July 7, 1964 H. K. LORENTZEN 3,140,071

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Filed June 20, 1961 2 Sheets-Sheet 1

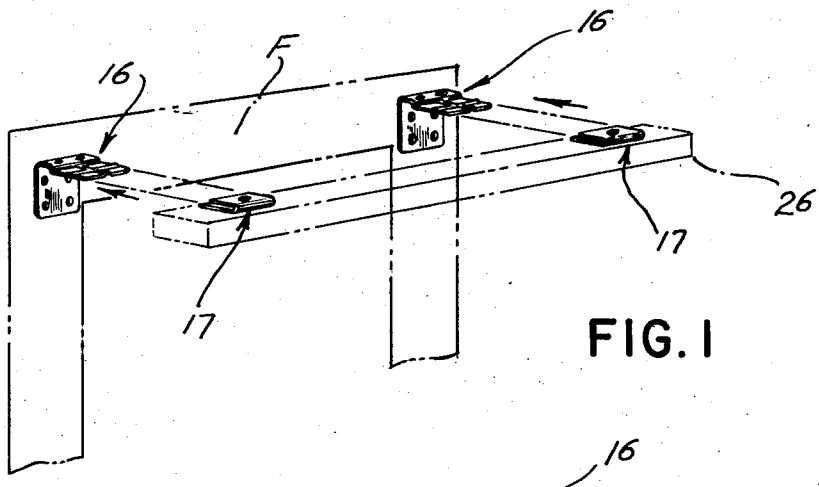



FIG. 1

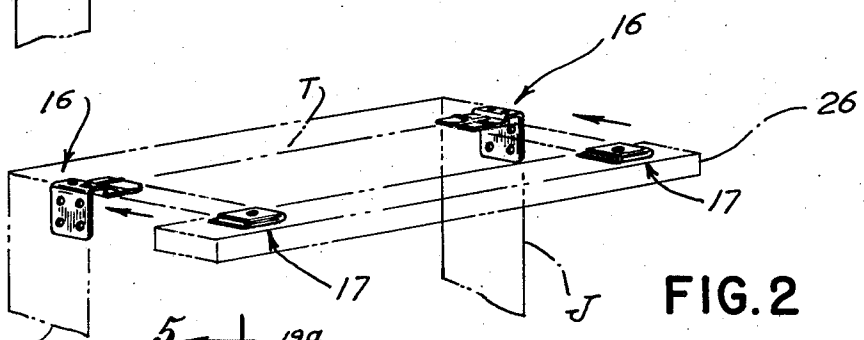



FIG. 2

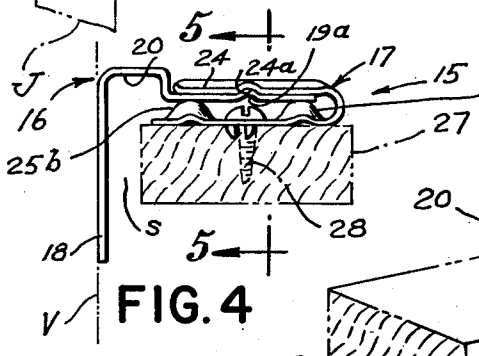



FIG. 4

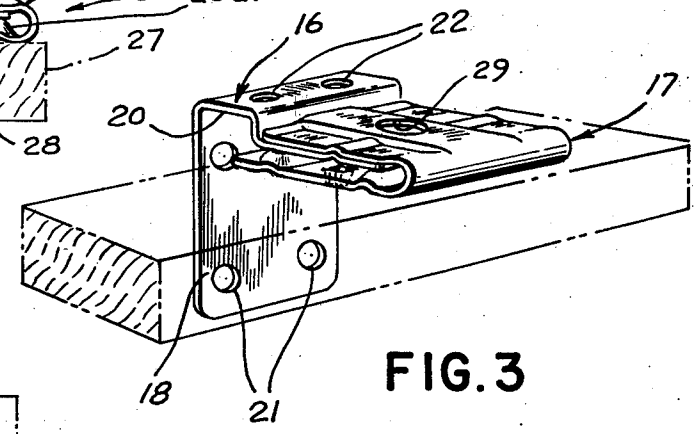



FIG. 3

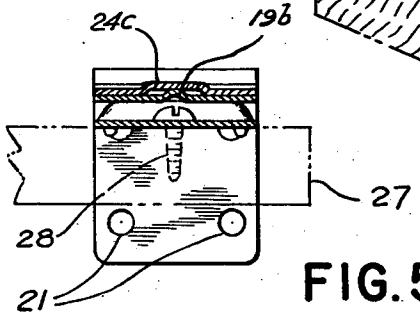



FIG. 5

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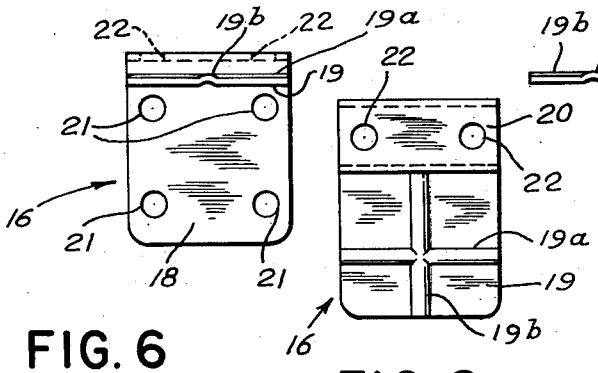



FIG. 6

FIG. 8

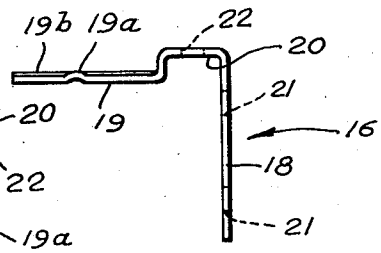



FIG. 7

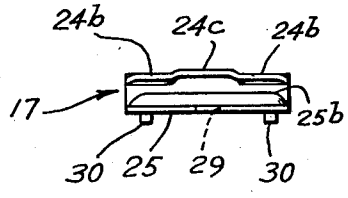



FIG. 9

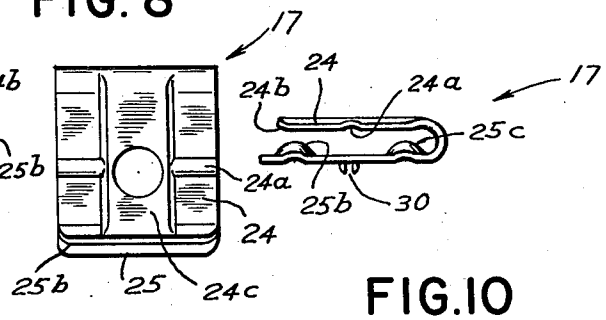



FIG. 10

FIG. 11

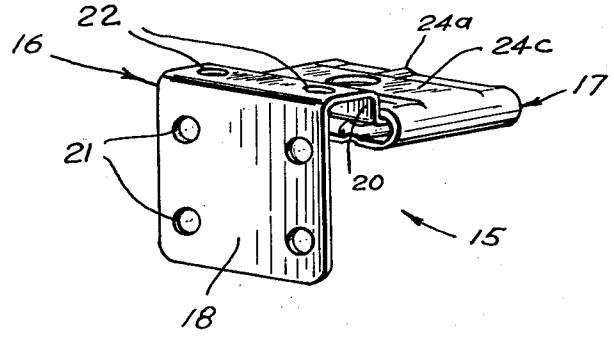



FIG. 12

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# BRACKET

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Filed June 20, 1961, Ser. No. 118,350
8 Claims. (Cl. 248—273)

This invention relates to brackets and more particularly to brackets for hanging curtains that are provided with head bars. Among such curtains are Venetian blinds, roll-up shades, and Roman shades.

In hanging a curtain that has a head bar it is convenient to use two or more separable brackets, one part of each bracket being attached to the head bar and the other part of each bracket being attached to the window frame or other portion of the building. The curtain is hung by uniting the two parts of each bracket and is taken down by separating the two parts of each bracket.

Such a separable bracket is shown in U.S. patent Wassyng et al., 2,808,222, October 1, 1957. In the Wassyng et al. bracket the head-bar-attached part of the bracket is provided with a separate spring which frictionally engages the building-attached part of the bracket when the two parts of the bracket are united to hang the curtain. This separate spring adds to the cost of the bracket. Also, it is difficult to make the Wassyng et al. spring strong enough to prevent canting of the head bar under downward pull upon the curtain.

Among the objects of the present invention are to provide a separable bracket of the type referred to which requires no separate spring, which is capable of sustaining heavy loads, and which effectively holds the head bar of a mounted curtain against canting under downward pull on the curtain.

Various other objects and advantages will be apparent from the detailed disclosure hereinafter, which is the best mode thus far contemplated by me of carrying out my invention. Unless otherwise indicated the specification, including the drawings, refers only to the particular mode disclosed of carrying out my invention; and it is to be understood that the invention may be carried out in other modes.

The bracket of the present invention may be used for making either an "inside" or an "outside" mount of the curtain. In an "inside" mount the curtain hangs within the window opening or other opening, or within an analogous recess in a wall. In an "outside" mount the curtain hangs adjacent to the plane of the wall without being nested within an opening or recess.

In the claims parts may at times be identified by specific names for ready understanding, but such nomenclature is to be understood as having the broadest meaning consistent with the context and with the scope of my invention as distinguished from the pertinent prior art.

In the drawings, forming part of this specification:

FIG. 1 is a largely diagrammatic isometric view indicating the manner of making an "outside" mount of a curtain with brackets of the present invention.

FIG. 2 is the same type of view as FIG. 1, indicating the manner of making an "inside" mount of a curtain with brackets of the present invention.

FIG. 3 is an isometric view of a bracket of the present invention with the parts thereof united as in an "outside" mount, a building member to which one part of the bracket is attached being indicated.

FIG. 4 is a side elevation of a bracket of the present invention with the parts thereof united as in an "outside" mount, a head bar to which one part of the bracket is attached being indicated in cross section.

FIG. 5 is a section of the bracket on line 5—5 of FIG. 4, the head bar of FIG. 5 being indicated in outline in dot-dash lines.



FIG. 6 is a front elevation of the part of the bracket that is to be attached to the building.

FIG. 7 is a side elevation of the bracket part shown in FIG. 6, looking from the right of FIG. 6.

FIG. 8 is a top plan view of the bracket part shown in FIG. 6.

FIG. 9 is a rear elevation of the part of the bracket that is to be attached to the head bar of the curtain.

FIG. 10 is a side elevation of the bracket part shown in FIG. 9, looking from the right of FIG. 9.

FIG. 11 is a top plan view of the bracket part shown in FIG. 9.

FIG. 12 is an isometric view showing the bracket parts of FIGS. 6–11 united as in an "inside" mount.

The separable bracket **15** (FIGS. 3 and 12) is composed of a building part **16** which is shown separately in FIGS. 6–8 and a head-bar part **17** which is shown separately in FIGS. 9–11.

The building part **16** is a one-piece sheet-steel stamping which has a vertical plate **18** and a projecting horizontal plate **19**, these two plates being connected together by a recurved formation **20**. The vertical plate **18** is provided with four holes **21** and screws may be inserted through any two or more of these holes to attach the building part **18** to a vertical surface of a building member. The recurved formation **20** is provided with two holes **22, 22** to receive screws for attaching the building part **16** to an overhead portion of a building, e.g., a lintel or a ceiling.

In FIG. 1 the building parts **16, 16** are indicated as being attached to the face of a window frame F. In FIG. 2 the building parts **16, 16** are indicated as being against the jambs J, J of a window frame, and also against the top T of the window frame. Thus in FIG. 2, the the building parts **16, 16** may be attached either by screws through holes **21** in the vertical plate **18** or by screws through holes **22** in the recurved formation **20**.

The head-bar part **17** is a one-piece U-shaped clip of stamped sheet steel having generally flat legs **24** and **25** (FIG. 10) which are spring jaws. This clip is adapted to be attached to a head bar, e.g., the wooden head bar **26** that is indicated in FIGS. 1 and 2 or the wooden head bar **27** that is indicated in FIGS. 4 and 5. The U-shaped clip constituting the head-bar part **17** is attached to the head bar with the lower leg **25** against the top of the head bar. The clip is secured to the head bar by a single screw **28** (FIGS. 4 and 5) which is inserted through the hole **29** (FIGS. 9 and 11) that is in the center of the lower clip-leg **25**. The lower clip-leg **25** has two pairs of downwardly-projecting prongs at **30, 30** (FIGS. 9 and 10) and, as the screw **28** is tightened down, these prongs are forced into the head bar and prevent the head-bar part **17** from swiveling on the screw.

To permit the screw **28** to be passed through the hole **29** in the lower clip-leg **25** and be driven by a screw driver, the upper clip-leg **24** is provided with an aligned and enlarged hole **29**.

With the building parts **16, 16** of a pair of the separable brackets attached to the building as indicated in FIGS. 1, 2 or 3 for example, and with the head bar of a curtain provided with the head-bar parts **17, 17** as indicated in FIGS. 1 and 2, the curtain which depends from the head bar is mounted by merely moving the head bar in the direction of the arrows in FIGS. 1 and 2 and uniting the two parts of each of the separable brackets. To demount the curtain the procedure is reversed, the head bar being pulled in the direction opposite to that indicated by the arrows in FIGS. 1 and 2.

Adjacent to its opposite ends the lower leg **25** of head-bar part **17** is substantially traversed by large upwardly-

facing ribs 25*b* and 25*c*, respectively, which are rounded in cross section. The free end of upper leg 24 is upwardly inclined at 24*b* and, taken with the rounded rib 25*b*, provides the head-bar part 17 with a funnel mouth which facilitates starting the head-bar part onto the projecting horizontal plate 19 of the building part 16. As the telescoping of the head-bar part onto the plate 19 is being completed the free end of the plate 19 strikes rounded rib 25*c* and rides over it. The two legs 24 and 25 of the head-bar part 17 are spring jaws; and the horizontal plate 19 is strongly clamped between the upper leg 24 and the ribs 25*b* and 25*c* of the leg 25. Between ribs 25*b* and 25*c* there is adequate space for the head of screw 28, as is seen in FIG. 4.

The projecting horizontal plate 19 and the U-shaped clip constituting the head-bar part 17 have complemental rib-and-groove formations which extend longitudinally of the head bar and make snap engagement when the two parts of the separable bracket 15 are united. In the bracket shown the projecting horizontal plate 19 has an upwardly-facing rib 19*a* and the upper leg 24 of the U-shaped clip has a complemental downwardly-facing groove 24*a*. The rib 19*a* extends parallel to the vertical plate 18 and is located about midway between the free end of the horizontal plate 19 and the juncture of the plate 19 with the recurved formation 20. The groove 24*a* makes snap engagement with the rib 19*a* when the two parts of the bracket 15 are fully united. Since this rib-and-groove formation extends longitudinally of the head bar, release of the head bar by accidental outward force on the head bar is prevented. In fact, the legs 24 and 25, through their spring-jaw action, so firmly grip the plate 19 that strong outward pull on the head bar is required to demount the curtain.

The projecting horizontal plate 19 is provided with a second upwardly-facing rib 19*b*, which is also complemental to the downwardly-facing groove 24*a*. The ribs 19*a* and 19*b* perpendicularly bisect each other as is best seen in FIG. 8. When the building part 16 is mounted as indicated in FIG. 1, the rib 19*b* extends transversely of the head bar and is inactive. However, when the building part 16 is mounted as indicated in FIG. 2, the rib 19*b* extends lengthwise of the head bar and makes snap engagement with the groove 24*a* of the head-bar part 17, the rib 19*a* being then inactive.

The upper clip-leg 24 of the head-bar part 17 is provided with a tunnel 24*c* which extends transversely of the head bar and receives the rib 19*b* or 19*a* whichever one is inactive. This is perhaps best seen in FIG. 5. The tunnel 24*c* is much wider than the ribs 19*b* and 19*a*, thereby providing for uniting the two parts of the bracket 15 with a degree of misalignment between them. While the rib received by the tunnel (19*b* or 19*a* as the case may be) is normally inactive, it is available to strike the side of the tunnel and prevent release of the head bar by accidental force lengthwise of the head bar.

Referring to FIG. 4, I provide working clearance between the free end of plate 24 and the recurved portion 20 sufficient to insure full snap engagement between the complemental rib-and-groove formations 19*a* and 24*a*. However, the free end of plate 24 is available to strike recurved portion 20 and thereby limit the rearward movement that can be imparted to the head bar in mounting the curtain. This limitation on the rearward movement of the head bar may be utilized to provide a space, such as the space S shown in FIG. 4, between the head bar and a vertical building surface V to which the building part 16 of the bracket is attached. In certain installations this space is used to pass cords used for raising and lowering the curtain.

I stamp my bracket parts from heavy-gauge sheet steel and cadmium-plate them after forming. For both the building part 16 and the head-bar part 17 I have used hard cold-rolled steel (Rockwell hardness of B85 to B90) having a thickness of .062". I have given the plate 19 a width of 1¼", and a length of 1⅛" from its free end to the juncture of the recurved formation 20; and I have co-ordinated the other dimensions of the two bracket parts with these plate dimensions.

The stamping of the bracket parts imparts additional hardness and springiness to the steel. I make my bracket of two parts only, no separate spring being required. My brackets are capable of supporting loads which are quite heavy as compared to other brackets of this type. No noticeable canting of the head bar takes place, even with fairly heavy downward pull on the curtain.

I claim:

1. In a separable bracket for mounting a curtain having a head bar, the bracket having a building part for attachment to the building and a head-bar part for attachment to the head bar, the two parts being adapted to be united for mounting the curtain and being adapted to be separated for demounting the curtain, the building part including a projecting horizontal plate and the head-bar part including means to engage said plate, the improvement which comprises: the head-bar part being a one-piece U-shaped clip the legs of which are horizontal spring jaws which grip the plate, the plate and clip having complemental rib-and-groove formations which extend longitudinally of the head bar and make snap engagement when the two parts of the bracket are united, and the spring jaws strongly gripping the plate and holding the head bar against canting; and there being two formations on the plate which are at right angles to each other and each of which is complemental to the formation on the clip, whereby the building part can be mounted with one of its said two formations inactive and extending transversely of the head bar and with the other of its said two formations extending longitudinally of the head bar for making snap engagement with the formation on the U-shaped clip.

2. The improvement as in claim 1 in which the clip is provided with a tunnel extending transversely of the head bar and which receives the inactive formation on the building part when the two parts of the bracket are united.

3. The improvement as in claim 2 in which the tunnel is wider than the inactive formation on the building part, thereby providing for uniting of the two parts of the bracket with a degree of misalignment between them.

4. In a separable bracket for mounting a curtain having a head bar, the bracket having a building part for attachment to the building and a head-bar part for attachment to the head bar, the two parts being adapted to be united for mounting the curtain and being adapted to be separated for demounting the curtain, the building part including a projecting horizontal plate and the head-bar part including means to engage said plate, the improvement which comprises: the head-bar part being a one-piece U-shaped clip the legs of which are horizontal spring jaws which grip the plate, the plate and clip having complemental rib-and-groove formations which extend longitudinally of the head bar and make snap engagement when the two parts of the bracket are united, and the spring jaws strongly gripping the plate and holding the head bar against canting; and the complemental formation of the U-shaped clip being on one leg thereof and the other leg thereof being provided with a pair of ribs extending longitudinally of the head bar, both of said ribs clampingly engaging the plate of the building part of the bracket when the two parts of the bracket are united, one rib engaging the plate adjacent to the building-adjacent end thereof and the other rib engaging the plate adjacent to the building-remote end thereof.

5. In a separable bracket for mounting a curtain having a head bar, the bracket having a building part for attachment to the building and a head-bar part for attachment to the head bar, the two parts being adapted to be united for mounting the curtain and being adapted to be separated for demounting the curtain, the building part in-

cluding a projecting horizontal plate and the head-bar part including means to engage said plate, the improvement which comprises: the head-bar part being a one-piece U-shaped clip the legs of which are horizontal spring jaws which grip the plate, one leg having a downwardly-facing groove extending longitudinally of the head bar, such groove extending across the width of the leg at approximately the midpoint of the length of the leg, and the plate having an upwardly-facing rib which extends across the plate and which is complemental to said groove and makes snap engagement with the groove when the two parts of the bracket are united, and the spring jaws strongly gripping the plate and holding the head bar against canting; and the plate having a second upwardly-facing rib which extends across the plate and which is also complemental to said groove, the two upwardly-facing ribs perpendicularly bisecting each other, whereby the building part can be mounted with one of its upwardly-facing ribs inactive and extending transversely of the head bar and with the other of its upwardly-facing ribs extending longitudinally of the head bar for making snap engagement with the downwardly-facing groove on the U-shaped clip.

6. The improvement as in claim 5 in which the clip is provided with a tunnel extending transversely of the head bar and which receives the inactive rib on said plate when the two parts of the bracket are united.

7. The improvement as in claim 6 in which the tunnel is wider than the inactive rib on the building part, thereby providing for uniting of the two parts of the bracket with a degree of misalignment between them.

8. In a separable bracket for mounting a curtain having a head bar, the bracket having a building part for attachment to the building and a head-bar part for attachment



to the head bar, the two parts being adapted to be united for mounting the curtain and being adapted to be separated for demounting the curtain, the building part including a projecting horizontal plate and the head-bar part including means to engage said plate, the improvement which comprises: the head-bar part being a one-piece U-shaped clip the legs of which are horizontal spring jaws which grip the plate, one leg having a downwardly-facing groove extending longitudinally of the head bar, such groove extending across the width of the leg at approximately the midpoint of the length of the leg, and the plate having an upwardly-facing rib which extends across the plate and which is complemental to said groove and makes snap engagement with the groove when the two parts of the bracket are united, and the spring jaws strongly gripping the plate and holding the head bar against canting; and the other leg of the U-shaped clip being provided with a pair of upwardly-extending ribs extending longitudinally of the head bar, both of such ribs clampingly engaging the plate of the building part of the bracket when the two parts of the bracket are united, one such rib engaging the plate adjacent to the building-adjacent end thereof and the other such rib engaging the plate adjacent to the building-remote end thereof.

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