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R. C. JOHNSON ET AL

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FIG. 1

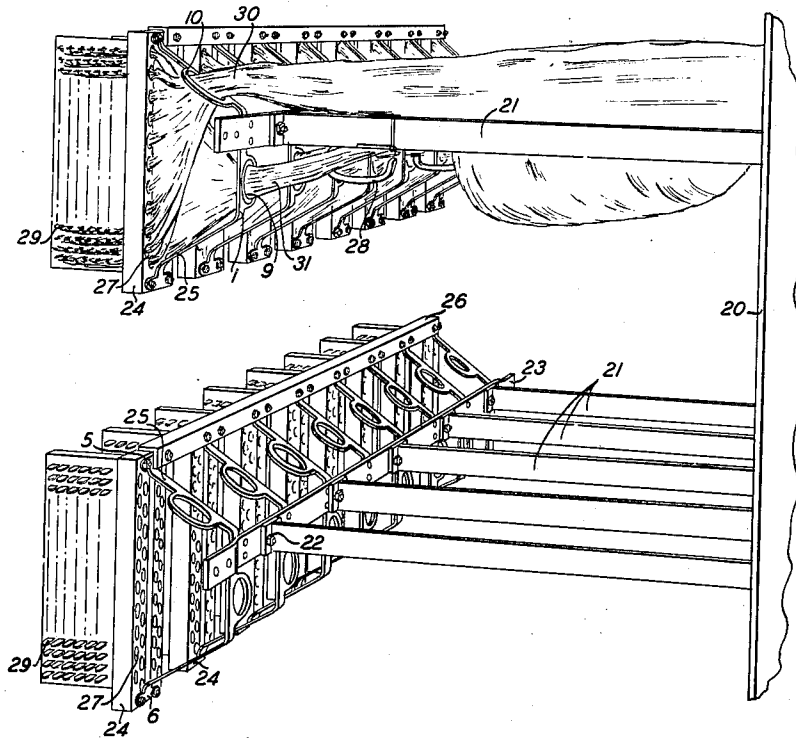


FIG. 2

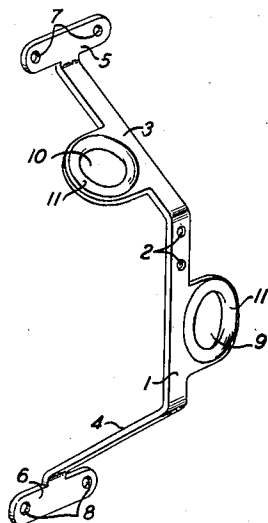
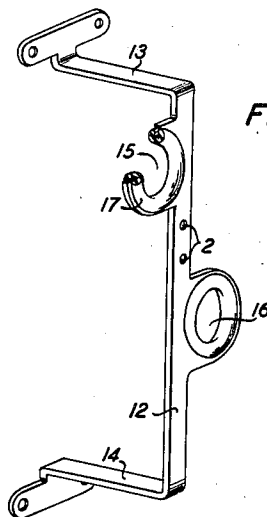


FIG. 3



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2 Claims. (Cl. 179-98)

This invention relates to distributing frame equipment for telephone systems and has for its object to increase the flexibility of wire distribution on such equipment.

It is well known that interconnections between lines incoming to an office and the central office equipment are made by the use of terminal blocks mounted on distributing frames, the wires from the blocks being concentrated by means of distributing rings. The present invention facilitates the mounting of the terminal blocks and the orderly disposition of the wiring to them.

In accordance therewith, improved means is provided for supporting terminal blocks on the shelves of distributing frames on which jumpers are run in a horizontal direction. The terminal blocks are mounted in a vertical position with means formed integrally with the supporting members for concentrating and segregating the wiring entering the two sides of the terminal blocks. This arrangement simplifies installation in that separate rings, pins, or brackets for accomplishing such concentration and segregation are not necessary.

The arrangement for attaching the supporting members to the distributing frame is such that the terminal blocks can be spaced independently of the shelf members. An angle bar resting horizontally along the tops of the terminal strips serves to hold the blocks rigidly and acts as a guide in running the jumper wires to keep them from falling between the blocks.

The invention will be more clearly understood from a consideration of the following description in connection with the attached drawing in which:

Fig. 1 shows two shelves of a distributing frame;

Fig. 2 shows an individual combined terminal block bracket and guide ring member; and

Fig. 3 shows an alternative form of combined terminal block support and guide ring member.

Referring first to Fig. 2, the said member is formed from sheet steel by a single cutting and bending operation. The bracket includes a vertical section 1 having screw holes 2, 2 and arms 3 and 4 which terminate in crossbars 5 and 6 also provided with screw holes 7, 7 and 8, 8 and bent to lie parallel with the section 1. Integral with arm 3 is formed ring 10 and integral with the vertical section 1 is formed ring 9. Both rings are lined with insulation 11 in any convenient form, for example, a grommet.

In the form of bracket shown in Fig. 3 the arms 13 and 14 are at right angles to the vertical

section 12 and the distributing rings 15 and 16 are formed on opposite sides of the vertical section 12. As in the case of the bracket of Fig. 2, one ring is above and the other below the mounting screw holes 2. Ring 15 has been broken to show the arrangement of the insulation 17 on the ring 15.

In Fig. 1 the lower shelf, which is unwired, shows the manner in which the brackets are used in mounting the terminal strips. To one level of the distributing frame 20 is connected a number of shelf bars 21 to the outer ends of which is fastened, by bolts 22, a mounting bar 23. To the mounting bar 23, by means of screw holes which register with the screw holes 2, a series of brackets 25 are mounted, the number of which is independent of the number of shelf bars 21.

The crossbars 5 and 6 of each bracket are bolted to a terminal strip 24 which has a plurality of sets of terminals 29. An angle bar 26 extends across the tops of the terminal strips and is held in place by the same bolts which hold the brackets and terminal strips together. This bar serves to render the shelf more rigid and also serves as a guide to prevent a jumper from becoming entangled with the terminal strips in the process of placing it horizontally on a shelf.

From the upper shelf of Fig. 1 it appears that the wires, generally jumpers, attached to the terminals 29 on the near side of the terminal strip 24 are carried through the holes 27 in the back of the terminal strip and through the jumper ring 10 on arm 3 of the bracket 25 to form a bundle 30 which spreads out along the top of the shelf formed by the shelf bars 21. The wires, attached to the terminals on the far side of terminal strip 24 usually come from a switchboard cable. This cable is broken up into a bundle for each shelf which in turn is subdivided into bundles such as 31. Such a bundle is passed through a fanning ring 28 to the distributing ring 9 on the vertical section 1 of bracket 25. From the ring 9 the wires are passed through the holes 27 in the back of the terminal strip and thence to the far ends of the terminals 29.

It is, therefore, evident that a distributing frame embodying the present invention provides a flexible terminal arrangement and is one which facilitates the wiring of the terminals both originally and when changes are required.

What is claimed is:

1. In a distributing frame, terminal blocks having sets of terminals, jumper wiring connected to one end of said terminals and switchboard cable leads connected to the other end of

the terminals, a mounting bracket having a vertical section and two arm sections for each of said terminal blocks, and two jumper wire guide rings formed integrally with said bracket, one of said rings being formed on one side of said vertical section and the other of said rings being formed on one of said arm sections in order to segregate the wiring connected to the two ends of the terminals of said terminal blocks.

2. In a distributing frame, mounting shelves thereon comprising horizontal bars and a connecting strip, terminal blocks, wiring attached to said terminal blocks and means for positioning 5 said terminal blocks on said shelves independent of said horizontal bars comprising brackets formed integrally with jumper wire guide rings.

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