July 30, 1929. P. C. WILSON 1,722,618

TRAVELER SLIDE

Filed Jan. 26, 1927

Fig. 2

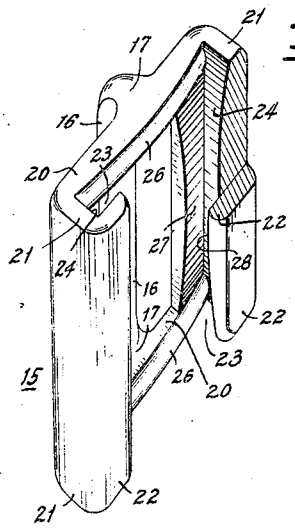


Fig. 1

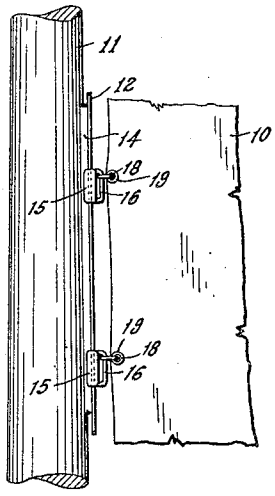


Fig. 3

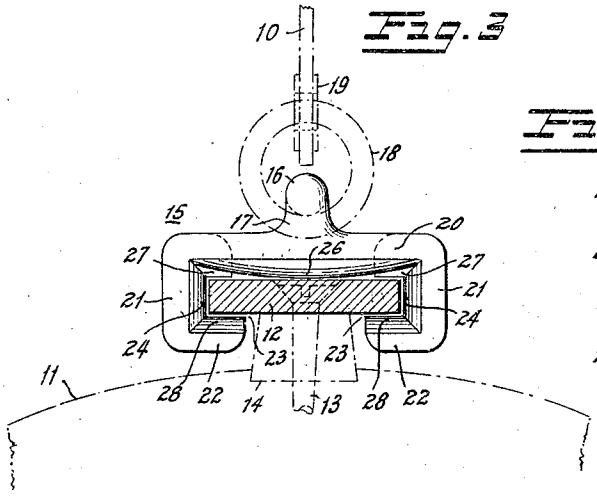
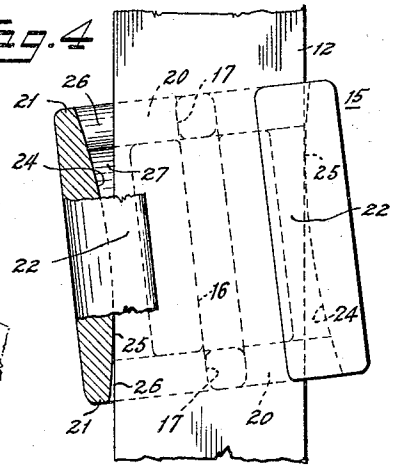


Fig. 4



INVENTOR.
Prescott C. Wilson
BY Dueell Adams & Anderson
ATTORNEYS.

Patented July 30, 1929. 1,722,618

UNITED STATES PATENT OFFICE.

PRESCOTT C. WILSON, OF BROOKLYN, NEW YORK.

TRAVELER SLIDE.

Application filed January 26, 1927. Serial No. 163,662.

This invention relates to improvements in securing devices of the type wherein the element or part secured thereby is restrained for traveling movement along a certain course, and being adapted for various applications. More particularly in some of its aspects, the invention relates to improvements in traveling slides or runners for securing sails or the like for traveling movement along a spar or mast.

It is the general object of the invention to provide an improved securing device of the class mentioned, so constructed and arranged as to diminish or practically avoid jamming or binding or other resistances to the free traveling movement of the secured element.

A further and more particular object of the invention is to provide an improved securing device of the class mentioned including a traveler slide or runner provided with convex contact surfaces for engagement with a guideway, and being arranged to decrease or practically avoid any binding or jamming of the runner in its movement along the guideway in either direction.

A further object is to provide an improved device for securing a sail or the like to a mast or spar so as to permit free hoisting or lowering thereof, and operating to diminish the tendency of binding or jamming of the sail securing device so as to minimize the time and effort required to raise or lower the sails.

Still another object of the invention is to provide, in a device of the class mentioned, an improved traveler or slide or runner having convex edge contact surfaces so disposed with reference to cooperating contact surfaces of a guideway that some portion of said convex edge surfaces are positioned for engagement with the guideway in any position the runner may assume, and also to provide an automatically shifting attachment for attaching a sail or the like to the runner so as to automatically free the runner from binding tendency during movement in either direction along the guideway.

Other objects will be in part pointed out below in connection with the detailed description of an illustrative but preferred embodiment of the invention, and will be in part obvious in connection with said description.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the claims.

For a more complete understanding of the nature and objects of the invention, reference is had to the following detailed description of the illustrative embodiment of the invention, and to the accompanying drawings, in which:

Fig. 1 is a fragmentary elevation showing a sail attached to a mast by a securing mechanism embodying the invention.

Fig. 2 is an enlarged perspective view with parts broken away for clearness of disclosure, showing a traveling slide or runner embodying the invention.

Fig. 3 is a sectional plan, and

Fig. 4 is an elevation with certain parts broken away showing the cooperation of the runner with a supporting guideway.

For the purpose of furnishing a detailed disclosure of the invention, an embodiment thereof is shown in the drawing as applied to the support of a sail to a mast or spar for movement therealong in either direction as during raising or lowering of the sail.

Referring to the drawing for a detailed disclosure of the embodiment of the invention there shown a sail 10 of a sailing vessel is supported by a spar or mast 11 which may be positioned as desired. A guideway 12 in the form of an elongated flat bar or plate is secured to the mast by suitable securing devices 13, its direction of length corresponding generally with that of the mast. A supporting block or strip 14 may be interposed between the guide bar and the mast so as to provide a firm seat for the bar and to space it slightly from the adjacent surface of the mast.

A plurality of traveler slides or runners 15 are mounted for slidable engagement with the guideway in connected relation therewith, each runner being provided with an attaching bar 16 secured at longitudinally spaced parts thereof to the runner as by studs 17. The attaching bar extends longitudinally of the runner and is spaced slightly therefrom so as to provide an elongated slot or passageway for the reception of an attaching ring or link 18, which is thus movable longitudinally relatively to the runner, such movement being limited by the terminals of the slot, that is, by the studs 17. Each attaching link is connected to the sail in any desired manner, preferably including a reinforced eye 19 secured to the sail.

All of the runners 15 are of the same con-

struction, and a description of one only is a description of all. As shown in Figs. 2 and 3, the runner is generally channel-shaped in cross section, including a back section 20, opposed side or edge sections 21 and opposed inwardly extending marginal projections or flanges 22. This construction provides opposed edge channels or grooves 23 for the reception of the edges of the guide bar, as shown in Fig. 3. The slide or runner is thus connected to the guide way for traveling movement in either direction therealong.

The bottom of the edge channels form edge contact surfaces for cooperation with the edge contact surfaces of the guide bar 12, each of these channel bottoms being curved longitudinally from end to end of the runner contact surface to present convex edge contact surfaces 24, opposing and adapted to contact respectively with the edge contact surfaces of the guide bar 12. These convex contact surfaces 24 are so disposed and the curvature thereof so proportioned relatively to the width of the guide bar 12, that whenever contact occurs between the cooperating surfaces such contact will be within the longitudinal limits of the convex contact surfaces: For example, as clearly seen in Fig. 4 when the runner tilts edgewise in either direction, or rotates on an axis disposed at an angle to the plane of the guideway, the engagement between the edges of the guideway and the convex contact surfaces 24 occurs within the longitudinal limits of the latter, no matter what may be the degree of tilting. As shown in Fig. 4, the runner has rotated as far as possible to the left, and the contact points 25 between the convex surfaces 24 and those of the bar 12 are well within the longitudinal limits of the former.

The result of this arrangement is that the convex contact surfaces 24 are always brought into play whenever an engagement occurs with the edge of the guide bar 12, thus reducing frictional resistance to progress of the runner in either direction, diminishing any tendency to binding or jamming action between the runner and guideway, and preventing any sharp or angular surfaces of the runner from engagement with the guideway.

In order still further to decrease frictional or other resistances to the progress of the runner along the guideway, the back section 20 is provided on the inner face thereof with convex contact surfaces 26, extending transversely across said face at both ends thereof. These contact surfaces 26 are preferably convexed longitudinally thereof away from said inner face, and also convexed or rounded transversely of their length, as shown, so as to provide domelike forward and rear contact surfaces. The inner back surface is also provided with laterally disposed longitudinally extending convex contact surfaces 27, convexed longitudinally away from said back surface. Four spaced convexed contact surfaces are thus provided on the inner back surface for engagement with the adjacent contact face of the guidebar 12. Furthermore, the inner surfaces of the flanges 22 are provided with longitudinally extending convex contact surfaces 28 opposed to the contact surfaces 27 and being generally similar to the latter but oppositely convexed; that is, they are convexed longitudinally inwardly from the inner flange faces.

From the foregoing it will be seen that the runner is provided at all parts thereof which oppose and make contact with any part of the guide bar during travel therealong in either direction, with curved or convexed contact surfaces, and that no flat or angular part thereof can come into contact with the guideway. Resistance to progress of the runner in either direction is therefore reduced to a minimum and tendency to binding or jamming is diminished. Also tendency to binding or jamming is reduced by the longitudinally convexed surfaces 24 as above explained. Tendency to binding or jamming is still further diminished by the lost motion connection between the link 18 and the runner provided by the elongated connecting bar 16, as above set forth. With this arrangement any incipient binding or jamming that may occur is immediately freed or released by operation of this connection, due to the fact that any stress exerted upon the runner by the connecting link 18 is directed in the form of a pull at the advance end of the traveler, no matter what the direction of travel is. This pull at the forward end of the traveler tends to bring it into alignment with the guideway, in which position its movement is free and unimpeded. A pull some distance back of the advance end of the runner, or toward the following end thereof, might tend to promote binding rather than avoiding it.

Since certain changes may be made in the above construction, and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and spacific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A traveler slide for securing devices having opposed similarly curved contact edge surfaces, and having opposed surfaces disposed at an angle to said edge surfaces and

each provided with a plurality of convex contact surfaces.

2. A traveler slide for securing devices having opposed similarly curved contact edge surfaces, and having a plurality of convex contact surfaces disposed in a plane at an angle to said edge surfaces.

3. A traveler slide for securing devices having opposed similarly but oppositely convexed edge contact surfaces, each contact surface being convexed with reference to the longitudinal axis of the slide throughout the longitudinal extent of said contact surface.

4. A traveler slide for securing devices having opposed similarly curved contact edge surfaces, and having a plurality of convex contact surfaces disposed in a plane at an angle to said edge surfaces, said traveler slide having a longitudinally disposed elongated bar for attaching a connecting link so as to permit relative longitudinal movement of said link.

5. A traveler slide for securing devices having opposed similarly but oppositely convexed edge contact surfaces, each contact surface being convexed with reference to the longitudinal axis of the slide throughout the longitudinal extent of said contact surface, said traveler slide having a longitudinally disposed elongated bar for attaching a connecting link so as to permit relative longitudinal movement of said link.

6. In combination, a traveler slide for securing devices having a plurality of angularly disposed faces, each provided with one or more convex contact surfaces, and a connecting link connected to said slide for limited relative movement thereon.

7. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said edge contact surfaces of the guideway and being longitudinally convexed throughout their longitudinal extent.

8. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said contact surfaces of the guideway and being longitudinally convexed throughout their longitudinal extent, said runner having a plurality of convex contact surfaces positioned to contact with another contact surface of said guideway.

9. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said guideway edge contact surfaces and being longitudinally convexed throughout their longitudinal extent, and a connecting link connected to said runner for limited relative longitudinal movement thereon.

10. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces, and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said guideway contact surfaces and being longitudinally convexed throughout their longitudinal extent, said runner having a plurality of convex contact surfaces positioned to contact with another contact surface of said guideway, and a connecting link connected to said runner for limited relative longitudinal movement thereon.

11. In a device of the character described, in combination, an elongated guideway and a securing traveler slide mounted upon said guideway for movement therealong, said slide having laterally opposed similarly curved contact faces extending longitudinally thereof for contacting with said guideway, said contact faces each being curved throughout the extent thereof, whereby said opposed contact faces engage simultaneously at points intermediate the ends thereof with the companion contact faces of the guideway when said slide is tilted or rotated edgewise to any possible extent.

12. In a device of the character described, in combination, an elongated guideway and a securing traveler slide mounted upon said guideway for movement therealong, said traveler slide having laterally opposed similarly curved contact faces extending longitudinally thereof for contacting with said guideway and cooperating therewith to prevent binding between the guideway and the slide, an elongated attachment fixed in longitudinal position upon said slide and a shifting connecting link shiftably connected to said elongated attachment so it may direct a forward pull at the forward end of said runner when moving in either direction.

13. In a device of the character described, in combination, an elongated guideway and a securing traveler slide mounted upon said guideway for movement therealong, said slide having laterally opposed similarly curved contact faces extending longitudinally thereof for contacting with said guideway, said contact faces each being curved throughout the extent thereof whereby said opposed contact faces engage simultaneously at points intermediate the ends thereof with the companion contact faces of the guideway when sad slide is tilted or rotated edgewise to any possible extent, and a connecting link connected to said runner for limited relative longitudinal movement thereon.

14. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said edge contact surfaces of the guideway and said channel edge surfaces being longitudinally convexed at the end portions thereof whereby said convex end surfaces which are diagonally disposed on the runner may simultaneously contact with the edge contact surfaces of said elongated guideway upon edgewise tilting of said runner in either direction so as to minimize jamming.

15. In a device of the character described, in combination, an elongated guideway having opposed edge contact surfaces, and a runner having opposed channels for the reception of said edge contact surfaces, said channels each having edge surfaces for engagement with said edge contact surfaces of the guideway, and said channel edge surfaces flaring laterally outwardly at the end portions thereof whereby said flaring surfaces which are diagonally disposed on the runner may simultaneously contact with the edge contact surfaces of said elongated guideway upon edgewise tilting of said runner in either direction so as to minimize jamming.

16. In a device of the character described, in combination, an elongated guideway having opposite guiding surfaces and a securing elongated traveler slide mounted upon said guideway for movement therealong, said traveler slide having laterally opposed oppositely laterally inclined contact faces at the ends of the slide whereby said laterally inclined end surfaces which are diagonally disposed on the slide may simultaneously contact with the opposite guiding surfaces of the guideway upon edgewise tilting of said slide in either direction so as to minimize jamming, said traveler slide, having continuously curved contact faces at opposite sides thereof connecting the respective inclined contact faces, thus providing continuous elongated contact faces at said opposite sides relatively disposed to permit the slide to rock or tilt edgewise and thus to present different portions of said elongated contact faces in contact position with said guide way.

17. In a device of the character described, in combination, an elongated guiding member having laterally opposed guiding contact faces and a securing elongated traveler slide member mounted upon said guiding member for movement therealong, and having laterally opposed, oppositely, laterally inclined guiding contact faces at each end thereof positioned for contact cooperation respectively with said first-mentioned contact faces, one of said members having oppositely disposed channels forming laterally disposed contact faces and into which channel the edges of the first mentioned member extend so that diagonally opposite faces of said slide member when laterally tilted may simultaneously slidably contact respectively with the adjacent faces of the companion member, said slide member, having continuously curved contact faces at opposite sides thereof, connecting the respective inclined contact faces, thus providing continuous elongated contact faces at said opposite sides relatively disposed to permit the slide to rock or tilt edgewise and thus to present different portions of said elongated contact faces in contact position with said guiding member.

In testimony whereof I affix my signature.

PRESCOTT C. WILSON.