

May 13, 1941.

R. A. HECHT

2,241,882

DESIGNATION STRIP

Filed March 28, 1940

2 Sheets-Sheet 1

FIG. 1

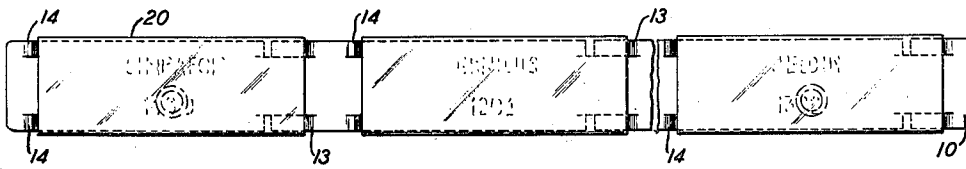


FIG. 2

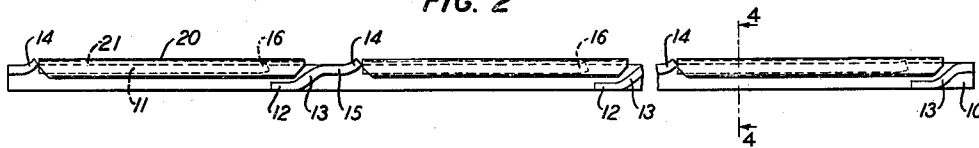


FIG. 3

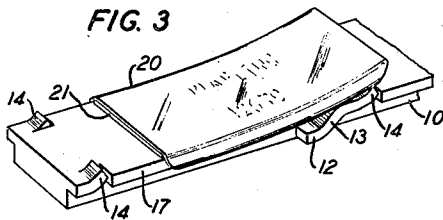
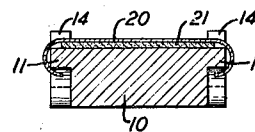


FIG. 4



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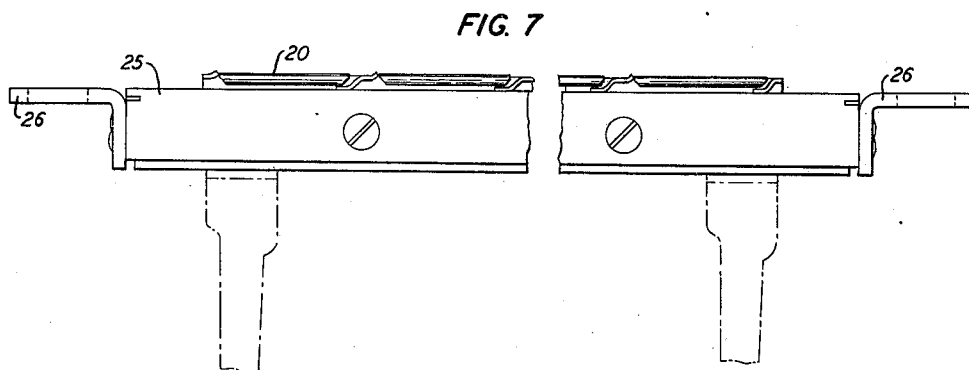
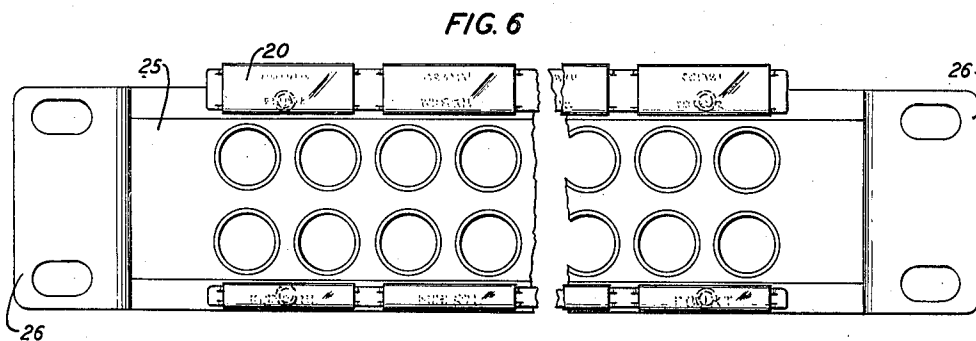
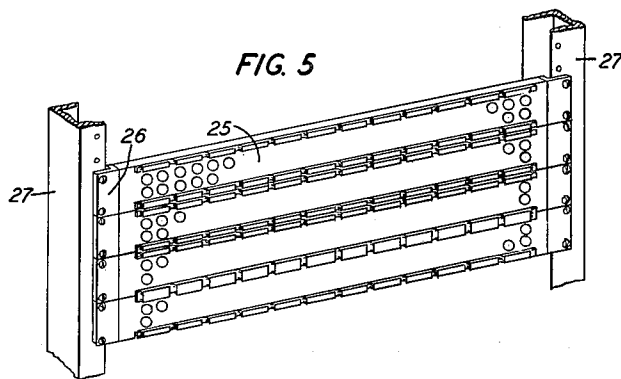
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DESIGNATION STRIP

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2 Sheets-Sheet 2



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DESIGNATION STRIP

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10 Claims. (Cl. 40—17)

This invention relates to designation devices and particularly to designation strips of the type used extensively in the telephone plant.

In the telephone plant, the designation strip is employed in general, as a means for identifying signal lamps or jacks which are mounted in horizontal rows on the telephone switchboard. It consists principally, of a paper or cardboard strip bearing the names of central offices, numbers or other characters of identification; a face strip or window of transparent material; and a holder or carrier capable of supporting the paper strip and window in superposed relation so that the designations may be observed through the window, which serves also as a protection for the paper strip.

Heretofore, in numerous designation strip designs, the holder element, or carrier, was constructed as an elongated metal strip with its two longitudinal edges turned over to form channels, into and out of which the paper strip and its associated face strip or window could be slipped with comparative ease. The holder, paper strip and window were of the same length so that a single strip of paper, or similar material was employed to accommodate all the designations assigned to a single row of lamps, jacks, etc. Obviously, to change the designations of one or more of the lamps, etc. located in a single row, necessitated the removal of the entire strip from its holder and the reinsertion of a new strip for the entire row, or the same strip with the undesired designations removed or revised. Another objectionable characteristic of the designation strip heretofore employed was its tendency to produce shadows on the designation bearing area, caused by the overhang of the intumed edges of the holder element. Such shadows obscured the designations and rendered them more difficult to read.

It is the object of this invention to provide a designation strip which is simple in construction, durable, inexpensive to manufacture and which overcomes the objectionable features of designation strips of the general character described above.

This object is attained in accordance with a feature of the invention by the provision of a holder, or carrier element in the form of a flat bar or rod provided with facilities for removably mounting a plurality of independent designation cards and their associated windows or face strips. More specifically, each carrier is sheared and formed at regular intervals throughout its length so as to provide a plurality of sets of guide mem-

bers and stops, by virtue of which each of the designation cards and its respective window or face strip may be conveniently fed onto the holder, accurately positioned thereon and subsequently removed therefrom without interference to adjacent card and window combinations.

Another feature of the invention contemplates the elimination of shadows from the designation bearing surface. To provide for this feature, the window element or face strip is constructed of a relatively small rectangular piece of cellulose acetate or similar material, whose longitudinal edges are turned back to provide channels or guides which accommodate oppositely disposed flanges on the holder, the outer or front face of the flanges being flush with the front surface of the holder. In this manner the overhang which, in prior designs, was a source of shadows, is transferred from the holder element to the window and is located at the rear of the strip, thus leaving a flat, shadow-free surface on the front or designation bearing area of the strip.

These and other features of the invention will be readily understood from the following detailed description made with reference to the accompanying drawings, in which:

Fig. 1 is a front view of a designation strip constructed in accordance with the present invention, showing three designation card and window combinations in position on the holder or carrier element;

Fig. 2 is a side or edge view of the designation strip illustrated in Fig. 1;

Fig. 3 is a perspective view of a section of the holder or carrier element showing one of the card and window combinations partially removed therefrom;

Fig. 4 is an enlarged section of the designation strip taken along the line 4—4 of Fig. 2, looking in the direction of the arrows;

Fig. 5 is a perspective view of a switchboard apparatus-mounting bay showing several jack mountings with their respective designation strips secured thereto;

Fig. 6 is an enlarged front view of a jack mounting showing designation strips of different widths mounted thereon; and

Fig. 7 is a side or edge view of the assembly illustrated in Fig. 6.

The carrier or holder element of the designation strip consists of an elongated metal rod or bar whose main body portion 10 is rectangular in section and is provided on each of its longitudinal edges with a flange 11 (Fig. 4) extending outwardly from the main body portion and flush

with the upper or front surface thereof. Prior to a series of combined shearing and forming operations which the rod undergoes, the flanges 11 are continuous and extend the entire length of the rod.

At regularly spaced intervals, the rod flanges 11 are sheared and formed in such a manner that a section of the flange material, consisting of the portions identified on the drawings by the numerals 12 and 13 is separated from the main body portion 10 and bent downwardly (viewing Figs. 2 and 3) while a smaller portion 14 is raised above the face of the rod. The numeral 15 identifies an unsheared section of the flange which joins the sections 13 and 14 and remains flush with the face of the rod. That is, its normal condition is undisturbed by the shearing and forming operations. The flange portion 13 is sloped downwardly from the plane of the section 15 and terminates in the section 12 which assumes a position substantially parallel to the longitudinal axis of the rod and substantially flush with the lower face of the main body portion 10. The flange metal which, prior to the shearing and forming operations, was joined to the cut end of section 12, and which is identified on the drawings by the numeral 16, is raised slightly above the upper face of the main body portion 10.

From the description thus far advanced, it is apparent that a combined shearing and forming operation results in the formation of flange sections 12, 13, 14, 15 and 16, and since this operation is repeated at regularly spaced intervals along each flange, a plurality of sets of flange sections 12, 13, 14, 15 and 16 appear at regularly spaced intervals throughout the entire length of the rod. These sets are duplicated on the two flanges and each set on one flange is in transverse alignment with a similar set on the other flange.

The flange metal extending to the left of each raised section 16 to the next raised portion 14 is in its original condition and, in Fig. 3 is identified by the numeral 17.

The purpose of the particular flange sections just described will be set forth in a later description.

As clearly seen in Fig. 4, the transparent window or face strip 20 has its two longer edges formed over or turned back to effect channels which accommodate or register with the flange sections 17 when the window and its associated designation card 21 is positioned on the carrier or holder. The card 21 is inserted in the window channels and occupies a position between the upper, or outer surface of the rod and the window. This card bears the names of a central office, numbers or other characters of identification.

In order to position a card 21 and its associated window 20 on the carrier element, the card is slipped into the channel-shaped edges of the window and the left-hand extremities of the window channels are fitted over or fed onto the raised flange sections 16 and the entire assembly pushed, or moved to the left in a direction parallel to the longitudinal axis of the rod. In this manner the formed edges of the window are guided onto the runner-like sections 17 on either side of the rod until the left edge of the window abuts against the raised flange portions 14. The flange portions 14 serve as stops and limit the extent to which a card and window combination may be moved to the left on the holder. The longitudinal dimension of the window 20 is such that when the left edge thereof abuts a set of

projections 14, the right edge thereof rests upon the inclined or sloping flange sections 13. Thus, a window 20 and its associated card 21 are securely held in position between a set of inclined flange sections 13 and the next set of raised portions 14 to the left.

To remove a card and its window from the holder, it is only necessary to slide the window to the right on the runner-like portions 17 of the holder. During this movement the right extremity of the window is cammed upwardly as it rides upon the inclined flange sections 13 in a manner which is apparent from the disclosure of Fig. 3. As the window, with its enclosed card, is moved to the right, the entire combination is raised above the face of the holder and clear of the next adjacent window. The sloping face of the raised sections 14 and also the fact the under edges of the face strip channel ends are cut at an angle of substantially 45 degrees further insure the raising of the card and window combination above the level of the next succeeding window, since the right edge of the window would be further guided upwardly by the portions 14 should it tend to drop down after leaving the sloping portions 13. The card and window materials are such as to permit these elements to be slightly flexed during their removal from and association with the carrier. The angle-cut edges of the window channels also prevent tearing of the face strips.

At regular intervals throughout its length, the carrier, or holder is provided with holes which accommodate screws by virtue of which the holder may be fixed to a jack mounting such as indicated at 25. At either end of the jack mounting there is fixed a bracket 26 which serves to mount the jack mounting on the channel beams 27 which constitute an apparatus mounting bay of the type well known in telephone switchboard design. Since the jack mounting, per se, forms no part of the present invention and constitutes a well-known switchboard accessory, it is believed that no description thereof is required.

As clearly illustrated in Fig. 6, the designation strip of this invention may be made in two sizes, one to accommodate a designation card bearing a double row of characters and the other to accommodate a designation card bearing a single row of characters. Obviously, it can be designed to accommodate designation cards having more than two rows of designation characters.

It will be noted that the designation strip herein described is so designed as to completely eliminate shadows. This desirable characteristic results from the fact that the channel edges are formed on the window elements rather than on the holder element as in prior designs. In the latter case, the window and card combination was slipped under the channel edges of the holder with the result that the overhanging edges of the holder were instrumental in casting shadows on the designation card. In the present design, the overhang is on the window itself and is located in the rear of the carrier when the card is positioned on the carrier. The visibility of the characters on the card is thus materially improved and the character bearing surface is free of shadows.

What is claimed is:

1. In a designation strip, a designation card-holding face strip having a pair of oppositely disposed edges in-turned to form channels, a mounting for said face strip comprising a flat metal bar

having a runner-like flange extending from each of two opposite edges thereof which register with the channels of said face strip when the face strip is in position on said bar, means for positioning said face strip on said bar comprising stops formed as integral projections of said bar and extending, at one end of the face strip, above the face of said bar and, at the other end of the face strip, below the face of said bar, against which the ends of the face strip abut, and a designation card interposed between the face of said bar and said face strip.

2. In a designation strip, a designation card-holding face strip having a pair of oppositely disposed edges in-turned to form channels, a mounting for said face strip comprising a flat metal bar having a runner-like flange extending from each of two opposite edges thereof which register with the channels of said face strip when the face strip is in position on said bar, means for positioning said face strip on said bar comprising stops formed as integral projections of said bar and extending, at one end of the face strip, above the face of said bar and, at the other end of the face strip, below the face of said bar, against which the ends of the face strip abut, the said projections extending below the face of said bar being inclined at an angle so that when said face strip is moved in one direction parallel to the longitudinal axis of the bar, the end of said face strip abutting thereon rides up on the inclined projections and is raised clear of the face of said bar, whereby said face strip may be removed from said bar, and a designation card having a pair of opposite edges registering in the channels of said face strip.

3. A designation strip comprising a single sectionalized flanged bar having integral projections extending above and below the face of each section of the bar and in alignment with the flanges thereof, a face strip for each section having one end abutting a pair of projections extending above the face of a bar section and the other end abutting the projections extending below the face of a bar section and having its two other edges formed over the flanges of the bar section, and a designation card interposed between each of said face strips and their corresponding bar sections.

4. A designation strip comprising a bar provided with an integral runner-like flange on each of a pair of opposite edges, each of said flanges having one end thereof raised above the face of said bar, a face strip having a pair of oppositely disposed in-turned edges forming channels which are guided on to said flanges by the raised ends thereof when said face strip is slid along said bar in a direction parallel to its longitudinal axis, stop members for limiting the extent to which said face strip may be moved on said flanges, comprising integral projections raised above the face of said bar in alignment with said flanges, and a designation card having a pair of opposite edges registering in the channels of said face strip.

5. A designation strip comprising an elongated rod divided longitudinally into a plurality of sections, each section provided with a pair of oppositely disposed flanges projecting from the longitudinal edges thereof, a face strip or window slidably mounted on the flanges of each of said sections comprising a sheet of transparent material having two of its opposite edges in-turned to form channels which register with the flanges of said sections, a designation card interposed

between each of said windows and the face of a corresponding rod section, and means for facilitating the removal of each of said windows and its associated card from the carrier, comprising a pair of sloping integral flange portions for each section against which one end of the window abuts and which raises the window above the face of said rod when the window is moved longitudinally in one direction on its respective flanges.

6. A designation strip comprising a carrier element having oppositely disposed flanges thereon, a designation card-holding window including a sheet of transparent material having two of its opposite edges in-turned to form channels, means comprising integral end portions of said flanges extending above the face of said carrier and adapted to be engaged by the channel edges of said window and to guide said window onto said flanges when said window is moved along the face of said carrier in one direction parallel to the longitudinal axis of said carrier, and a designation card having two of its opposite edges registering in the channel edges of said window.

7. A designation strip comprising a carrier having oppositely disposed flanges thereon, a designation card-holding window including a sheet of transparent material having two of its opposite edges in-turned to form channels, means comprising integral end portions of said flanges extending above the face of said carrier and adapted to register with the channel edges of said window whereby said window is guided onto said flanges when moved along the face of said carrier in one direction parallel to the longitudinal axis of said carrier, stop members for limiting the extent to which said window can be moved in said one direction comprising raised portions integrally formed on said carrier and in longitudinal alignment with said guide portions, and a designation card having two of its opposite edges registering in the channel edges of said window.

8. In a designation strip, a card-holding face strip or window having in-turned edges forming channels, a mounting for said oppositely disposed flat metal bar having oppositely disposed flange extensions constituting runners, and means for guiding the channels of said window onto the runners of said bar comprising a raised end portion of each of said runners projecting at an angle above the surface of said bar and adapted to register with the channel edges of said window whereby said window is guided onto said runners when moved in one direction parallel to the longitudinal axis of said bar while its channel edges are in registry with said raised end portions.

9. A designation strip comprising a carrier having oppositely disposed flanges thereon, a card holder including a sheet of transparent material in-turned at two of its edges to form channels, means for guiding the channels of said card holder onto said carrier flanges when said holder is moved longitudinally in one direction along the face of said carrier comprising inclined end portions of said flanges extending above the surface of said carrier, means for limiting the extent to which the card holder can be moved in said one direction comprising other raised portions of said carrier flanges in alignment with said guide means, and a designation-bearing card interposed between the face of said carrier and said sheet of transparent material.

10. A designation strip comprising a holder

provided with a pair of oppositely disposed flanges extending the entire length of the holder and whose continuity is interrupted at regularly spaced intervals to effect a plurality of separate card-holding sections, the flanges of each section being upturned at one end to effect guide means for a card holder, and a card holder for each of said sections comprising a sheet of transparent material having two opposite edges formed over

to effect channels which are adapted to fit over the upturned ends of said flanges and to be guided thereby onto the flanges of a card-holding section when the card holder is moved in one direction parallel to the longitudinal axis of said holder subsequent to the association of the channel edges of the card holder with the said guide means.

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