

P. G. EMERY.
SHADE GUIDE.

APPLICATION FILED AUG. 19, 1901.

970,452.

Patented Sept. 13, 1910.

Fig. 1.

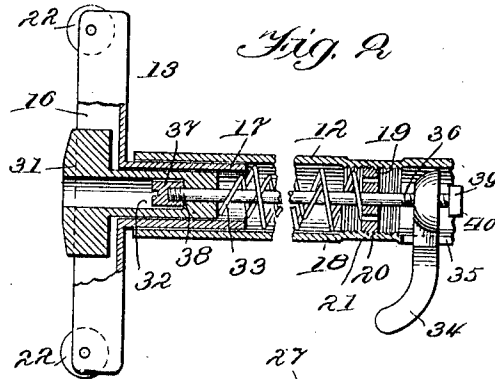
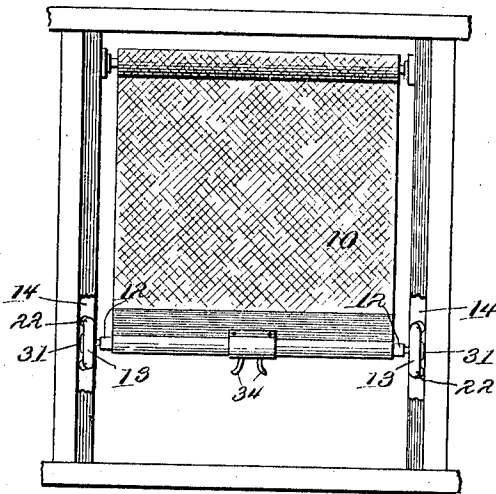


Fig. 2.

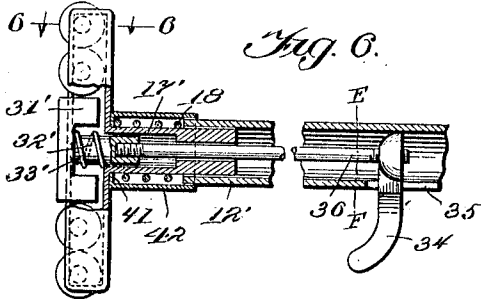


Fig. 3.

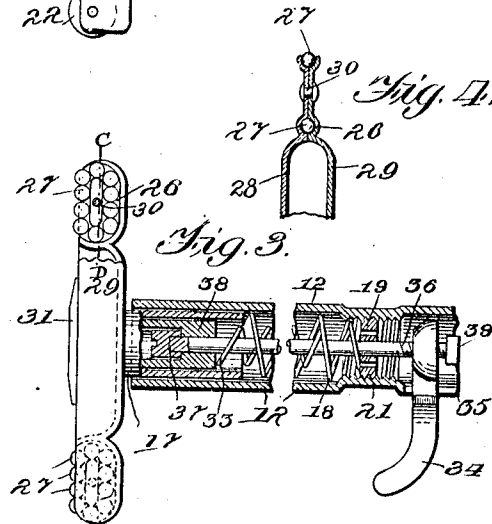


Fig. 4.

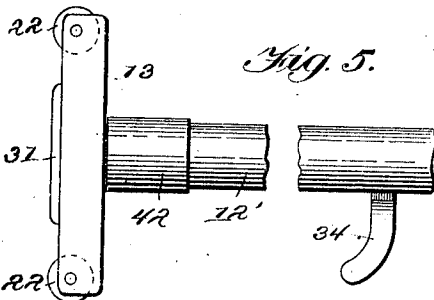


Fig. 5.

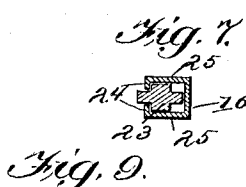


Fig. 6.

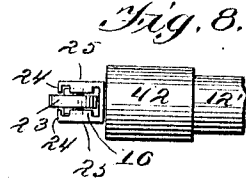


Fig. 7.



Fig. 8.

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UNITED STATES PATENT OFFICE.

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SHADE-GUIDE.

970,452.

Specification of Letters Patent. Patented Sept. 13, 1910.

Original application filed August 20, 1900, Serial No. 27,490. Divided and this application filed August 19, 1901. Serial No. 72,602.

To all whom it may concern:

Be it known that I, PLATO G. EMERY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Shade-Guides, of which the following is a specification.

This invention relates to novel improvements in shade guides and has particular reference to means for guiding and holding the shade against the tension of a spring roller upon which the shade is mounted.

The object of the invention is to guide the shade so that it will not become disarranged during its adjustment but always remain in the proper position and to hold the shade in its adjusted position against the tension of the spring roller.

The invention consists essentially of guiding devices carried by the shade stick and traveling in grooves a casing and an independent friction device for holding the shade in its adjusted position against the tension of the spring roller, the friction device being operable to permit the ordinary adjustment of the shade without affecting the guiding device, and being capable of operation to release the guiding device so that the shade may be disengaged from the casing for cleaning and other purposes.

In the accompanying drawings Figure 1 illustrates a shade embodying my invention in a window casing. Fig. 2 is a sectional view of the guiding and holding means on one end of the stick. Fig. 3 shows a guiding device provided with ball bearings at the ends of the shoe. Fig. 4 is a sectional view on the line C—D of Fig. 3. Figs. 5 and 6 show a modified construction of the invention Fig. 5 being a front view and Fig. 6 a vertical sectional view. Figs. 7 and 8 are details showing the manner of arranging the rollers in the friction shoe illustrated in Fig. 6, Fig. 7 being a sectional view on the line 6—6 of Fig. 6. Fig. 9 is a sectional view on the line E—F of Fig. 6.

Referring to the drawing, in which like numerals of reference denote corresponding parts in the several figures, 10 designates the curtain of my improved window shade which is attached to the spring roller 11 in the usual manner and provided at its lower end with a tubular shade stick 12 carrying guiding devices 13 at its ends which are

arranged to travel in the vertical grooves 14 in the casing 15.

The guiding device consists of an elongated guide shoe 16 provided with a hollow shank 17 which is arranged to operate loosely in the end of the shade stick 12 and to hold it in the groove of the casing in operative position I provide a spring 18 which is arranged within the stick and bears against the inner end of said shank and against a stop 19 located within the stick. In order to provide an adjustment for the guiding device so that it can be adapted to casings which vary more or less in width I make the stop 19 in the form of a peripherally threaded disk to screw into the threaded section 20 of the stick which is formed by making an annular depression 21 on the outside thereof. The stop device can therefore be adjusted lengthwise of the stick to control the tension of the spring and can be tightened or loosened as it may be desired to increase or decrease the tension of said spring as well as to obtain the proper normal position of the guiding shoe with relation to the end of the stick.

At the ends of the guide shoe I provide anti-friction devices which may consist of rollers 22 journaled in the sides of the guide shoe, as shown in Fig. 2, or loosely arranged in the guide shoe, as shown in Figs. 6, 7, and 8, or I may employ a ball-bearing, as shown in Figs. 3 and 4.

In Figs. 7 and 8 the rollers 23 are held within the guide shoe by means of the inwardly turned flanges 24 on the sides 25 and these rollers are arranged to engage with each other and with the friction device, as shown in Fig. 6.

In Figs. 3 and 4 I have shown the guide shoe provided at each end with a race for a series of anti-friction balls 27 which project beyond the face of the guide shoe so as to bear against the back wall of the groove. The guide shoe in this instance is formed of sheet metal bent or stamped to form two leaves 28, 29, spread apart throughout the middle portion to accommodate the friction device and drawn together at their upper and lower ends and secured by a screw or rivet 30. The ball race encircles this screw or rivet and is formed by depressing each of the leaves of the shoe to provide a continuous groove therein which will hold

the balls loosely and yet prevent them from falling out.

The invention is not limited to the use of anti-friction devices of any particular kind and others may be employed besides the three species shown and described.

The friction device consists of a foot 31 which is provided with a hollow shank 32 and is normally held in operative position by means of a spring 33 which bears against the inner end of the shank and against the stop 19. The foot of the friction device may be of any suitable shape or configuration and it is constructed to engage the guide shoe to press said shoe against the tension of its spring 18 when it is desired to release the guide shoe from operative position in the groove. The friction foot is operated by means of a pinch handle 34 which has an integral broadened outer portion 34', and an enlarged head 34'' and a reduced neck 34''' (Fig. 9). The head is adapted to be inserted through the slot 35 in the stick and turned transversely thereof into operative position in the stick and is carried by a rod 36 which enters the hollow shank of the friction foot and is provided with a head 37 which engages a shoulder 38, said head being shown screw threaded on the rod but it may be rigid therewith as shown in Fig. 3. The pinch handle has a screw threaded engagement with the end of the rod so that it can be adjusted longitudinally of the stick to obtain the proper adjustment for the friction foot. A nut 39 is fixed on the inner end of the rod to limit the adjustment, and when it is desired to take the fixture apart this nut is held rigid, while the rod is being turned, by means of a tool inserted through the slot 35 and into a slot 40 in the side of said nut.

In Fig. 6 I have shown a modified construction of my invention in which the guide shoe spring 18 is arranged on the shank 17' to bear against the end of the stick proper 12' and the inturnd end 41 of a sleeve 42 inclosing the spring and the end of the stick, and the friction foot spring 33' is arranged on the shank 32' to bear against the foot 31' and the guide shoe. The operation of the parts in this construction is precisely similar to that shown in Fig. 2 and the arrangement of the spring, is to all intents and purposes, the same.

This invention provides simple and effective means for holding and guiding a shade under tension which do not easily get out of order and which can be manipulated to adjust the shade without affecting the guiding devices or by further operating the friction device the guiding devices may be adjusted so that they can be readily disengaged from the grooves. The guiding device and the friction device are yieldingly mounted and normally arranged to operate

independently of each other so that in the ordinary use of the shade the guiding devices will be undisturbed, but when it is desired to clean the shade or to withdraw it from its guided position for any other purpose, the friction foot is further withdrawn to release the guiding device from engagement with the wall of the groove. My invention, therefore, to a very large extent prevents the accidental withdrawal of the guiding devices from the grooves as under all ordinary conditions it will simply be necessary to release the frictional engagement of the foot with the wall of the groove, whereupon the spring roller immediately operates to roll up the shade without causing the friction foot to engage the guiding device.

I do not claim broadly herein a yielding stop for the guiding device as this is claimed in my Patent No. 716,832 granted December 23, 1902, of the application for which this application is a division.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A shade guide comprising a shade stick, an anti-friction guiding device, an independent friction device carried at the end of the stick and adapted to impinge against a casing, and means carried by the shade stick and connected to the friction device for withdrawing the friction device longitudinally of the stick and out of operative contact with the casing.

2. A shade guide comprising a shade stick, an anti-friction guiding shoe, a yieldably mounted friction device carried at the end of the stick and adapted to impinge against a casing, and means carried by the shade stick for withdrawing the friction device longitudinally of the stick and out of operative contact with the casing.

3. A shade guide comprising a shade stick, an anti-friction guiding device, an independent and yieldably mounted friction device carried at the end of the stick and adapted to impinge against a casing, and means carried by the shade stick for withdrawing the friction device longitudinally of the stick and out of operative contact with the casing.

4. A shade guide comprising a shade stick, a friction device, a guide shoe independent of the friction device and carried at the end of the stick and adapted to travel in a casing, and a spring constantly acting on the guide shoe.

5. A shade guide comprising a shade stick, an anti-friction guiding device, an independent and yieldably mounted friction device at the end of the stick and adapted to impinge against a casing, and means carried by the shade stick for withdrawing the friction device longitudinally of the stick and out of operative contact with the casing.

6. A shade guide comprising a shade stick, a yieldably mounted guiding device and a separate and yielding friction device carried at the end of the stick, said friction device being capable of adjustment independent of the guiding device.

7. A shade guide comprising a shade stick, a yielding guiding device and an independent and yieldably mounted friction device carried at the end of the stick.

8. A shade guide comprising a hollow shade stick, a guide shoe provided with a hollow shank arranged in the end of the stick, a spring operating against the end of said shank, a friction device arranged within the shoe, and a spring operating against the end of said friction device.

9. A shade guide comprising a hollow shade stick, a friction device and a guiding device carried at the end thereof, an adjustable stop located within the stick, and independent springs operating against said stop and bearing respectively against the guiding device and the friction device.

10. A shade guide comprising a hollow shade stick provided with an interiorly screw threaded portion, a disk screwed therein, a guiding device provided with a hollow shank arranged in the end of said stick, a spring located between the end of said shank and the disk, a friction device provided with a shank arranged in the hollow shank of the guiding device and a spring operating between said friction device shank and the disk.

11. A shade guide comprising a shade stick, a spring pressed friction device and a spring pressed guiding device having a portion thereof arranged between the friction device and the end of the stick to be engaged and pushed backward by the friction device.

12. A shade guide comprising a shade stick, a guiding device carried thereby and ball-bearings at the ends of said guiding device.

13. A shade guide comprising a shade stick, a guiding device carried thereby and consisting of a guide shoe provided at each end with a ball-bearing comprising a race and a series of balls operating in said race and projecting beyond the face of the guide shoe.

14. A shade guide comprising a shade stick, a guiding device carried thereby and consisting of a guide shoe comprising two leaves drawn together at their ends and shaped to provide a continuous ball race groove, a device for fastening said ends together and a series of balls loosely arranged in said groove and projecting beyond the face of the shoe.

15. A shade guide comprising a shade stick, a recessed friction device at the end thereof, a handle, a rod connecting said han-

dle and friction device, one end of the rod being constructed to provide for turning the rod independent of the friction device to engage or disengage the rod from the handle.

16. The combination with a shade stick, of a guide therefor, means for exerting automatically yieldable pressure on the guide, and a friction device adjacent to the guide and so mounted as to be yieldable without the guide being affected relative to the stick when in a casing.

17. The combination with a shade stick, of a guide mounted on the end of the stick, yielding means for pressing the guide outward, and a friction device adjacent to the guide and movable horizontally when in a casing to compensate for wear thereon without affecting the normal position of the guide relative to the stick.

18. The combination with a shade stick, of an elongated guide connected to said stick, automatic means for pressing the guide outwardly, a friction device adjacent to the guide and adapted to move into impingement against a casing without moving the guide, and a handle connected to said friction device.

19. A shade guide adapted to travel in a casing and comprising a shade stick, an anti-friction guiding device constructed to be withdrawn from the casing, a yieldably mounted friction device adapted to impinge against the casing, and means carried by the stick for withdrawing the friction device out of contact with the casing without affecting the guiding device.

20. A shade guide comprising a shade stick, a guide shoe provided with a hollow shank arranged in the end of the stick, a spring operating against said shank, a friction device separate from the guide shoe, and a spring operating to thrust said friction device outwardly.

21. The combination with a hollow shade stick provided with a slot, of a friction device, and a handle connected with said friction device, said handle having an integral broadened outer portion and an enlarged head and a reduced neck, said head adapted to be inserted through the slot in the stick and turned transversely thereof into operative position.

22. In a curtain having an upward tendency, the combination with a shade stick, of an anti-friction guide and a friction device carried by the stick and constructed to engage a casing at the same time, and means for operatively moving said friction device without affecting the guide.

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Witnesses:

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