United States Patent

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[54] **DESIGNATION STRIP ASSEMBLY**
10 Claims, 4 Drawing Figs.

[52] U.S. Cl. ..... 40/10 R
[51] Int. Cl. G09f 3/18
[50] Field of Search 40/10, 16, 16.2, 16.4, 16.6

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ABSTRACT: A designation strip assembly comprises an elongated straight base portion having an outer face between shouldered sides. The outer face may have a concave portion adjacent each shouldered side and a gently convex surface longitudinally between the concave portions. A self-supporting, channel-shaped, springable, transparent cover strip is attached to overlie the outer face of the base portion and has flanges with beaded locking edge portions engageable along the shouldered sides for locking the cover strip against the base. The cover strip web curves gently to conform to the convex part of the base outer face. The cover strip may be progressively sprung to the base along the shouldered base sides and may be progressively removed by springing therefrom. An indicia bearing designation strip is normally carried along the inside face of the cover strip and is wide enough to be retained between the flanges of the cover strip.

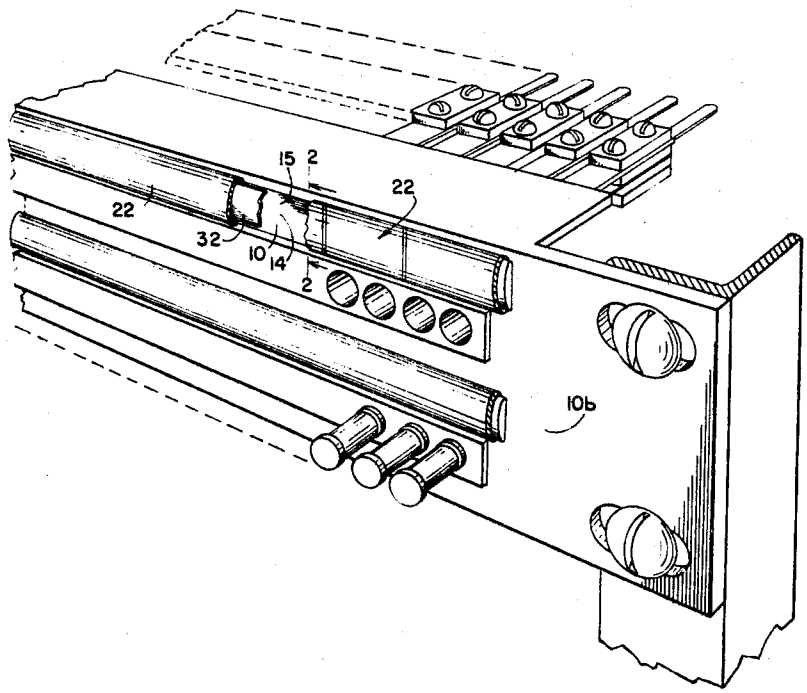


FIG. 1

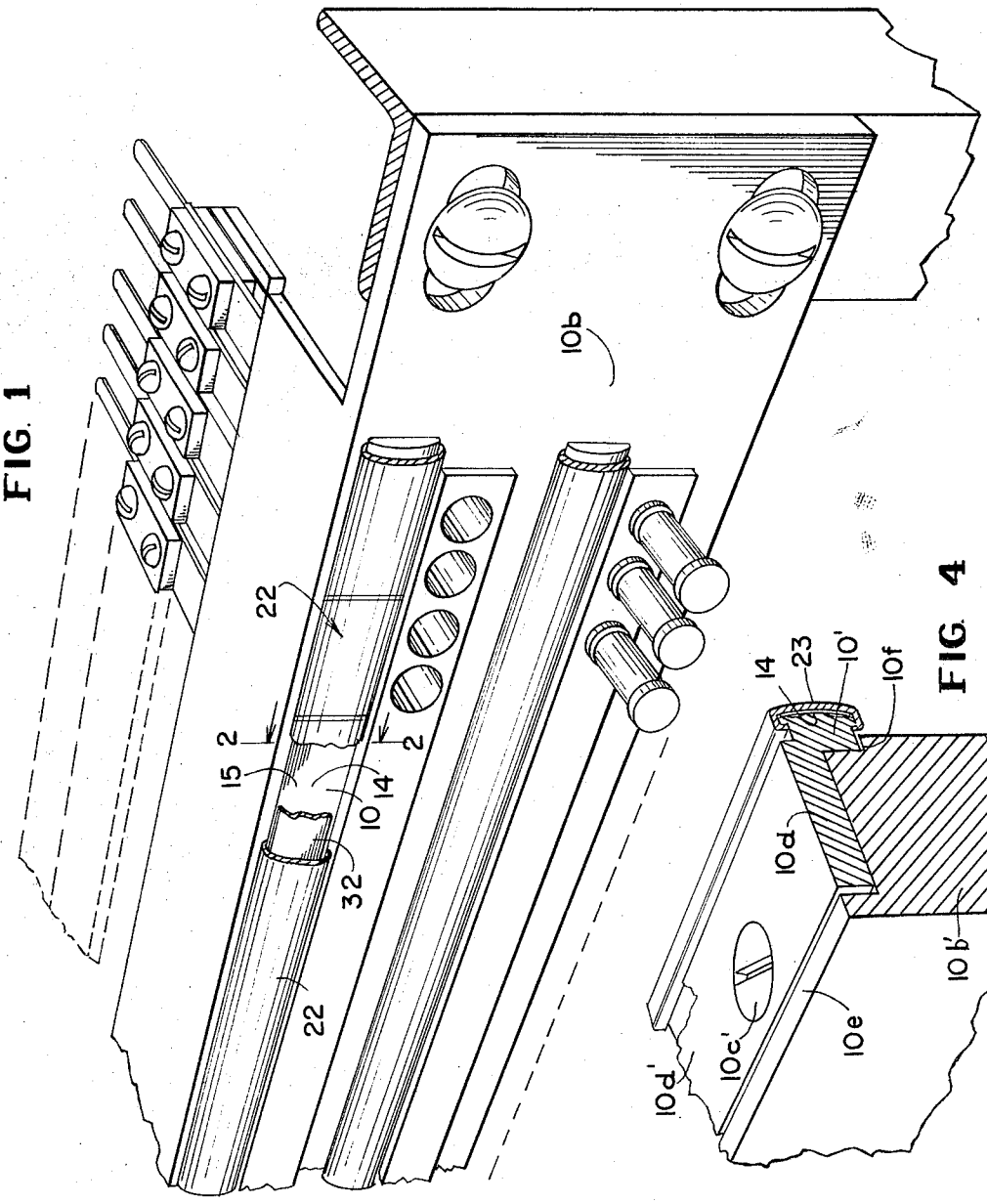


FIG. 4

FIG. 3

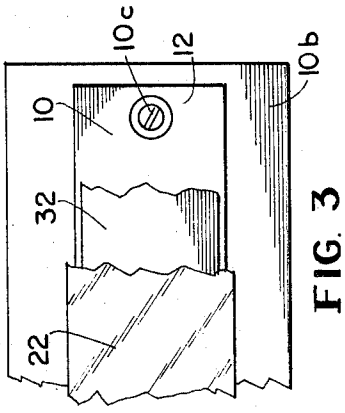
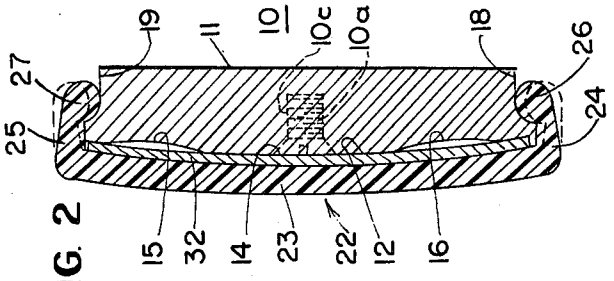


FIG. 2



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DESIGNATION STRIP ASSEMBLY

This invention relates to a designation strip assembly which may be readily applied to a panel or suitable support. Panels containing jacks, switches, terminals, lamps, etc., often require designation strips for identification purposes. Such strips should have transparent, easily cleanable, covers for protection, and should be easily changed when desired. In addition, an assembly supporting designation strip material should be easily cut to required length from longer lengths, and be susceptible to ready attachment to a panel or other support.

The assembly embodying the present invention comprises three physically separate components, each one of which may have an indefinite length. One component is a base portion generally of metal or plastic of sufficient thickness to be reasonably strong. The base portion may be attached to a panel or other rigid support by small screws, cement, or any desired means or may be integral with the support. The base portion has along its length an outer face, part of which is formed by shoulders extending laterally from the sides of the base portion. Transversely of the base strip and extending between the longitudinal shoulders, the outer base face presents a centrally disposed convex region bounded on each side by a concave region.

Cooperating with the base portion is a generally channel-shaped, springable, transparent cover strip whose web may be flat but is preferably curved and has flanges shaped to provide beaded locking edge portions extending longitudinally of such cover strip. The cover strip and base portion are so dimensioned and the cover strip material is selected with regard to strength as to permit a cover strip to be progressively sprung along the outer face over the shouldered base. Conversely, the cover strip may be sprung free progressively along the length thereof. The cover strip is adapted to normally retain a thin designation strip between the locking edge portions, such designation strip carrying suitable identification material thereon.

The fit between the cover strip and base portion of an assembly is sufficiently tight and the friction between the base and locking portion materials is such that it is usually difficult to slide one longitudinally with respect to the other when the two are locked together. This is desirable so that there will be no displacement between assembly components.

The preferred construction, particularly of the base, not only retains the designation strip snugly in the assembly against longitudinal movement but also bows the designation strip outwardly against the inside face of the locking strip.

As illustrated, the shape of the base outer face provides two narrow concave regions along the shouldered sides of the base portion. These concave regions, if provided, create clearance between the base portion and the locking strip or the designation strip. Since neither the designation strip nor the locking strip will follow the concave contour of the base face, this makes it possible to start peeling the locking strip free from the base strip at one end of such locking strip. The initiation of such a peeling action may be accomplished by inserting a fingernail or the pointed tip of a letter opener. An additional advantage of such longitudinal clearance regions between the base and adjacent surface of the designation strip is that air relief passages are provided making it easier to lock or release the locking strip and designation strip with respect to the base portion.

The invention will now be described in connection with drawings wherein:

FIG. 1 is a perspective view, with some parts broken away, illustrating an embodiment of the invention mounted on a panel board.

FIG. 2 is a transverse section on line 2–2 of Figure 1.

Figure 3 is a plan view of a part of the designation strip assembly of FIGS. 1 and 2 attached to a panel support.

FIG. 4 is a perspective detail illustrating a modification of the designation strip assembly mounting attached to a support.

The novel designation strip assembly embodying the present invention includes base portion **10** which may be attached to or integral with a support or panel containing desired devices requiring identification. As illustrated in FIGS. **1** to **3** inclusive, base portion **10** has countersunk mounting apertures **10***a* at spaced intervals along its length. Such apertures permit the mounting of base **10** against panel structure **10***b* by means of screws **10***c*. The countersinking is at front or outer face **12** so that the screwhead may be flush with respect to face **12**. Base **10** has flat rear face **11** which will fit against the flat face of panel structure **10***b*. Apertures **10***a* in base **10** are small enough to avoid undue weakening of base **10** and are disposed at appropriate intervals along the strip length. As is apparent from the shape of base **10**, apertures **10***a* are disposed at the thickest part of base **10**.

Panel **10***b* carries a row of jacks as an example and a row of pushbutton switches, each of which may require identification.

Base portion **10** may be extruded in desired lengths from aluminum brass, plastic, etc. Base portion **10**, has outer face **12** preferably so shaped as to provide centrally disposed convex portion **14** and laterally offset concave portions **15** and **16** bordering sides **18** and **19** of base **10**. As an example, base portion **10** may have a width between sides **18** and **19** of the order of about one-fourth inch, but this is exemplary only and may be larger or smaller. Concave portions **15** and **16** are shown in magnified form.

Generally, convex base portion **14** takes up about one-half of the width between base sides **18** and **19** although this ratio is not important. The concave portions **15** and **16** bordering convex base portion **14** are shallow, with respect to the convex base portion, the shape and depth of such concave face portions being otherwise unimportant. The shape of the entire outer face **12** of base portion **10** is such that any self-supporting material extending over convex face portion **14** will normally not follow the concave contours of the base outer face in the widths which would normally be used.

Cooperating with base portion **10** is locking strip **22** having the general shape of a channel provided with web **23** and flanges **24** and **25**. Locking strip **22** is preferably of transparent plastic extruded to the desired shape. Locking strip **22** may have web **23** substantially normally flat between flanges **24** and **25** or normally curved or bowed, in the direction shown in FIG. **2**. Flanges **24** and **25** have beaded locking edges **26** and **27**, the beads extending toward each other. The depth of flanges **24** and **25** and the width of web **23** are selected so that a locking strip **22** will snugly fit in interlocked relation over the shouldered sides of base portion **10**. By selecting the proper material for locking strip **22** and having appropriate thickness of web and flanges, it is possible to provide a locking strip which can be sprung into locked position over the outer face of a length of base portion or may be sprung free therefrom.

As an example, locking strip **22** may be of cellulose acetate butyrate of commercial grade. Where base portion **10** has a transverse dimension of about one-fourth inch between sides **18** and **19**, the thickness of web **22** may be about 0.025 of an inch and the radius of curvature of web **23** may be about three-tenths of an inch. Flanges **24** and **25** may have a thickness of about 0.02 inches with beaded edges **26** and **27** extending inwardly toward each other about 0.01 inch to about 0.03 inch beyond the inside flange surface. These dimensions are not critical and may be varied within wide limits depending upon the thickness and nature of the locking strip material, and the strength of locking grip to be provided. The normal curvature of web **23** may be somewhat sharper than the curvature of convex portion **14** of base **10** although this is not important. In fact, the normal curvature of web **23** may be less than that of convex portion **14** of base **10** or web **23** may be normally flat.

In general, the mechanical properties of the locking strip are such that the springing action required for application to or removal from the outer face of base portion **10** should be well within the elastic limits of the locking strip material.

When the two are locked together, the grip of the locking strip upon the base strip will be tight.

Normally disposed between the locking strip and base strip is designation strip **32** of any suitable material. Designation strip **32** may be of thick paper or such material as white vinylite or other plastic which can take markings. For example, a thickness of about 0.01 inch for the designation strip may be selected, and the width of the strip is such that it will lie between flanges **24** and **25** of the locking strip. By having the proper width of designation strip **32**, a reasonably thick designation strip will be tightly locked between the base portion **10** and locking strip **22** against longitudinal movement. In addition, such designation strip will remain in slidable position relative to the locking strip if the locking strip is free of the base.

The locking strip and designation strip may be readily cut to desired length by means of a scissors and by having a suitable finish on the designation strip, any desired markings may be applied thereto.

Base portion **10** of a designation strip assembly may be supported on a panel structure in a variety of ways. FIG. **4** shows base portion **10'** integral with support portion **10*d*** to provide an L-shaped support bar. It is possible to have support portion **10*d*** extend from the middle part of base portion **10'** to provide a T-shaped support bar. Any other support bar shape may be provided. The support bar structure is attached to a panel structure **10*b'*** in suitable fashion. If the support bar is adjacent the top of panel structure **10*d***, as shown in FIG. **4**, support portion **10*d*** is bolted thereto at regions **10*c'***. Panel structure **10*b'*** may have its top portion undercut so that the top surface **10*d'*** of support portion **10*d*** is substantially flush with edge portion **10*e*** of panel structure **10*b'***. As illustrated in FIG. **4**, panel structure **10*b'*** is undercut in the front at **10*f***. Thus base portion **10** can fit snugly to provide a finished front view of a designation strip assembly on a panel.

Any one of a number of clear plastic materials may be used for locking strip **22**. Thus butyrates, high-density polyvinyl chloride and other materials are available in transparent form and have desirable elastic properties which render such materials useful as a locking strip in an assembly embodying the present invention. Since such plastic materials have different characteristics of strength, elasticity and the like, it will be understood that the dimensional requirements for a locking strip may vary somewhat with the nature of the material used. Also the surface characteristics of the plastic, such as its coefficient of friction with respect to the material of which base **10** is made, may have to be considered. The material specified for locking strip **22** is merely exemplary of a commercially available material having desirable properties when used with extruded base metal such as aluminum where base **10** is separate from a panel as **10*b***.

Substantial variations may be made in the construction of the designation strip assembly without departing from the scope of the invention except as defined by the appended claims.

What I claim is:

1. A designation strip assembly including an elongated base portion of relatively rigid material of indefinite length having sides longitudinally thereof and having a suitable thickness, said base portion extending in straight lines along the length thereof and being symmetrical with respect to a base portion center plane extending along the base portion length, said base portion having an outer face along the length thereof part of which is formed by shoulders extending laterally from the sides of the base portion, said base portion outer face having a concave portion adjacent each shouldered part and extending along the length of the base portion, a channel-shaped locking strip of transparent springable material of indefinite length, said locking strip having its web portion dimensioned to extend transversely across the outer face of the base portion and having flange portions terminating in continuous beading, the flanges being dimensioned to extend over the base portion shoulders with the beading located below the base portion shoulders for locking action, said locking strip being thin enough and having sufficient elasticity so that it can be pressed into or peeled out of locking engagement progressively along the entire length of said locking strip, said locking strip accommodating, between its flanges at the outer face of said base portion, a flexible designation strip carrying desired markings, a designation strip being normally insertable in or removable from a locking strip only when the latter is free of the base portion, said locking strip and designation strip being cuttable to desired length by scissors, said concave portions taking up a small part of the base portion width whereby initiation, at an end of the locking strip, of removal of such strip from a base portion is facilitated.

2. The construction according to claim **1** wherein said base portion outer face has a convex shape between each concave portion.

3. The construction according to claim **1** wherein said locking strip is of cellulose acetate butyrate.

4. The construction according to claim **1** wherein a length of markable designation strip is carried between the flanges of said locking strip.

5. A designation strip assembly including an elongated base portion of relatively rigid material of indefinite length having sides longitudinally thereof and having a suitable thickness, said base portion extending in straight lines along the length thereof and being symmetrical with respect to a base portion center plane extending along the base portion length, said base portion having an outer face along the length thereof part of which is formed by shoulders extending laterally from the sides of the base portion, a channel-shaped locking strip of transparent springable material of indefinite length, said locking strip having its web portion dimensioned to extend transversely across the outer face of the base portion and having flange portions terminating in continuous beading, the flanges being dimensioned to extend over the base portion shoulders with the beading located below the base portion shoulders for locking action, said locking strip being thin enough and having sufficient elasticity so that it can be pressed into or peeled out of locking engagement progressively along the entire length of said locking strip, said locking strip accomodating, between its flanges at the outer face of said base portion, a flexible designation strip carrying desired markings; a designation strip being normally insertable in or removable from a locking strip only when the latter is free of the base portion, said locking strip and designation strip being cuttable to desired length by scissors and being applicable to or removable from a base portion as a unit.

6. The construction according to claim **5** wherein said locking strip web has a thickness of the order of about 0.025 inches.

7. The construction according to claim **5** wherein the continuous beading along the locking strip flanges extend toward each other beyond the inside flange surfaces.

8. The construction according to claim **5** wherein the continuous beading has a thickness greater than the thickness of the flange.

9. The construction according to claim **5** wherein said locking strip web has a thickness of the order of about 0.025 inches; wherein the continuous beading has a thickness greater than the flange thickness and extend toward each other beyond the inside flange surfaces.

10. The construction according to claim **5** in combination with a length of markable designation strip disposed between the flanges of such locking strip.