein, the latter means for shortening the cords being in vogue at the present time.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view showing the cord rack in the rear of a telephone switch board embodying my invention, Fig. 2 is a rear elevation showing the cord rack and the switch cords depending therefrom, Fig. 3 is an enlarged perspective view showing my improved cord shortening device, Fig. 4 is a vertical transverse section taken through the switch board and cord rack showing the manner of disposition of the cords on the cord shortening device, and Fig. 5 is a detail side elevation showing the construction and composition of a rod employed in the cord shortening device.

The preferred form of construction as illustrated in the accompanying drawings comprises a telephone switch board having a casing 1 and a cord rack 2 arranged in the rear, 3 indicating the cords which are provided with the usual plugs 4 adapted for insertion into the plug sockets, not shown, which are provided in the upper portion of the front of the switch board. Upon the cords 3 are arranged slidable weights 5 which serve to hold the plugs 4 in normal upright position as shown in Fig. 1. The weights 5 also serve to return the plugs 4 to their normal or upright position upon release from the plug sockets, not shown.

In ordinary practice at the present time, the cords 3 are knotted in such a manner as to take up the unnecessary slack therein and to adjust the lengths thereof to the position of the weights 5 which should be arranged in substantially the same horizontal plane adjacent the bottom of the casing 1 as shown in Fig. 1. The cords of switch boards when installed therein are unnecessarily long, and consequently knotting of the cords is resorted to to reduce their length. Knots in the cords cause interference of the same and are generally objectionable, consequently the object of the present invention is to provide a suitable means or device for obviating the necessity of knotting the cords in order to take up the unnecessary slack therein.

The cord shortening device comprises a pair of substantially rectangular metallic plates 6 which are provided at one end with oppositely turned perforated plates 7, these flanges being disposed at right angles to the main body of the plate 6 and the perforations therein being designated by the numeral 7′ in Fig. 3. The plates 6 are spaced apart from each other as shown in Fig. 1 and secured to the under side of the cord rack 2 by means of nails or screws 8 passed through the perforations 7′ of the flanges 7. In this manner the flanges 6 are vertically arranged and also in parallelism. Provided in each vertical edge of the flanges 6 is a plurality of equally spaced horizontally extending rod sockets 9, any suitable number of these sockets being provided as may be required for any given switch board. A plurality of rods 10 of a length sufficient to bridge the space between the plates 6 is provided and adapted to be removably secured in said plates as will be presently described. Each rod 10 is provided with an insulating coating of covering 11 in order to prevent short circuiting of the cords 3 which rest thereon. This coating of insulation may be paint, rubber, or fiber, or any other suitable material adapted for this purpose. Each end of a rod 10 is threaded for the reception of a nut 12 which is screwed thereon as plainly illustrated in Fig. 3. The rods 10 are secured in their respective notches or sockets 9 when the nuts 12 are screwed into close relation with the corresponding surface of the plates 6, thereby producing a

frictional locking means. In order to remove a rod 10 it is only necessary to loosen a nut 12, whereupon said rod may be readily withdrawn from the sockets 9 in which it is supported.

It will be observed by reference to Figs. 3 and 4 that any number of rods 10 and any arrangement thereof may be employed, the arrangement shown in Fig. 3 being most commonly employed.

The operation for applying the cord shortening device to the telephone cords 3 is as follows: Assuming that the plates 6 are secured in position underneath the ends of the cord rack 2 as illustrated in Fig. 1, then in order to take up the unnecessary slack on said cords, a rod 10 is held horizontally in front of the cords and so moved thereagainst as to produce a single bend in all of the cords. The rod 10 is then positioned in a pair of sockets 9 and secured therein by tightening up the nuts 12. Further shortening of the cords 3 is effected by employing a second rod 10 and pressing the cords 3 in the opposite direction, whereupon said second rod is secured in a pair of notches in the opposite edges of the plate 6. The resulting arrangement will be the same as that shown in Figs. 1 and 4. Further shortening of the cords may be accomplished by using a third and a fourth rod and so on.

It is apparent that when the cords 3 are shortened by means of the cord shortening device of the present invention that no interference to the normal action of said cords is made.

The telephone cord shortening device as hereinbefore set forth is adapted for use in connection with all switch boards of ordinary construction, and the same may be applied by any unskilled person.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a telephone switch board cord rack having a plurality of cords depending therefrom, of a rod hanger secured to said rack, and a rod arranged adjacent said cords and removably secured in said hanger, substantially as described.

2. The combination with a telephone switch board cord rack having a plurality of telephone cords depending therefrom, of a rod hanger secured to said rack, and a plurality of rods removably secured in said hanger and arranged adjacent said cords, substantially as described.

3. The combination with a telephone switch board cord rack having a plurality of cords depending therefrom and arranged in a line, a rod hanger secured to said rack adjacent each end of the line of cords, and a plurality of rods arranged parallel with said line of cords and removably secured in said hanger, substantially as described.

4. The combination with a telephone switch board cord rack having a plurality of cords depending therefrom and arranged in a line, rod hangers secured to said rack at each end of said line of cords, and a plurality of parallel rods removably secured in said hangers and arranged parallel with said line of cords, substantially as described.

5. The combination with a telephone switch board cord rack having a plurality of equally spaced cords depending therefrom and arranged in a line, of a rod hanger depending from said rack at each end of said line of cords, a plurality of rods adapted to be removably secured in said hangers and be arranged parallel with said line of cords, and means for securing a tension on said cords, substantially as described.

6. The combination with a telephone switch board cord rack having a plurality of telephone cords depending therefrom and arranged in a line, a rod hanger depending from said rack adjacent each end of said line of cords, there being rod sockets in each rod hanger, and a plurality of rods of a length sufficient to bridge the space between said hangers and adapted to be secured thereto, said rods being arranged parallel to each other and with said line of cords, substantially as described.

7. A telephone cord shortening device comprising a pair of plates adapted to be secured on the under side of a telephone cord rack adjacent the cords thereof, there being a plurality of notches provided in the vertical edges of said plates, and a plurality of rods of a length sufficient to bridge the space between said plates and adapted to be removably secured thereto, substantially as described.

8. A cord shortening device for telephone switch boards comprising a pair of substantially rectangular metallic plates spaced apart and secured to the under side of the switch board cord rack adjacent the ends of the line of cords depending from the latter, there being a plurality of notches provided in the vertical edges of said plates serving as rod sockets, the latter being equally spaced apart, and a plurality of rods bridging the space between said plates and adapted to be removably secured in the sockets provided therein, substantially as described.

9. A cord shortening device for telephone switch boards comprising a pair of metallic rectangular plates having flanges bent at right angles at one end thereof, said flanges being secured adjacent each end of the switch board cord rack adjacent the cords depending therefrom, the construction being such that said plates will assume vertical positions, each plate being provided with a plurality of horizontally extending sockets formed in each vertical edge thereof, and a plurality of rods of a length sufficient to bridge the space between said plates and adapted to be removably secured in said sockets, substantially as described.

10. A telephone shortening cord device for switch boards comprising a pair of substantially rectangular plates having perforated flanges bent at right angles at one end thereof, said plates being secured to the switch board cord rack at the respective ends thereof by means of said flanges, the construction being such that said plates will be vertically disposed and arranged parallel to each other, there being a plurality of inwardly extending notches provided in the vertical edges of each plate, and a plurality of rods arranged in alinement with the line of telephone switch cords and adapted to be removably secured in any corresponding pair of said sockets, substantially as described.

11. A telephone cord shortening device for switch boards comprising a pair of spaced vertically disposed plates secured at the ends of the switch board cord rack adjacent the line of cords depending therefrom, said plates being arranged in parallelism and provided with a plurality of notches forming sockets in each vertical edge thereof, and a plurality of rods of a length sufficient to bridge the space between said plates and adapted to be secured in said sockets, each rod being provided with threaded ends and nuts for screwing onto the latter and for abutting the sides of said plates for securing said rods in position, substantially as described.

12. A telephone switch cord shortening device for switch boards comprising a pair of substantially rectangular plates adapted to be secured in vertical positions on the under side of the switch board cord rack at the ends thereof, there being a plurality of inwardly extending horizontal notches provided in each plate for the reception of rods, a plurality of rods disposed horizontally and bridging the space between said plates, said rods being provided with threaded ends adapted to be seated in said notches, and nuts adapted to be screwed to said threaded ends and to abut the sides of said plates for forming a frictional locking means, said rods being provided with an elongated insulation in the peripheral surface thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. WEYRAUCH.

Witnesses:
HELEN F. LILLIS,
JOSHUA R. H. POTTS.