(No Model.) 2 Sheets—Sheet 1.

A. C. SPICER.

WINDOW SHADE HOLDER.

No. 441,594. Patented Nov. 25, 1890.

Fig. 1.

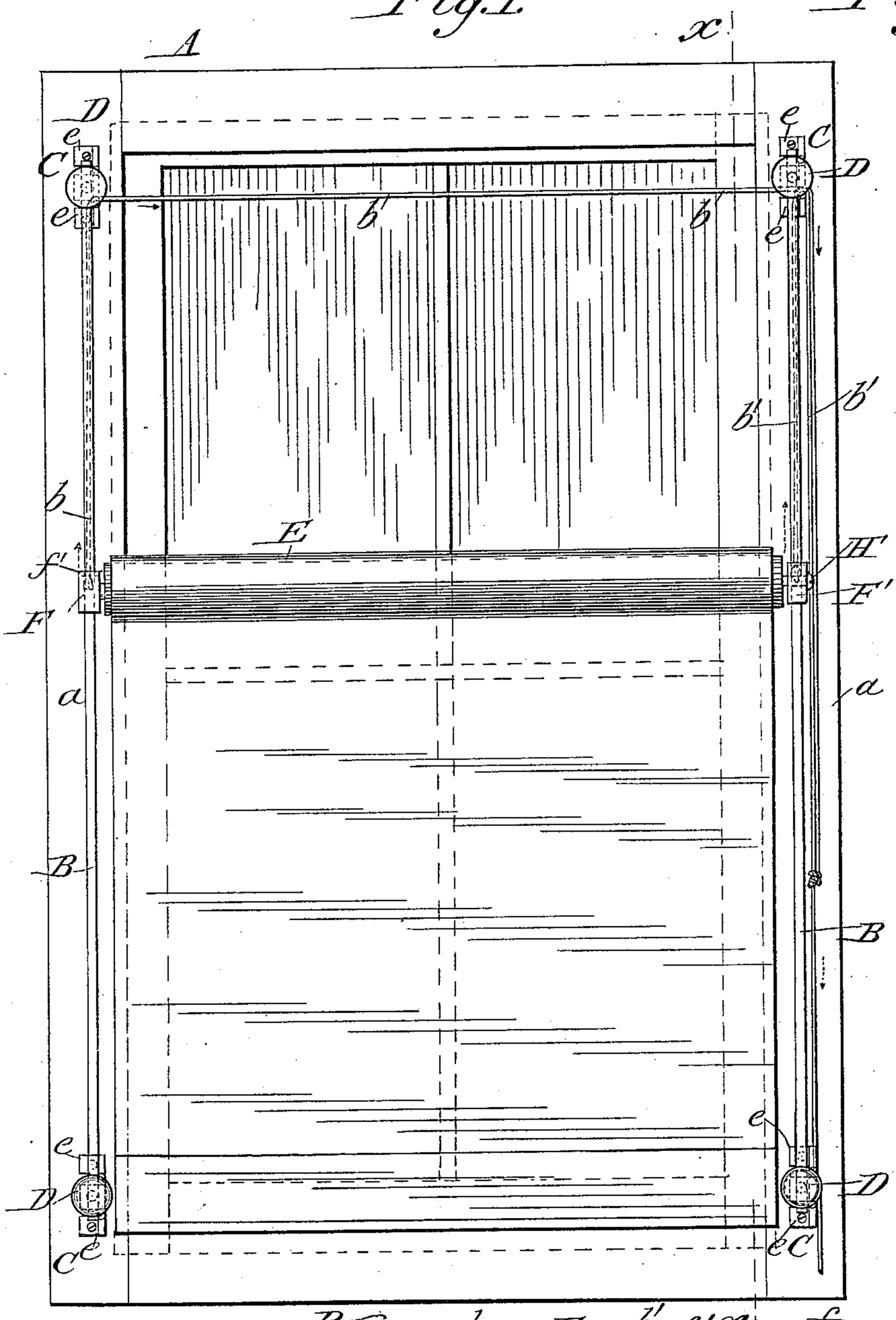


Fig. 2.

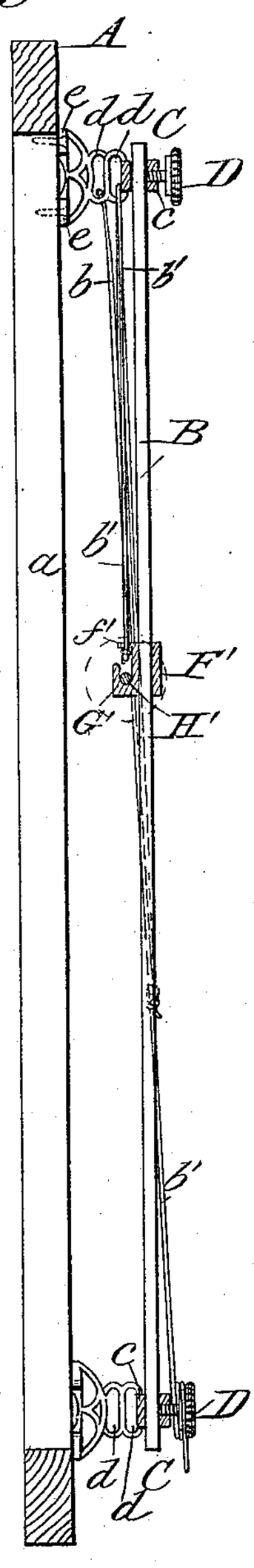
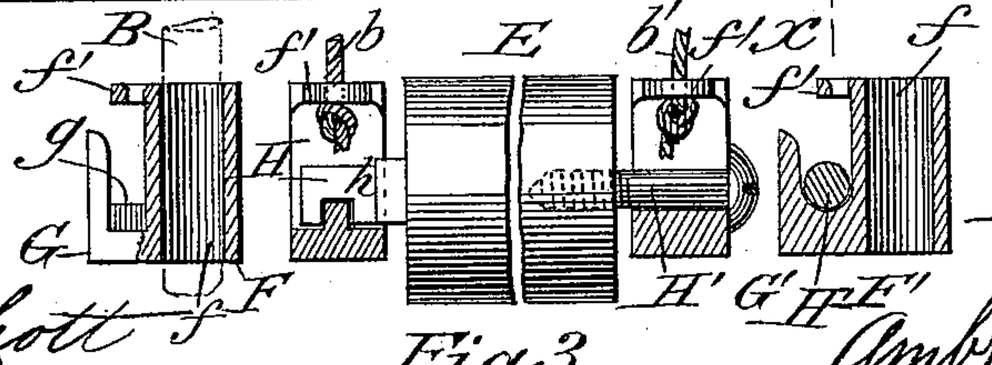


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

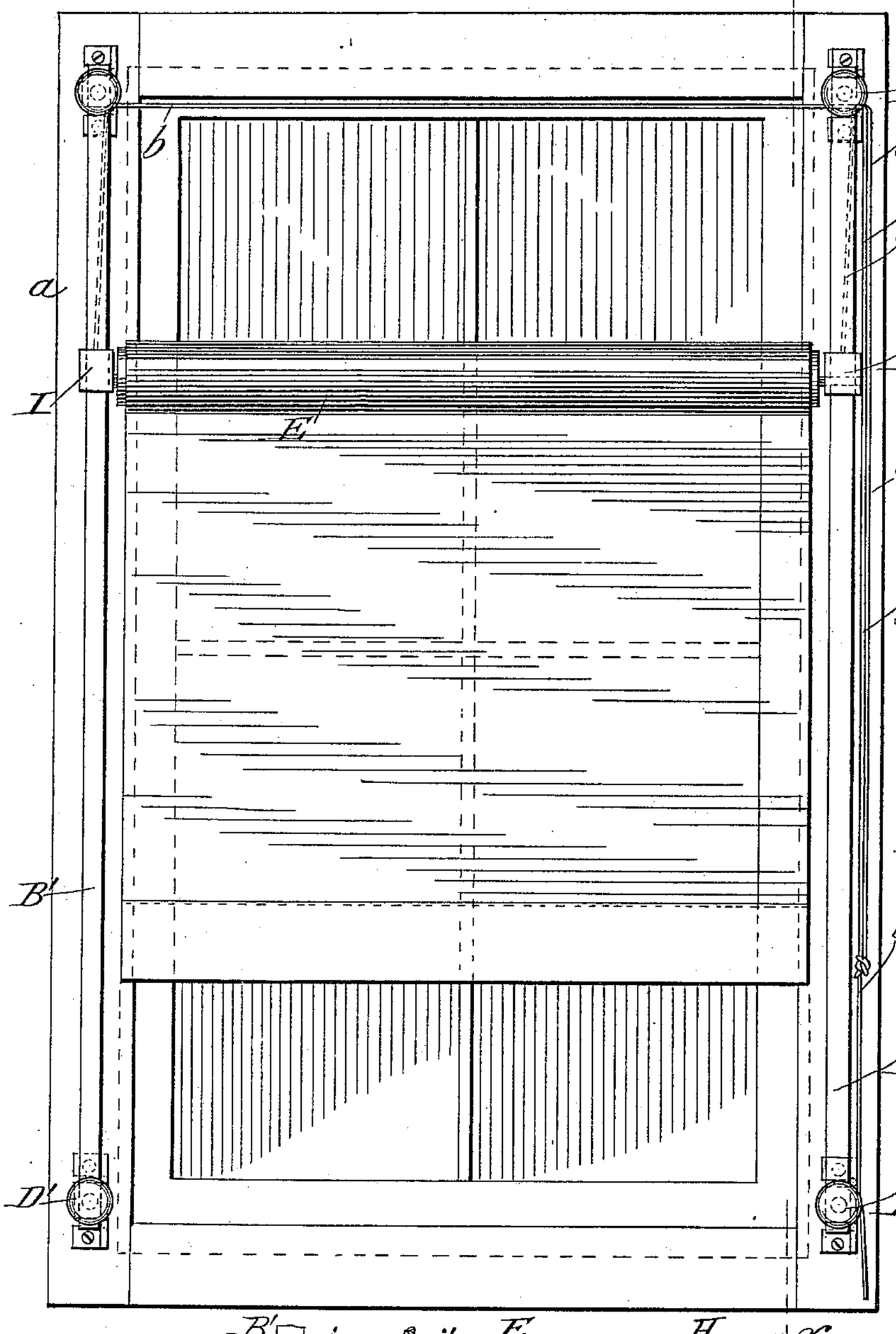

Fig. 5.

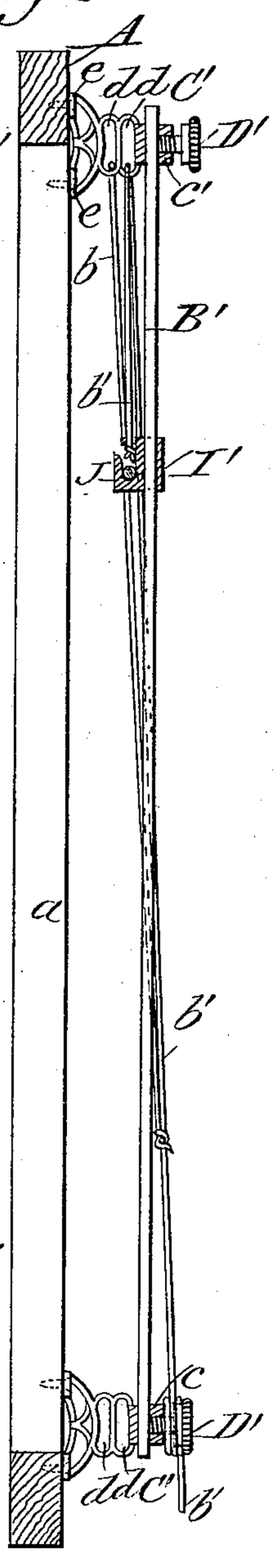

Fig. 6.

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UNITED STATES PATENT OFFICE.

AMBROSE C. SPICER, OF BATTLE CREEK, MICHIGAN.

WINDOW-SHADE HOLDER.

SPECIFICATION forming part of Letters Patent No. 441,594, dated November 25, 1890.

Application filed June 5, 1890. Serial No. 354,364. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE C. SPICER, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Window-Shade Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved device for adjustably supporting or holding curtain-rollers or window-shades of various kinds, the object of the invention being to provide means whereby the curtain-roller or other window-shade contrivance may be adjusted to different heights and fixed in any desired position to which it may be adjusted with sufficient steadiness and firmness to permit the curtain or window-shade to operate in connection therewith as successfully as it does when the curtain-roller is permanently secured at the top of the window-frame; and the invention consists, therefore, in the construction, arrangement, and combination of the several parts, substantially as will be hereinafter more fully described, and then pointed out in the claims.

In the annexed drawings illustrating my invention, Figure 1 is a front elevation of a window-frame provided with my improved devices for adjustably supporting the curtain-roller at different heights. Fig. 2 is a vertical cross-section on the line *x x* of Fig. 1, certain parts being shown in side elevation. Fig. 3 represents in enlarged section the detailed construction of various parts of the invention. Fig. 4 is a front elevation similar to Fig. 1, showing a slightly-modified form of certain of the parts of the invention. Fig. 5 is a vertical cross-section on the line *x x* of Fig. 4. Fig. 6 is an enlarged sectional detail of certain of the parts, representing them in the modified form that they assume when employed and used as shown in Figs. 4 and 5.

Similar letters of reference designate corresponding parts throughout all the different figures of the drawings.

A represents a window-frame of any suitable size, form, and arrangement, it being shown here by way of illustration simply to indicate the manner in which my improved device for supporting the curtain-roller is applied thereto.

My invention is applicable equally well to window-frames of various patterns, shapes, and sizes, and hence I am restricted to no particular kind wherewith to use it. The window-frame A of the drawings has the sides, uprights, or jambs *a a*.

In front of each of the side uprights or jambs *a a* of the window-frame is located a vertical guide rod or bar, having a length sufficient to extend from the top to the bottom of the window-frame and being made of suitable shape, size, and strength. In Figs. 1 and 2 these guide-rods are shown as consisting simply of round rods B B. They are held at top and bottom by means of supporting-brackets, which project a sufficient distance from the face of the window-frame to locate the said guide-rods at proper points a short distance away from the side face of the window-frame.

The supporting-brackets are indicated by the reference-letter C. They are formed at their outer end with sockets *c*, having round or tubular openings therein which receive the ends of the guide-rods. The sockets *c* are provided with set-screws D, which are adapted to bear upon the guide-rods, and thus hold them securely in position, as shown. Furthermore, the supporting-brackets are provided with loops *d d*, through which pass the draw-cords or operating-ropes, to be hereinafter referred to. The brackets are secured to the window-frame by means of the perforated lugs *e e*, through which pass suitable attaching-screws or other devices, which enter the window-frame and hold the brackets securely in position. It will be noticed that the lugs *e e* in all of the four brackets which are found on a single window-frame project in the same direction parallel with the guides. I find it better to have all the brackets made alike in this way rather than to have the lugs of one pair of brackets projecting a different direction from those of the other pair, as this latter condition of things would require that a part of the brackets be made after one pattern and a part after another pattern, whereas by having them all alike I cheapen their construction by making them all of one pattern.

E denotes the curtain or shade roller around which the curtain or shade is rolled. The object of the invention, as stated at the beginning, is to adjust this roller to different heights, thus permitting it at one time to occupy a position at the top of the window-frame, where it is ordinarily located, as everywhere found, and at other times it may occupy a position midway of the height of the frame, as substantially indicated in Fig. 1, or it may be adjusted to any point and held there with sufficient steadiness and firmness to allow the curtain to be lowered or lifted in the ordinary way. The roller E has its pivoted ends connected to slides which move up and down upon the guide-rods B B.

F is the slide which moves upon one of the rods B, and F′ the slide which moves upon the other one of these rods. If desired, both slides may have the same construction; but I preferably form them slightly different to allow the curtain-roller to be properly attached thereto.

The slide F has the tubular opening *f*, through which passes the round rod B. Said slide F furthermore has the socket G, of a substantially rectangular or oblong interior form. Above this socket is a lip or lug *f′*, which is perforated to permit the end of the draw-cord to pass therethrough. The end of the roller E adjacent to the slide F is provided with a flat projection or plate H, which enters the rectangular socket G and rests neatly therein. Said flat projection H preferably has a notch *h* cut therein, which is adapted to engage a lip *g*, formed in the interior of the socket G. This lip in the socket G is located in the interior, so that it may be engaged from either side thereof by the said notch *h*, so as to adapt it to be used either upon the right-hand rod or upon the left-hand rod, so as to adapt its use to rollers of different constructions, as some rollers are constructed with the flat journal at the left hand and others are made with the flat journal at the right hand. The other slide F′ has likewise the tubular passage *f*, wherein is the guide-rod B, and also it has an integral socket G′, which preferably has a rounded interior form, and is similarly constructed on its right and left sides, so as to admit of its being used either upon the right or left hand rod, corresponding to the construction of the slide *h* and for a corresponding purpose, and above this socket is a lip or lug *f′*, which is perforated to permit the passage therethrough of the draw-cord which is connected to the slide F′. The end of the roller E adjacent to the slide F′ is provided with a round projection H′, which enters the rounded socket G′ and lies neatly within the same. Thus it will be seen that as the curtain-roller revolves the flat projection H will remain stationary while the round projection H′ revolves, said projection H being connected to the roller in such a manner as that it may stay fixed within its socket; but it is unnecessary to describe here further the detailed construction of the roller itself, since it will generally be arranged as a spring-roller, so as to operate automatically, and any common and well-known spring mechanism may be employed in connection with the roller.

Connected to the slide F is the draw-cord *b*, (see Figs. 1 and 2,) which extends upward from said slide F, passes through one of the loops *d* of the supporting-bracket at that corner of the frame, then runs horizontally across the window to the adjacent bracket C, through one of its loops *d*, then downward alongside of the guide B on that side of the frame.

Connected to the slide F′ is a cord *b′*, which extends upward from said slide, passes through one of the loops *d* of the bracket C at that corner of the window-frame, then runs back downward alongside of the guide-rod.

The two cords *b* and *b′* will be connected together in some suitable manner, as shown in the drawings, so that the operator by pulling upon a single cord at the bottom of the window may cause both slides F and F′ to be lifted simultaneously and to the same extent, carrying with them of course the roller E, and thus adjusting the curtain-roller to any desired height. When the curtain-roller has thus been adjusted, the end of the draw-cord may be wound around the set-screw D belonging to the bracket at the lower right-hand corner of the window-frame. It may be here stated that these set-screws D are formed in a somewhat peculiar manner to permit the ready winding around them of the draw-cord. Between the milled head and the screw-shank is a supplemental body, smooth on its surface and of less diameter than the milled head. This gives additional room around which to wind the draw-cord. This supplemental surface will be readily seen by referring to the set-screws in Figs. 2 and 5.

Obviously the draw-cord may be attached to any other desired object—such, for instance, as an independent set-screw fastened at some point on the window-frame, or to any other projecting device.

In Figs. 4, 5, and 6 the same device as is shown in Figs. 1, 2, and 3 is represented with certain slight modifications in its structure. In these figures (4, 5, and 6) the upright guides are made in the form of flat bars B′ B′, instead of being round rods, as B B in Figs. 1 and 2. Although the round rods are perhaps more generally desirable, yet the flat bars are a preferred construction sometimes. With these bars B′ B′, I employ supporting-brackets C′, which are similar in construction to the supporting-brackets C. They have at their outer ends sockets *c′*, which are like to the sockets *c*, except that there is a rectangular or square passage therethrough, instead of a round one, to receive the flat bars B′. The set-screws D′ bear upon the ends of the flat bars within these sockets and hold them tightly in position, the same as the set-screws D hold the rod B in place.

I and I′ denote the slides which are used with the flat bars. They differ in certain respects from the slides F and F′, so as to better suit them for moving upon the flat bars B′ B′. The slide I′ has a square or rectangular passage *i*, which receives the bar B′. It also has an integral socket J, having a round interior form, and is constructed so that it may be used upon the left-hand rod or upon the right-hand rod with equal facility, so as to adapt it to hold securely the round journal of a roller, whether the round journal be upon the right or left end of said roller, and above this socket is the perforated lug *i′*, to which the draw-cord is connected. The end of the roller E adjacent to the slide I is provided with a round projection H′, similar to the projection H′ on the roller E represented in Fig. 1. Said projection H′ lies nicely within the slide-socket J and rotates therein. The slide I′, which moves upon the other bar B′, has likewise a rectangular passage through it, (designated by *i*,) and it has an integral rectangular-shaped socket J′, above which is the perforated lip or lug *i′*, to which the other draw-cord is connected. The end of the roller E adjacent to the slide I′ has a flat projection H, formed with a notch *h*. Within the socket J′ are a couple of lips or lugs *j j*, and when the flat projection H lies within the socket J′ its notch *h* will engage one or the other of these lugs, so that the said projection H may be fixed firmly within its sustaining-socket. The lips or lugs *j j* in the slide I′ are two in number and located at equal distance from either side of the slide I′ and the same distance from the side as is the lip in the slide F, so as to adapt it to be used either upon the right-hand guide-bar or upon that at the left hand, and equally will be engaged by the notch *h* of a roller in either the right-hand end or left-hand end thereof, so as to adapt it to rollers of different constructions. The draw-cord *b* is connected to the slide I in this form of the invention the same as it is connected to the slide F in that form shown in Fig. 1, and likewise the draw-cord *b′* is connected to the slide I′ in the same manner that it is attached to the slide F′, as indicated in Fig. 1, and the two draw-cords are fastened together, so that they may be jointly operated to jointly lift or lower the two slides I and I′, and thus carry the curtain-roller up or down, keeping it all the while horizontal, and thus adjusting it to any desired height in front of the window.

I have already referred to the perforated lugs with which each of the slides are provided. The draw-cords pass through these lugs, and are then knotted on the under side of the lugs to prevent them from being withdrawn, and so knotted as to securely lock and hold the journals of the roller within the respective sockets of the respective slides until said knots are purposely withdrawn, so as to permit the removal of the journals. As the cords thus exert their power in a vertical line upon the slides, the latter will be easily moved up and down as the result of this connection. The construction of the slides permits the roller to be held firmly and avoids any liability of its slipping out of position and falling. However, it is easily removable from the slides when desired, as will be obvious from an inspection of their construction.

Referring again to the brackets which support the guide-rods, it may be stated as regards the attaching-lugs thereof that it is found much better to have them project toward the left than to have a portion of them project toward the right. It is well known that the side draft in holding and moving a curtain is always toward the right. To prevent displacement toward the right I project the feet or attaching-lugs of these brackets toward the left.

Referring again to the draw-cord, it will be noted that by loosening the connection of one cord with the other the two cords may be used to act separately, if desired, and by thus disconnecting them greater or less length may be given to either one of them, so as to properly adjust the slides and cause them to move uniformly, and thus preserve the horizontality of the roller.

Referring again to the set-screws with which the brackets are provided, it will be observed that their use is valuable, inasmuch as it facilitates the employment of guide rods or bars of any desired length. Said guide-bars may project above and below the brackets, if desired; also, they may be cut off at just the length needed, and there is no necessity of drilling or punching holes therein for screws or of cutting threads on the round rods, or any other such expensive construction; but the smooth plain rods enter the sockets in the bracket and are held tightly by means of the adjusting-screws.

It will be noted in this application that I employ guide-rods either round or flat or other suitable shape on which the slides move up and down. In my other pending application filed of even date herewith, Serial No. 354,365, I employ upright grooved guides within which the slides operate. It will therefore be seen that these two applications cover different structures, as just stated.

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

1. In a device for holding curtain-rollers at different heights, the combination of the curtain-roller having at one end the round journal and at the other end a flat journal, the rigid vertical guide-rods, which are removable and adjustable, the supporting-brackets C at each end of the guide-rods, having sockets provided with set-screws, provided also with loops *d d*, through which the draw-cords pass, and with perforated lugs *e e*, whereby the brackets are secured in place by means of screws, the ends of the said guide-rods enter-

ing and being firmly held within the sockets of the brackets, the slide on one guide having a round socket to receive the round journal of the roller and the slide on the other guide having a right-angled socket to receive the flat journal on the other end of the roller, said slides being perforated to permit the passage through them of the guide-rods, and having integral perforated lugs which are above the above-mentioned sockets, wherein the journals of the curtain-roller are located, and the draw-cords connected to said perforated lugs and passing through the loops of the upper brackets so as to operate to lift the two slides simultaneously.

2. In a device for holding window-curtains at different heights, the combination of the rigid vertical guide rods or bars, which are removable and adjustable, the supporting-brackets C therefor, having integral sockets, cord-loops *d d*, and perforated lugs *e e*, the said guide-rods entering the said bracket-sockets and being held therein by means of set-screws, the curtain-roller having a rounded projection at one end and a flat projection at the other, with a notch, a slide on one of the guide-rods having a round socket to receive the round projection on the roller, and the slot on the other guide-rod having a rectangular socket to receive the flat projection on the other end of the roller, and provided with a lip formed in the interior of the socket to be engaged by the notch on the flat projection of the roller, said slides being perforated to permit the passage through them of the guide-rods, and having perforated lips or lugs above the sockets, which hold the roller-journals, together with the draw-cords connected to said perforated lugs and passing through the loops *d d* of the upper brackets, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

AMBROSE C. SPICER.

Witnesses:
W. E. JOHNSON,
HALE JULIAN SPICER.