March 10, 1964 V. KANSER 3,124,095

JIB SLIDE

Filed Nov. 21, 1960

Fig. 1

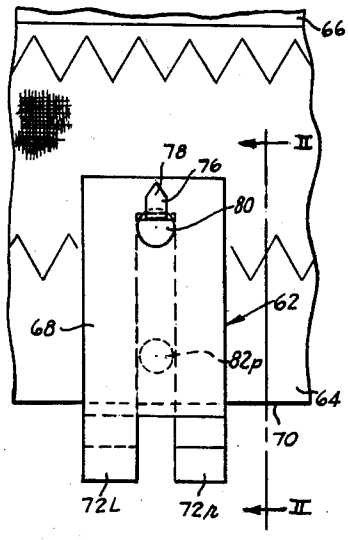


Fig. 2

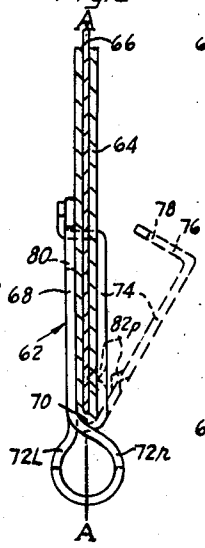


Fig. 3

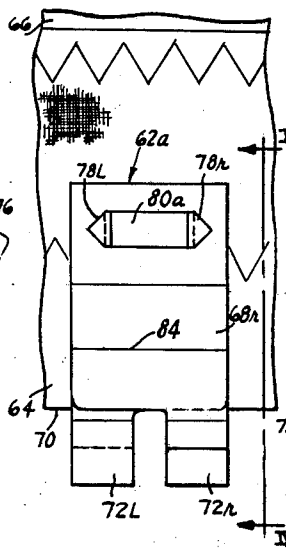


Fig. 4

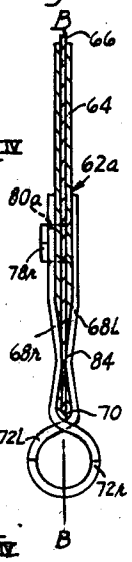


Fig. 5

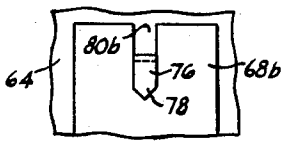


Fig. 2A

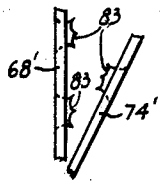


Fig. 8

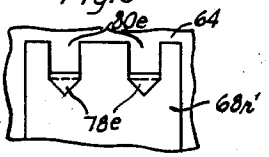


Fig. 6

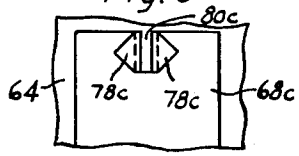


Fig. 9

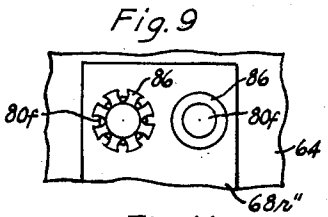


Fig. 7

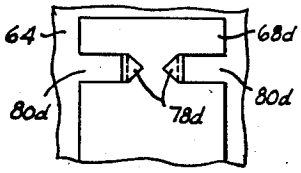


Fig. 10

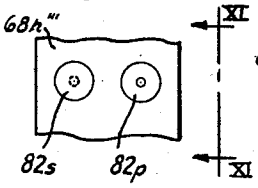
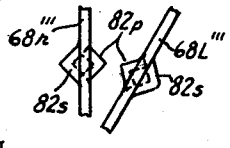


Fig. 11



WITNESSES

Robert Kerr

Carolyn M. Leak

INVENTOR.

VINCENT KANSER

BY

R. J. Reed Jr.

United States Patent Office 3,124,095 Patented Mar. 10, 1964

3,124,095
JIB SLIDE

Vincent Kanser, 59 Forest Ave., Glen Ridge, N.J.

Filed Nov. 21, 1960, Ser. No. 70,798
20 Claims. (Cl. 114—108)

The present invention relates to marine hardware and, more particularly, to an improved jib slide.

Heretofore, the luff (or forward leach) of a jib was slidably attached to a stay wire or rope (extending from the bow eye to the upper portion of the mast) by conventional jib slides which were secured to the bolt rope or bolt wire reinforced edge of the jib and which were slidable in the stay wire or rope.

The jib slide (shown in U.S. Patent No. 520,955 issued June 5, 1894, to A. K. Evans) had a concave base bar which was adapted to fit over the bolt rope of the jib and was provided with depending lips which could be forced inwardly to grab the bolt rope. The oppositely directed hooks upstanding from the base bar slidably engaged the stay wire. Alternatively the lips on the base bar were dispensed with and the base bar was lashed to a grommet in the jib.

In U.S. Patent No. 2,267,469 issued Dec. 23, 1941, to R. E. Joys, a separate slide was provided with oppositely directed hook portions (for slidably engaging the stay wire) and also with a fastener opening defined by a strap. A U-shaped pronged jib slide fastener straddled the strap and was closed about the bolt rope or bolt wire.

Recently the reinforcing bolt ropes (which rot) and the reinforcing bolt wires (which rust) for the jib have been eliminated. The edge portions of the jib are now reinforced with a cloth tape, such as nylon, orlon or dacron tape. This cloth tape covers both sides and is sewed to the edge portion of the jib.

Nylon is the generic or common name for a series of polyamide resins made by the polymerization of the hexamethylenediamine salt of adipic acid. Orlon is a registered trademark owned by E. I. du Pont de Nemours & Co., Wilmington, Del., and is a synthetic fiber made principally from polyacrylonitrile. Dacron is a registered trademark owned by E. I. du Pont de Nemours & Co., Wilmington, Del., and is a synthetic fiber made by the condensation of dimethyl terephthalate and ethylene glycol.

When the lips of the jib slide of the above mentioned U.S. Patent No. 520,955 are secured to the tape reinforced edge portion of the jib, the jib slide falls off. While it is still possible to lash the base bar of the jib slide to a grommet in the tape reinforced edge portion of the jib, installation of the grommet and the manual lashing operation are time consuming operations and hence are expensive from a labor standpoint.

Use of the jib slide fastener (disclosed in above mentioned U.S. Patent No. 2,267,469) to attach the jib slide to the tape reinforced edge portion of the jib, causes the jib slide fastener to pivot about its one plane of attachment to the jib and to tear the tape reinforced edge portion of such jib.

A general object of the present invention is the elimination of the difficulties and defects of the conventional jib slides by the provision of an improved jib slide which is adapted for permanent attachment to a tape reinforced edge portion of the jib; which will not tear loose from such edge portion of the jib; and which can be quickly and economically attached to the edge portion of the jib.

The aforesaid object of the present invention and other objects which will become apparent as the description proceeds are achieved by the provision of an improved jib slide comprising a body disposed on one side of the edge portion, oppositely directed hook portions projecting

from the body beyond the edge of the edge portion for dispositon about a stay wire, and a leg projecting from the body and bent over the edge portion and extending along the other side of the edge portion. A first securing means is provided on the body and leg adjacent the terminal portions of the body and the leg for securing the terminal portions of the body and the leg to the edge portion. Between the first securing means and the hook portions, a second securing means is provided on the body and the leg for further securing the body and the leg to the edge portion and to prevent oscillatory and longitudinal movement of the jib slide with respect to the first securing means.

For a better understanding of the present invention reference should be had to the accompanying drawing, wherein like numerals of reference indicate similar parts throughout the several views, and wherein:

FIG. 1 is a side elevational view of an improved jib slide of the present invention, showing such jib slide affixed to the tape reinforced edge portion of the jib;

FIG. 2 is another side elevational view along the line II—II of FIG. 1 in the direction of the arrows;

FIG. 2A is a fragmentary side elevational view of an alternative embodiment of the body and leg shown in FIG. 2;

FIG. 3 is a view similar to FIG. 1 of an alternative embodiment of the improved jib slide of the present invention;

FIG. 4 is a view similar to FIG. 2 but taken along the line IV—IV of FIG. 3 in the direction of the arrows;

FIGS. 5–7 are fragmentary side elevational views, similar to FIG. 1, of alternative embodiments of the first securing means associated with the jib slides shown in FIGS. 1–4;

FIGS. 8–9 are fragmentary side elevational views, similar to FIG. 3, of alternative embodiments of the first securing means associated with the jib slide shown in FIGS. 3–4 wherein the right-hand element in FIG. 9 illustrates an intermediate step in the attachment of the left-hand element in FIG. 9;

FIG. 10 is a fragmentary side elevational view of an alternative embodiment of the second locking means;

FIG. 11 is another side elevational view along the line XI—XI of FIG. 10 in the direction of the arrows.

With specific reference to the form of the present invention illustrated in the drawing, and referring particularly to FIG. 1, an improved jib slide of the present invention is indicated generally by the reference numeral **62**. This jib slide **62** is shown in FIG. 1 secured to an edge portion **64** of a jib **66**.

In order to install the jib slide **62**, an operator positions a rigid metal plate-like body **68** of such jib slide **62** on the front side of the edge portion **64** (FIG. 1) flush with an edge **70** of such edge portion **64**. As shown in FIGS. 1 and 2, a pair of oppositely directed and spaced hooks **72***r* and **72**L project from the body **68** for use in securing a stay wire (not shown) therein in the conventional manner. It will be noted from a consideration of FIG. 2 that (adjacent the edge **70**) the hook **72***r* passes under such edge **70** and functions as a saddle to support the edge **70**. The other hook **72**L does not support the edge **70**.

Disposed between the hooks **72***r* and **72**L, a leg **74** (of generally U-shaped configuration) projects from the body **68** and around the edge **70** in saddle supporting position. This leg **74** (at this point in the operation) projects upwardly from the edge **70** as shown in the dotted line position of FIG. 2.

This leg **74** is provided with a bent outer end **76** (of reduced width, FIG. 1) which is pointed at **78**. The bent outer end **76** and a registering locking aperture **80** in the body **68** comprise the first securing means.

Between the bent outer end **76** and the hooks **72***r* and **72**L, the leg **74** carries an inwardly projecting (with respect to centerline A—A, FIG. 2) a conically shaped male protuberance **82***p* which functions as the second securing means.

With the body **68** and leg **74** positioned with respect to the edge **70** of the edge portion **64**, as above described, the point **78** of the bent outer end **76** of the leg **74** is driven through the edge portion **64** and the locking aperture **80** by a compressive tool, such as a pair of pliers (not shown), so that the portion of the leg **74** below the bent outer end **76** assumes the solid-line position shown in FIG. 2 and so that a portion of the bent outer end **76** projects laterally beyond the body **68**. Thereafter the projecting portion of the bent outer end **76** (including the point **78**) is bent upwardly (FIG. 2) to the position shown in such figure thus permitting the first securing means to lock the jib slide **62** to the edge portion **64**.

It will be understood that, when the leg **74** moves from the dotted-line position (FIG. 2) to the solid line position, the male protuberance **82***p* (the second securing means) bites into (but not through) the edge portion **64** to further secure the jib slide **62** to such edge portion **64** and to prevent oscillatory and longitudinal movement of said jib slide **64** with respect to the first securing means.

To further lock the leg **74** and the body **68** to the edge portion **64**, a piercing tool (not shown) having a pyramidal (four faced) operating point may be driven through the male protuberance **82***p* and the body **68**.

Alternatively the protuberance **82***p* may be replaced by a plurality of pierced protuberances **83** (FIG. 2A) formed in the leg **74'** and in the body **68'** by the above-mentioned piercing tool (not shown). The four pronged edges of each pierced protuberance **83** bite into (but not through) the edge portion **64**. These pierced protuberances **83** may be disposed in spaced relation either on the longitudinal axis of the jib slide **62**, with two such pierced protuberances **83** on the body **68'** and one pierced protuberance **83** on the leg **74'** or they may be disposed in a spaced triangular, square or rectangular arrangement on the body **68'** and the leg **74'**.

Althernatively, as shown in FIGS. 3 and 4, an improved jib slide **62***a* may be provided with a pair of plate-like bodies **68***r* and **68**L, each having an associated oppositely directed hook **72***r* and **72**L respectively depending therefrom. These hooks **72***r* and **72**L are both disposed in saddle-like supporting contact with the edge **70**.

The first securing means comprises a pair of spaced vertically disposed substantially parallel tabs **78***r* and **78**L which normally project inwardly (with respect to the center line B—B, FIG. 4) from body **68**L; are inserted through the edge portion **64** and locking aperture **80***a* in body **68***r*; and are then bent outwardly (FIG. 3) over the side walls of the locking aperture **80***a*.

To provide the second securing means, the bodies **68***r* and **68**L converge inwardly at **84** to provide a pinch line, which compresses and secures the edge portion **64** therebetween to prevent oscillatory or longitudinal movement of the jib slide **62***a* with respect to the first securing means.

Alternative Embodiments of the Securing Means

It will be understood by those skilled in the art that the first securing means shown in FIGS. 3 and 4 (i.e. locking aperture **80***a* and tabs **78**L and **78***r*) can be substituted for the first locking means shown in FIGS. 1 and 2 (i.e. the locking aperture **80** and bent outer end **76**).

As shown in FIG. 5, the bent outer end **76** is bent downwardly over the bottom side wall of a locking aperture in the form of an open end slot **80***b*.

In FIG. 6 a pair of vertically disposed tabs **78***c* are bent over the side walls of a locking aperture, such as the open end slot **80***c*.

The securing means (shown in FIG. 7) comprises open end slots **80***d* in the side walls of a body **68***d* (as locking apertures) and tabs **78***d* are bent inwardly over the inside side wall of such open end slots **80***d*.

Alternatively a body **68***r'* (FIG. 8) is provided with a pair of open end slots **80***e*, as the locking aperture, and tabs **78***e* are bent downwardly over the bottom wall of the end slots **80***e*.

For use individually as a first securing means in the jib slide **62** (FIGS. 1 and 2) or for use in pairs as the first securing means in the jib slide **62***a* (FIGS. 3 and 4), other securing means are shown in FIG. 9. For example, a hollow rivet-like protuberance **86** (FIG. 9) having a tapered cutting edge is mounted on either the leg **74** (FIGS. 1 and 2) or the body **68**L (FIGS. 3 and 4); is inserted through the edge portion **64** and a locking hole **80***f* in body **68***r''*; and is then peened over the edge of such locking hole **80***f*.

For use as a second securing means, FIGS. 10 and 11 show two pairs of mating male protuberances **82***p* and female protuberance **82***s*, with one pair of protuberances **82***p* and **82***s* carried by a body **68***r'''* and another pair of protuberances **82***p* and **82***s* carried by a body **68**L''' and for use with a jib slide similar to jib slide **62***a* (FIGS. 3 and 4). The (inwardly projecting conically shaped) pointed male protuberances **82***p* pierce the edge portion **64** and wedge the edge portion **64** into (the outwardly projecting conically shaped) socket-like female protuberances **82***s*. When the second securing means shown in FIGS. 10 and 11 is employed with a jib slide similar to jib slide **62** (FIGS. 1 and 2) a female protuberance **82***s* is provided on the body **68** in registry with the male protuberance **82***p* on the leg **74**.

It will be understood that for use as an alternative first securing means in the jib slide **62** (FIGS. 1 and 2) the embodiments shown in FIGS. 5–9 can be employed. For use as alternative second securing means with such jib slide **62** the embodiments shown in FIGS. 7–9 and 10–11 can be used.

For the jib slide **62***a* (FIGS. 3 and 4) alternative first securing means can comprise the embodiments of FIGS. 6–9. As alternative second securing means for such jib slide **62***a*, the embodiments of FIGS. 6–9 and 10–11 are usable.

Additionally, the female elements (such as the locking apertures **80**, **80***b* etc.) may be disposed on either the leg **74** (FIGS. 1, 2) or the body **68**L (FIGS. 3, 4) with the male elements (i.e. pointed outer end **76** etc.) disposed on either the body **68** (FIGS. 1, 2) or the body **68***r* (FIGS. 3, 4).

It will be understood by those skilled in the art that the object of the present invention has been achieved by the provision of an improved jib slide which is adapted for permanent, economical and quick attachment to a tape reinforced edge portion of a jib so that such jib slide will not tear loose from such edge portion.

While in accordance with the patent statutes a preferred embodiment of the present invention has been illustrated and described in detail it is to be particularly understood that the invention is not limited thereto or thereby.

I claim:

1. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body and formed to extend around said edge portion for supporting said edge portion, and to extend along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said leg between said first cooperating securing means and said hooks for wedging said edge portion against said

body to further secure said jib slide to said edge portion and prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means, each of said securing means being integrally formed with said slide.

2. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a sail, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body and formed to extend around said edge portion and along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said leg between said first securing means and said hooks for wedging said edge portion against said body to further secure said jib slide to said edge portion and prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means, each of said securing means being integrally formed with said slide.

3. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body and formed to extend around said edge portion for supporting said edge portion, and to extend along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said body between said first securing means and said hooks for wedging said edge portion against said leg to further secure said jib slide to said edge portion and prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means, each of said securing means being formed integrally with said slide.

4. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body, and formed to extend around said edge portion for supporting said edge portion and extending along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said body between said first securing means and said hooks for wedging said edge portion against said leg to further secure said jib slide to said edge portion and prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means, each of said securing means being formed integrally with said slide.

5. The jib slide recited in claim 1 wherein said first securing means comprises a locking aperture in said body, and said first cooperating securing means comprises a pointed outer end on said leg for insertion through said edge portion and said locking aperture and adapted to bend over the side wall of such locking aperture.

6. The jib slide recited in claim 1 wherein the first securing means comprises an open end slot in said body, and said first cooperating securing means comprises a pointed outer end on said leg for insertion through said edge portion and said open end slot and adapted to bend over the side wall of said open end slot.

7. The jib slide recited in claim 1 wherein the first securing means comprises an open end slot in said body, and said first cooperating securing means comprises a pair of parallel pointed tabs on said leg for insertion through said edge portion and said open end slot and adapted to bend outwardly over the side walls of said open end slot.

8. The jib slide recited in claim 1 wherein the first securing means comprises a pair of open end slots in the side wall of said body, and said first cooperating securing means comprises a pair of parallel pointed tabs on said leg, each tab being adapted for insertion through said edge portion and an associated open end slot and for bending inwardly over the side wall of said associated open end slot.

9. The jib slide recited in claim 1 wherein the first securing means comprises a locking aperture in said body, and said first cooperating securing means comprises a rivet-like hollow protuberance on said leg for insertion through said edge portion and said locking aperture and adapted to be peened over the side walls of said locking aperture.

10. The jib slide recited in claim 1, wherein said second securing means on said leg comprises a pointed protuberance, and a second cooperating securing means on said body comprises a socket-like protuberance, said pointed protuberance being operable to wedge said edge portion into said socket-like protuberance.

11. The jib slide recited in claim 1 wherein said body is formed inwardly to provide a first pinch line adjacent said second securing means, and said second securing means comprises an inwardly formed second pinch line on said leg, said pinch lines being operable to compress said edge portion thus further locking said jib slide to said edge portion.

12. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a body for disposition on one side of said edge portion, oppositely directed hooks projecting integrally from said body beyond said edge portion for disposition about a stay wire, a leg projecting integrally from said body and around said edge portion and formed to extend along the other side of said edge portion, a first securing means on said body, a first cooperating securing means on said leg for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said body between said first securing means and said hooks, and a second cooperating securing means on said leg in registry with said second securing means for insertion through said edge portion and engageable with said second securing means to further secure said jib slide to said edge portion and to prevent oscillating and longiutdinal movement of said jib slide with respect to said first securing means.

13. The jib slide recited in claim 12 wherein the first securing means comprises a pair of open end slots in said body, and said first cooperating securing means comprises a pair of parallel pointed tabs on said leg for insertion through said edge portion and said open end slots and adapted to be bent downwardly over the bottom side walls of such open end slots.

14. The jib slide recited in claim 12 wherein the first securing means comprises a pair of open end slots in the side wall of said body, and said first cooperating securing means comprises a pair of parallel pointed tabs on said leg, each tab being adapted for insertion through said edge portion and its associated open end slot and for bending inwardly over the sidewall of said associated open end slot.

15. The jib slide recited in claim 12 wherein the first securing means comprises a locking aperture in said body, and said first cooperating securing means comprises a rivet-like hollow protuberance on said leg for insertion through said edge portion and said locking aperture and

adapted to be peened over the side walls of said locking aperture.

16. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a jib, said jib slide comprising a first body for disposition on one side of said edge portion and provided at one end with a first hook extending beyond said edge portion, a second body integrally connected to and facing said first body and for disposition on the other side of said edge portion and provided at one end with an oppositely directed second hook in longitudinal registery with said first hook, a first securing means on the other end of said first body, a first cooperating securing means on the other end of said second body for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said first body between said first securing means and said first hook, and a second cooperating securing means on said second body in registry with said second securing means, said second securing means and said second cooperating securing means being operable to compress said edge portion therebetween to further secure said jib slide to said edge portion and to prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means.

17. An integral one-piece jib slide for attachment to the tape reinforced edge portion of a sail, said jib slide comprising a first body for disposition on one side of said edge portion and provided at one end with a first hook extending beyond said edge portion, a second body integrally connected to and facing said first body and for disposition on the other side of said edge portion and provided at one end with an oppositely directed second hook in longitudinal registry with said first hook, a first cooperating securing means on the other end of said second body, a first cooperating securing means on the other end of said first body for insertion through said edge portion and engageable with said first securing means to secure said jib slide to said edge portion, a second securing means on said second body between said first securing means and said second hook, and a second cooperating securing means on said first body in registry with said second securing means, said second securing means and said second cooperating securing means being operable to compress said edge portion therebetween to further secure said jib slide to said edge portion and to prevent oscillatory and longitudinal movement of said jib slide with respect to said first securing means.

18. The jib slide recited in claim 16 wherein said first securing means comprises a locking aperture in said first body, and said first cooperating securing means comprises a pair of pointed tabs for insertion through said edge portion and said locking aperture and adapted for bending over the side walls of said aperture.

19. The jib slide recited in claim 12 wherein said first securing means comprises a pair of open end slots in said first body, and said first cooperating securing means comprises a pair of pointed tabs, each tab being adapted for insertion through said edge portion and an associated open end slot and for bending over the side wall of said open end slot.

20. In combination, a sail including a reinforced edge, and a unitary one-piece slide secured to said sail at said edge, said slide comprising a body member disposed on one side of a portion of said edge, oppositely directed hooks projecting integrally from said body member beyond said edge portion for disposition about a stay wire, a leg member projecting integrally from said body member and disposed around said edge portion for supporting said edge portion, first cooperating securing means integral with said leg member and with said body member and including a part inserted through said edge portion to secure said slide to said edge portion, one of said body and leg members being integrally formed with second securing means located between said first securing means and said edge, said second securing means comprising a portion projecting from one of said members in the direction of the other of said members for wedging said edge portion between said members, thereby further securing said slide and edge portion and preventing oscillatory and longitudinal movement of said slide with respect to said edge portion.

References Cited in the file of this patent

UNITED STATES PATENTS

207,694	Tunny	Sept. 3, 1878
309,258	Shelby	Dec. 16, 1884
711,234	Seligman	Oct. 14, 1902
1,507,026	McKoun	Sept. 2, 1924
1,591,537	Larsen	July 6, 1926
1,872,613	Van Norden	Aug. 16, 1932
2,097,018	Chamberlin	Oct. 26, 1937
2,267,469	Joys	Dec. 23, 1941
2,604,897	Cottor et al.	July 29, 1952

FOREIGN PATENTS

673,966	Great Briatin	June 18, 1952