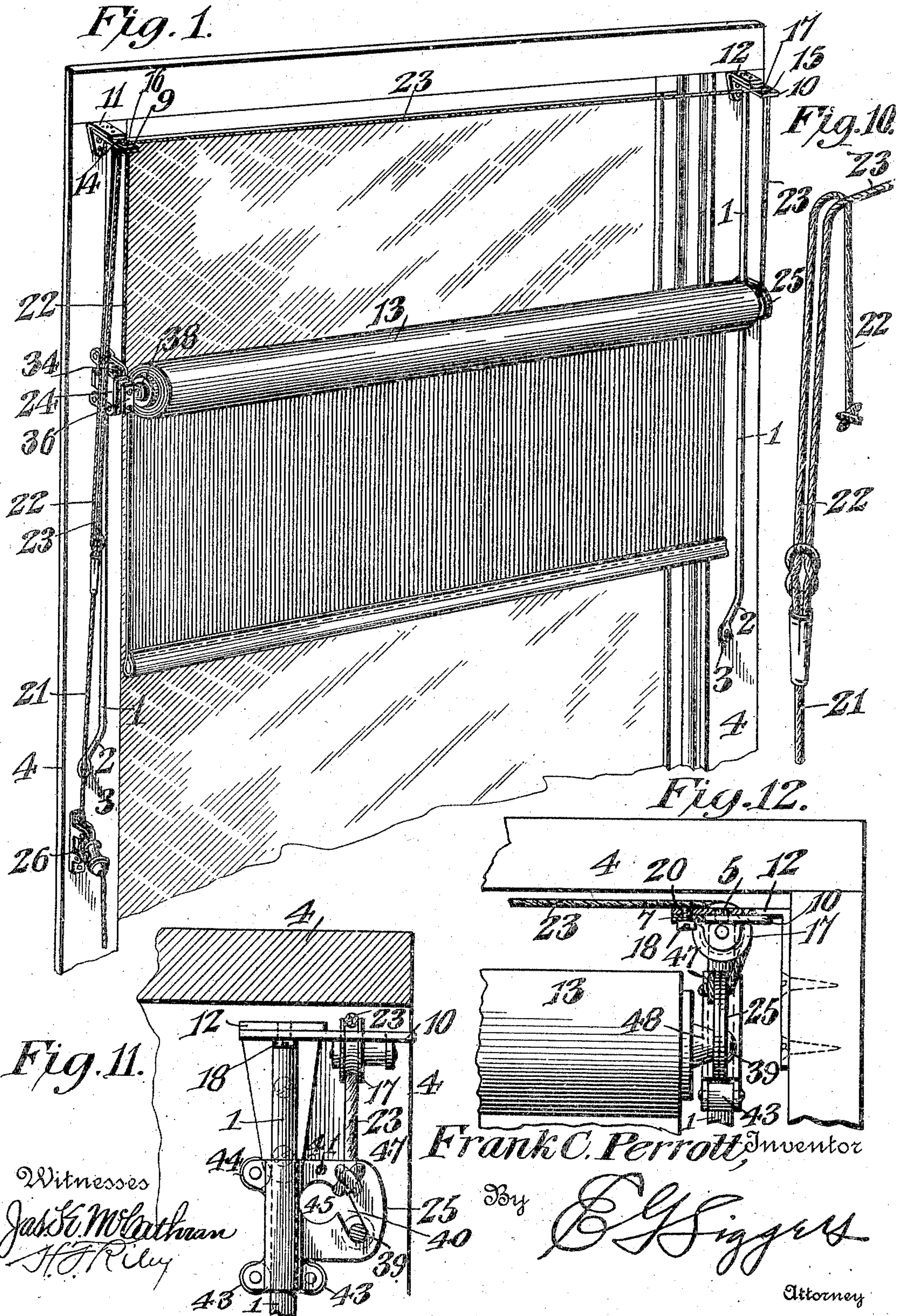


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APPLICATION FILED FEB. 11, 1909.

950,953.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.

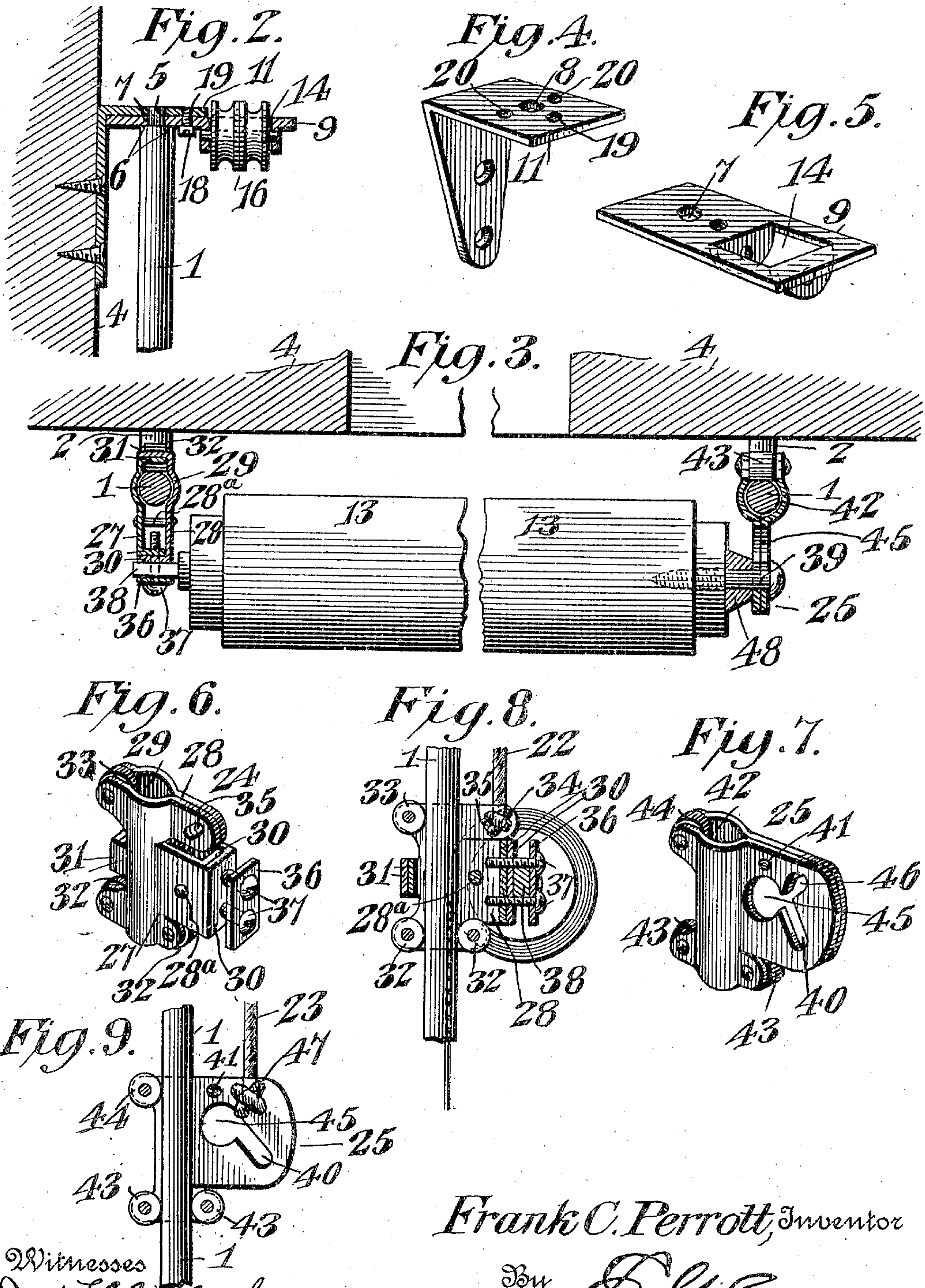




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Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK C. PERROTT, OF BEAVER FALLS, PENNSYLVANIA.

## WINDOW-SHADE ADJUSTER.

950,953.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed February 11, 1909. Serial No. 477,315.

*To all whom it may concern:*

Be it known that I, FRANK C. PERROTT, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented a new and useful Window-Shade Adjuster, of which the following is a specification.

The invention relates to improvements in window shade adjusters.

10 The object of the present invention is to provide a simple, inexpensive and efficient window shade adjuster, adapted with slight changes to be applied to either the outer face or to the inside of a window frame or casing, and capable of ready adjustment to enable the window shade to be lowered any distance from the top of the window within the limits of the device, and of permitting the shade to be freely worked on and off the roller.

A further object of the invention is to provide a window shade adjuster of this character, equipped with anti-friction devices arranged to permit the window shade to slide freely in its upward and downward movements and to positively move downward through gravity without binding.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing the advantages of the invention.

40 In the drawings: Figure 1 is a perspective view of a window shade adjuster, constructed in accordance with this invention. Fig. 2 is an enlarged vertical sectional view of the upper portion of one side of the window shade adjuster. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of one of the supporting brackets. Fig. 5 is a similar view of one of the pulley plates. Fig. 6 is a detail perspective view of one of the slidable casings. Fig. 7 is a similar view of the other slidable casing. Fig. 8 is a vertical sectional view of the slidable casing shown in Fig. 6. Fig. 9 is a similar view of the slidable casing, illustrated in Fig. 7. Fig. 10 is a detail view of a portion of the operating cord. Fig. 11 is

a detail elevation partly in section, illustrating the arrangement of the bracket and the pulley plate, when the window shade adjuster is mounted within the window frame. Fig. 12 is a front elevation of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The window shade adjuster comprises in its construction a pair of vertical guide rods 1, having their lower portions 2 bent at an angle and secured by a screw 3, or other suitable fastening device to the window frame or casing 4. The upper ends 5 of the guide rods are reduced to form shoulders 6 and to provide projecting terminals, extending through openings 7 and 8 of pulley plates 9 and 10 and supporting brackets 11 and 12, which connect the upper ends of the guide rods with the window frame or casing. The brackets and the plates are preferably constructed of steel and are stamped out of such material, but they may consist of castings or be constructed in any other desired manner. The supporting brackets, which are substantially L-shaped, have vertical attaching portions adapted to be secured to the front face of the window frame 4, as illustrated in Fig. 1, and to the inner or side face, as illustrated in Figs. 11 and 12 to be arranged either outside or within the window frame. The plates 9 and 10, which are provided with openings 14 and 15 to receive pulleys 16 and 17, and the brackets 11 and 12, are relatively adjustable, each of the pulley plates being adapted to extend longitudinally from the horizontal top portion of its bracket or to be arranged transversely of the same. When the supporting brackets are secured to the front of the window frame, as illustrated in Fig. 1, the pulley plates are arranged longitudinally of the supporting portions and they are disposed transversely of the same when the brackets are located within the window frame, as shown in Figs. 11 and 12. The pulley plates are detachably secured to the brackets by means of screws 18, and the brackets are provided with front and side openings 19 and 20 to receive the screws 18. This will permit the pulley plate to extend from the front or from either side of the supporting brackets. As the pulley plate is located at the lower face of the horizontal portion of the bracket and as one of its edges fits against the front face of the at-



taching portion of the bracket, a single screw will operate to rigidly secure the parts together.

The opening 14 of the pulley plate 9 receives a pair of pulleys 16, and the other opening 15 receives the single pulley 17, and the pivots or spindles of the pulleys are mounted in perforations of thin ears of the pulley plates. The window shade 13 is raised and lowered by means of an operating cord 21, having branches 22 and 23 extending upward to the pair of pulleys 16. The branch 22 then extends downward and is connected with a slidable casing 24, while the other branch extends across the top of the window to the pulley 17 and then extends downward therefrom to a slidable casing 25. These casings support the window shade, and the operating cord 21 is adjustably secured by a clamp 26, whereby the window shade is held in any desired position.

The casings 24 are preferably constructed of steel and are stamped out of such material, but they may be constructed in any other preferred manner. The slidable casing 24 is composed of two plates or members 27 and 28, secured together by a rivet 28<sup>a</sup> and oppositely grooved to form a vertical opening 29 through which one of the guide rods passes. The plates or members are provided with front and rear lugs or flanges 30 and 31, located intermediate of the top and bottom of the casing and arranged to space the sections or members from each other. The lugs or flanges of the plate or member 27 fit between the lugs or flanges of the other plate or member 28 and abut against the inner face of the latter. The slidable casing 24 is equipped with lower front and rear anti-friction rollers 32 and an upper rear anti-friction roller 33, which is located opposite the points of attachment of the end 34 of the branch 22 of the operating cord 21.

The plates or members of the casing 24 are provided at the top and bottom with ears to receive rivets, or other suitable fastening devices on which the anti-friction rollers are mounted, and the terminal 34 is passed through an inclined slot 35 and is knotted to form a stop. The branch 22 is connected with the casing 24 at the upper portion of the front of the same, plates or members being provided with ears or portions fitted together and slotted, as clearly illustrated in Fig. 6 of the drawings. The front lug or flange 30 of the plate or member 28 coöperates with an adjustable plate 36 to form a clamp, and the front clamping plate 36 is adjustably connected with the front of the slidable casing 24 by screws 37, piercing the plate and the front lugs or flanges 31. The spring journal 38 of the shade roller is clamped between the front of the casing 24 and the plate 37, and the roller is thereby spaced from the casing, so

that the latter will not interfere with the rotary movement of the former. The other end of the roller is provided with a headed pivot or journal 39, preferably consisting of a screw and arranged in a bearing slot 40 of the slidable casing 25. The slidable casing 25 is composed of two plates or members secured together by a rivet 41 and oppositely grooved to provide a vertical opening 42 for the contiguous guide rod. The casing 25 is equipped with lower front and rear anti-friction rollers 43 and an upper rear anti-friction roller 44, mounted between perforated ears or portions of the plates or members of the casing 25 on rivets or other suitable fastening devices. The plates or members of the casing 25 are fitted together in advance of the vertical opening 42 and are provided with an opening 45, and the bearing slot 40 extends downward and outward from the opening 45 at an inclination, as clearly illustrated in Figs. 7 and 9 of the drawings. The front portion of the casing 25 is also provided with an upwardly extending inclined slot 46 for the reception of the terminal 47 of the branch 23 of the operating cord. The terminal 47 is passed through the slot 46 and knotted to form a stop.

The means for supporting the window shade is located below the plane of the upper rear anti-friction rollers and below the points of attachment of the operating cords, so that the weight of the window shade operates to maintain the rear anti-friction rollers in contact with the guide rod.

The upper rear anti-friction rollers are drawn against the guide rods when the operating cord is pulled downward, and they thereby prevent the casings 24 and 25 from binding and permit the window shade to be readily raised. The lower front and rear anti-friction rollers coöperate with the upper anti-friction rollers and effectually prevent the casings 24 and 25 from binding when the window shade is lowered. The weight of the window shade tends to throw the slidable casings forward and causes the anti-friction rollers to engage the guide rods. By the particular arrangement of the anti-friction rollers, the window shade is positively lowered through gravity. The shoulders 6 of the upper ends of the guide rods assist in supporting the weights of the window shade and thereby relieve the upper brackets and the pulley plates of strain. The roller is provided adjacent to the casing 25 with a tapered boss 48, arranged to engage the front portion of the casing 25 at the inner face thereof to space the latter therefrom, so that there will be no liability of the roller binding against the slidable casing and interfering with the operation of the window shade.

The detachable connection between the



pulley plates and the brackets not only permit the relative adjustment of the parts, but will also be found advantageous when the brackets are mounted in a window frame.

5 Usually in such arrangement the pulleys are located close to the top of the window frame and more or less difficulty is experienced in arranging the cords on the pulleys, but by the detachable connection this difficulty is  
10 eliminated, as the screw 18, which is inverted, is readily accessible from beneath.

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

15 1. A device of the class described including a substantially L-shaped supporting bracket having a vertical attaching portion and a horizontal supporting portion, and a relatively adjustable plate provided with  
20 guiding means and projecting from the bracket and having one of its edges fitted in the angle thereof and bearing against the inner vertical attaching portion, said plate being adapted to extend from either the  
25 front or either side of the bracket, and a single fastening device piercing the plate and the bracket and rigidly securing the former to the latter.

2. A device of the class described including a substantially L-shaped bracket having  
30 a horizontal projecting portion and a depending vertical attaching portion, a plate fitted against the lower side of the horizontal portion of the bracket and projecting  
35 beyond the same and having one of its edges bearing against the vertical attaching portion, an inverted screw piercing the plate and the bracket and rigidly securing the  
40 former to the latter, and a pulley carried by the plate and adapted to receive an operating cord.

3. A device of the class described including a substantially L-shaped bracket having  
45 a horizontal projecting portion and a depending vertical attaching portion, a pulley plate secured to the lower face of the horizontal portion of the bracket and projecting  
beyond the same and having one of its edges bearing against the depending vertical attaching portion, said plate and bracket having  
50 registering openings, a guide rod having reduced terminals fitted in the said openings and forming a supporting shoulder for the bracket and the plate, and means for  
55 suspending a window shade from the plate and for slidably connecting the window shade with the guide rod.

4. A device of the class described including a supporting bracket having a horizontal  
60 projecting portion provided with a central opening and having front and side openings, a relatively adjustable pulley plate arranged against the lower face of the horizontal portion of the bracket and fitted in  
65 the angle thereof and having an opening

to register with the central opening of the bracket and provided with another opening adapted to register with the front and side openings of the bracket, a guide rod fitted  
70 in the central opening of the bracket and the corresponding opening of the pulley plate, and a fastening device extending through the other opening of the pulley plate and engaging one of the other openings of the  
75 bracket.

5. In a device of the class described, the combination with a guide rod, of a slidable casing including two sides similarly grooved  
80 to form a vertical opening for and conforming to the configuration of the guide rod, said casing being provided at the front with means for supporting a window shade, lower  
anti-friction rollers located in advance and in rear of the said grooves, an upper anti-friction roller arranged in rear of the same  
85 and above the plane of the means for supporting the window shade, said anti-friction rollers being adapted to prevent the casing from binding against the guide rod, and an  
operating cord connected with the front  
90 portion of the casing opposite the upper anti-friction roller and above the means for supporting the window shade.

6. In a device of the class described, the combination with a guide rod, of a slidable  
95 casing having means for supporting a window shade and composed of two plates or members similarly grooved to form a vertical opening for the guide rod and provided  
at the front and back of the opening  
100 with ears, upper and lower anti-friction rollers mounted between the ears, said casing being also provided at the front with means for attaching an operating cord.

7. In a device of the class described, the combination with a guide rod, of a slidable  
105 casing having means for supporting a window shade and composed of two plates or members similarly grooved to form a vertical opening for the guide rod and provided  
at the front and back of the opening with  
110 ears, upper and lower anti-friction rollers mounted between the ears, said plates having front slotted portions fitted together and arranged to receive an operating cord.  
115

8. In a device of the class described, the combination with a guide rod, of a slidable  
casing composed of two plates or members oppositely grooved to form a vertical opening  
120 for the guide rod and provided in advance and in rear of the opening with spaced ears and having intermediate transversely disposed lugs or flanges maintaining the ears in spaced relation, and anti-friction  
rollers mounted between the ears.  
125

9. In a device of the class described, the combination with a guide rod, of a slidable  
casing composed of two plates or members oppositely grooved to form a vertical opening  
130 for the guide rod and provided in ad-



vance and in rear of the opening with spaced ears and having intermediate transversely disposed lugs or flanges maintaining the ears in spaced relation, anti-friction rollers mounted between the ears, a clamping plate arranged at the front of the bracket, and adjusting screws piercing the clamping plate and the front lugs or flanges, said plate and casing coöperating to form a clamp for engaging the spring journal of a window shade roller.

10. In a device of the class described, the combination with a guide rod, of a slidable casing composed of two plates or members oppositely grooved to form a vertical opening for the guide rod and provided in advance and in rear of the opening with spaced ears and having intermediate transversely disposed lugs or flanges maintaining the ears in spaced relation, said plates being also provided with front upper por-

tions fitted together and having registering slots to receive an operating cord, and anti-friction rollers mounted between the ears.

11. In a device of the class described, the combination with a guide rod, of a slidable casing composed of two plates or members grooved to form a vertical opening and having front portions fitted together, said front portions being provided with an opening and having upwardly and downwardly inclined slots extending from the opening and adapted to receive respectively an operating cord and the journal of a window shade roller.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK C. PERROTT.

Witnesses:

ROLAND GUS KELB,  
EARL R. LEYDA.