June 17, 1930. W. OCCHIUZZO 1,763,811

AUTOMATIC CURTAIN TIEBACK

Filed Aug. 27, 1928

Fig. 1.

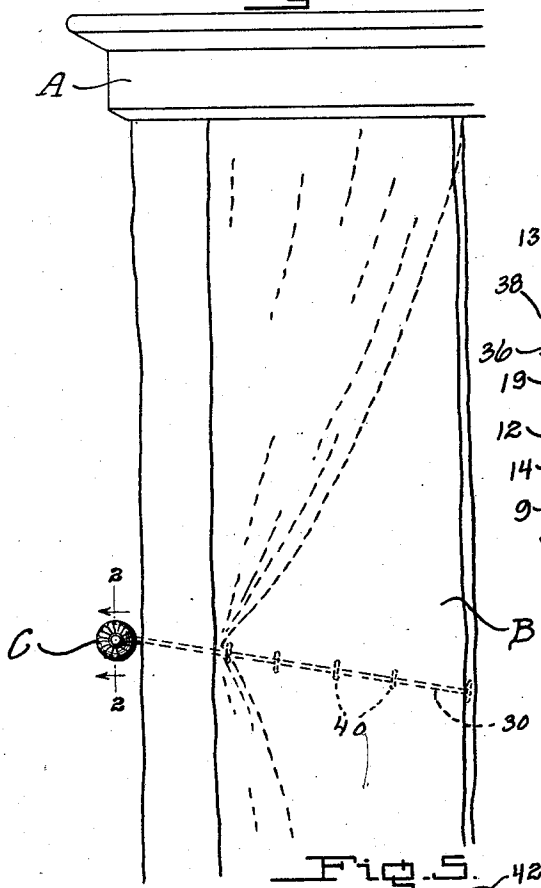


Fig. 2.

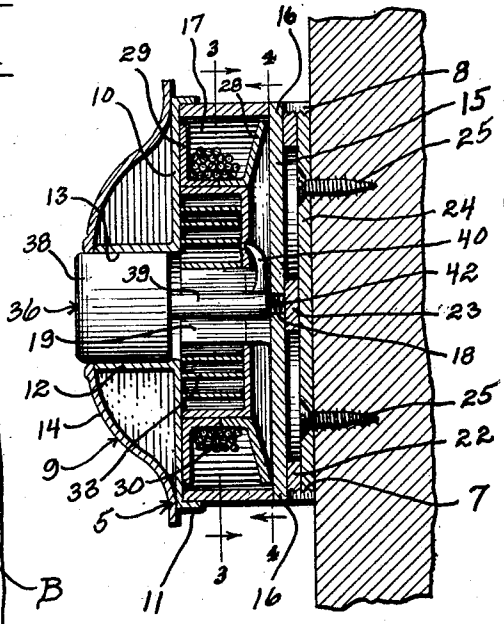


Fig. 5.

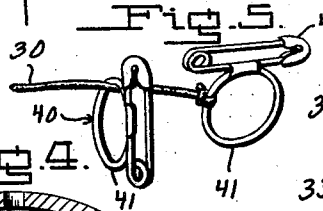


Fig. 3.

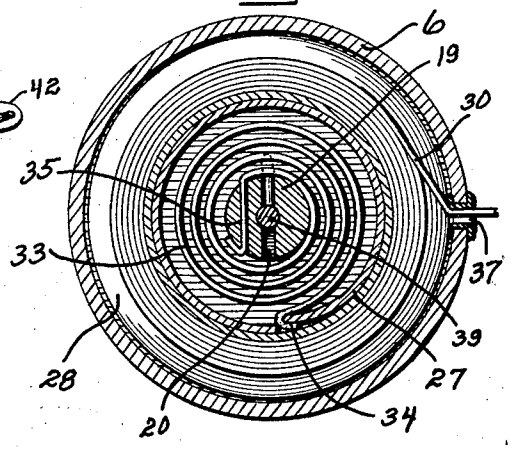
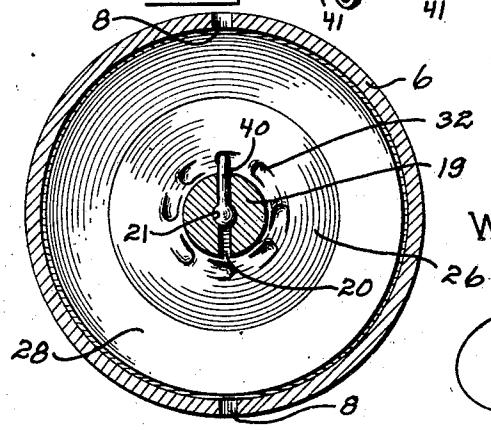


Fig. 4.



William Occhiuzzo. Inventor

By Lancaster and Allwine

Attorneys

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UNITED STATES PATENT OFFICE

WILLIAM OCCHIUZZO, OF NEW YORK, N. Y.

AUTOMATIC CURTAIN TIE BACK

Application filed August 27, 1928. Serial No. 302,307.

The present invention relates to tie-backs for curtains and similar draperies, and the primary object of the invention is to provide a novel and efficient curtain tieback whereby the curtain may be drawn back in a neat manner when so desired by the mere releasing of an automatically operable device permanently disposed adjacent the outer edge of the curtain.

A further object of the invention is to provide an automatic curtain tieback embodying an arrangement whereby the curtain may be drawn back to any desired extent, and which device is so detachably associated with the curtain as to not in any way detract from the general appearance thereof.

A still further object of the invention resides in the provision of an automatic curtain tieback embodying a spring actuated reel adapted to be permanently mounted adjacent one edge of the window and a tie cord adapted to be detachably connected with the curtain, with release means associated with the reel whereby the tie cord will be automatically wound on the reel to draw the curtain into folds adjacent the edge of the window.

A still further and important object of the invention is to provide a device of this character which will be neat in appearance, one which is susceptible of ready and easy attachment, and one wherein the movable parts are so enclosed as to prevent any possible injury being done the curtains with which the tiebacks are associated.

Other objects and advantages of the invention will be apparent during the course of the following detailed description, taken in connection with the accompanying drawing, forming a part of this specification and in which drawing:

Figure 1 is a fragmentary plan view of a window opening provided with curtains, and showing one of the improved tiebacks as associated with one of the curtains.

Figure 2 is an enlarged section on line 2—2 of Figure 1 showing the internal arrangement of the device and the simple manner of attachment of the device.

Figure 3 is a section on line 3—3 of Figure 2 and looking in the direction of the arrows.

Figure 4 is a section on line 4—4 of Figure 2 and looking in the direction of the arrows.

Figure 5 is a fragmentary perspective view showing two of the curtain attaching members and the manner in which they are associated with the tie cords.

Referring to the drawing in detail, and wherein similar reference characters designate corresponding parts thruout the several views, the letter A designates a window casing having curtains or drapes B associated therewith, and C the improved tieback for drawing the curtain B toward one edge of the window casing.

The tieback device C embodies a casing or housing 5 embodying a tubular body portion 6 being open at its inner side and internally screw threaded as at 7 adjacent its inner end. The inner edge of the tubular body portion 6 is provided with diametrically arranged slots or recesses 8 which preferably extend from the inner edge of the body portion to a point adjacent the inner end of the threads 7. The outer end of the body portion 6 is closed by a hollow cap 9 embodying an inner section 10 provided with a circumferential flange 11 for attachment to the forward edge of the tubular body portion as by welding or the like, and an axially disposed tubular sleeve 12 providing a guide way 13 axially of and opening into the tubular body portion. Secured in any preferred manner at its circumferential portion to the circumferential portion of the inner section 10 is a face plate 14 having an axially disposed opening aligning with the outer end of the guide way 13, and the outer surface of the face plate 14 may be ornamented in any suitable design as shown by example in Figure 1.

Slidably fitting within the tubular body portion 6 from the inner open end thereof, is a closure disc 15 provided with diametrically projecting lugs 16 for slidably fitting in the slots 8. These lugs 16 serve to prevent rotation of the closure disc within the tubular body portion, and also serve as means for limiting inward movement of the closure disc whereby the disc is retained in spaced

relation from the inner cap section 10 to form a chamber 17. This closure disc 15 is provided with an axially disposed opening 18, and carries a hub 19 the axis of which extends co-axial with the axis of the opening 18. This hub or stub shaft 19 is rigidly affixed to the closure disc 15 and is preferably of a length substantially equal to the depth of the chamber 17. This hub 19 is provided throughout its length with a diametrically extending slot or keyway 20 provided intermediate its edges with confronting semi-circular shaped portions providing a bearing 21 extending axially of the hub and in axial alignment with the opening 18.

Threaded into the inner threaded end of the tubular body portion 6 is a locking ring or disc 22 provided with a diametrically extending web 23 which when the locking ring is threaded into engagement with the closure disc 15, forms a closure for the inner end of the opening 18. Thus it will be seen that the ring or disc 22 serves as a means for retaining the closure disc 15 in position at the base of the recesses 8, and that the ring when threaded into the body portion is spaced inwardly from the outer end of the threads 7. A threaded mounting or attaching disc 24 is provided with openings for receiving suitable fastening elements as at 25 whereby the mounting disc may be secured in position adjacent one edge of the window frame A. After mounting of the disc 24, the casing 5 may be threaded upon the disc so that the casing conceals the mounting disc and its fastening elements.

Mounted to rotate upon the hub or stub shaft 19 within the chamber 17, is a drum 25 embodying a cup shaped spring housing embodying a disc portion 26 and a rim portion 27 of less depth than the length of the hub 19. Secured to and extending circumferentially of the rim portion 27 is a pair of inner and outer groove forming flanges 28 and 29 respectively providing a circumferentially extending groove within which is wound a flexible tie cord 30. One end of the tie cord may be secured to the drum in any suitable manner. The inner flange 28 projects inwardly at an angle from the disc portion 26 and engages the closure disc 15 in a manner whereby the drum is held against longitudinal shifting on the hub 19 and the disc portion 26 is disposed in spaced relation to the outer side of the closure disc as clearly illustrated in Figure 2. The inner face of the disc portion 26 is provided with a series of concentrically arranged ratchet notches 32. Disposed within the cup shaped housing of the drum 25 is a spiral spring 33 having one end attached to the disc portion 26 of the drum as at 34 and its opposite end fitting in a slot 35 provided in the outer end of the hub 19. This spring 33 when the tie cord 30 is unwound from the drum 25 is so placed under tension that it will act to rewind the tie cord upon the drum when the drum is freed thru operation of the release means 36.

The tubular body portion 6 is provided with an opening 37 thru which the tie cord extends.

Referring now to the release means 36 for releasing the drum 25 and allowing the spring 33 to rewind the tie cord 30 upon the drum, the same embodies a finger button 38 having sliding movement within the guide way 13, and connected with the inner end of the button 38 is a shank 39 having sliding movement in the bearing portion 21 provided axially of the hub 19. Carried by the inner end of the shank 39 is a hook shaped arm 40 which extends radially of the hub thru the slot 20 with its outer end bent toward the button 38 for engagement in the ratchet notches 32. Arranged in the opening 18 provided in the closure disc 15, is an expansion coil spring 42 having one end acting upon the web 23 and its opposite end acting upon the inner end of the shank 39 in a manner to normally urge the shank outwardly and the hooked end of the arm 40 into engagement with the inner side of the disc portion 26. By observing Figure 2 it will be seen that when the finger button 38 is pressed inwardly against the tension of the spring 42 that the keeper arm 40 will be moved out of holding engagement with the ratchet notches 32 and thus allow the drum 25 to be rotated by the spring 33 for winding the tie cord 30 upon the drum.

The tie cord 30 may be provided with any suitable number of curtain attaching members 40 and in the example shown these attaching members embody rings 41 having suitable pins 42 connected thereto for connection with the curtain at various points. The attaching members may be strung on the tie cord by passing the cord thru the rings 41 and it is preferred that the terminal of the tie cord be connected with the ring of the terminal attaching member as shown in Figure 5, so that the terminal attaching member serves to retain the remaining attaching members on the tie cord.

When the curtain is in its closed position as shown in Figure 1 and it is desired to draw the curtain back in folds adjacent the edge of the window, it is merely necessary to press inwardly on the finger button 38 for releasing the drum 25 and whereupon the spring 33 will act to automatically rotate the drum and wind the tie cord thereon for drawing the curtain into a position as shown by the dotted lines in Figure 1. It will of course be seen that the curtain may be tied back in any desired position by releasing pressure on the button 38 prior to the time when the curtain is drawn back to its fullest extent. When desiring to draw the curtain it is merely necessary to grasp the curtain at the terminal of the tie cord and exert a pull on the tie cord for al-

lowing the keeper arm 40 to spring past the ratchet notches as the tie cord is being unwound from the drum.

From the foregoing description it will be apparent that a novel and efficient automatic curtain tieback has been provided which will be neat and efficient in operation, and which device when associated with a curtain or various other types of draperies, will not in any way detract from the appearance of the curtain.

Changes in detail may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the following claims.

I claim:

1. A tieback for curtains comprising a housing for mounting adjacent one side edge of the curtain, a spring actuated drum rotatably mounted in the housing, a tie cord wound on said drum and extending from the housing, said tie cord when withdrawn from the housing to place the spring of the drum under tension, means for attaching the tie cord to a curtain, and release means for said drum for allowing rewinding of the tie cord thereon.

2. A tieback for curtains comprising a housing for mounting adjacent one side edge of the curtain, a spring acutated drum rotatably mounted in the housing, a tie cord wound on said drum and extended from the housing, said tie cord when withdrawn from the housing to rotate the drum for placing the spring of the drum under tension, release means for the drum, means for attaching the terminal of the tie cord to the inner edge of the curtain, and a plurality of curtain attaching members freely movable on the tie cord.

3. A tieback for curtains comprising a housing provided with a guide way, a hub fixedly mounted in the housing coaxially of the guide way, a drum rotatably mounted on the hub and having ratchet notches provided on its inner side, a tie cord wound on the drum and extending from the housing with means thereon for attachment to the curtain, a coil spring having one end connected to the fixed hub and its opposite end connected to the drum whereby the spring will be placed under tension when the tie cord is unwound from the drum, and release means for allowing rewinding of the tie cord upon the drum by said spring for drawing the curtain into folds at one side including a button slidable in said guide way and a keeper arm engageable in said ratchet notches, said keeper arm to be released from the notches upon inward movement of the button.

4. A tie back for curtains comprising a housing provided with a guide way, a stub shaft fixedly mounted in the housing coaxially of the guide way and provided with a diametrically formed keyway, a drum rotatably mounted on the stub shaft embodying a disc portion provided with a series of concentrically arranged ratchet notches, a tie cord wound on the drum and extending from the housing with means thereon for attachment to the curtain for draping the same to one side, a coil spring having one end connected with the stub shaft and its opposite end connected with the drum and adapted to be placed under tension thru unwinding of the tie cord from the drum, a finger button movable in the guide way and having a shank extending from its inner end into the keyway of the stub shaft, a keeper arm carried by the inner end of the shank and projecting radially of the stub shaft thru the keyway with its outer end adapted for engagement in said ratchet notches, and spring means for retaining the keeper arm in engagement with the ratchet notches for preventing rotation of the drum until an inward pressure is exerted on said button.

5. A tieback for curtains comprising a housing having a guide way, a stub shaft fixedly mounted in the housing coaxially of the guide way and provided with a keyway formed diametrically of the stub shaft, a drum rotatably mounted on the stub shaft including a disc portion disposed at the inner side of the drum and provided with a series of ratchet notches arranged concentric to the axis of the stub shaft, a tie cord wound on the drum and extending from the housing with means thereon for attachment to the curtain for draping the same to one side, a coil spring having one end connected with the stub shaft and its opposite end connected with the drum to be placed under tension upon unwinding of the tie cord from the drum, a finger button slidably mounted in the guide way of the housing, a shank extending inwardly from the button for sliding movement in the keyway of the stub shaft, a keeper arm extending radially from the inner end of the shank thru the keyway of the stub shaft and having a hooked outer end extending toward the button for engagement in the ratchet notches provided in the disc portion of the drum, and an expansion spring acting upon the inner end of the shank for yieldably urging the keeper arm into engagement with the ratchet notches.

6. A tieback for curtains comprising a housing embodying a tubular body portion and a cap closing the outer end of the body portion and provided with a guide way, a removable closure disc for the inner end of the tubular body portion and provided with an axially disposed opening being closed at its inner end, a stub shaft carried by the closure disc coaxially of said opening, a drum rotatably mounted on the stub shaft embodying a disc portion and an angularly disposed inner flange engageable with the closure disc for spacing the disc portion from the closure disc, said disc portion having a

series of angularly arranged ratchet notches provided at its inner side, a tie cord wound on the drum and extending from the housing and having means thereon for attachment to a curtain for draping the same to one side, a coil spring having one end connected to the stub shaft and its opposite end connected to the drum to be placed under tension upon unwinding of the tie cord from the drum, a button slidably mounted in the guide way of said cap and having a shank extending axially thru the said shaft with its inner end in confronting relation with the opening in said closure disc, a hook shaped keeper arm extending radially from the shank for engagement in the ratchet notches of the drum, and an expansion coil spring arranged in the opening of the closure disc and engaging the inner end of said shank for normally urging the keeper arm into engagement with the ratchet notches.

7. A tieback for curtains comprising a tubular body portion being internally screw threaded at its inner end and having diametrically disposed slots opening at its inner ends, a hollow cap secured to the outer end of the tubular body portion and provided with an axially disposed guide way, a closure disc slidably fitting in the body portion from the inner end thereof and having radially projecting lugs engageable in the slots in the body portion, a locking ring threaded into the body portion for retaining the closure disc against displacement in the body portion, a stub shaft carried by the closure disc coaxially of said guide opening and provided with a diametrically formed keyway, a spring actuated drum rotatably mounted on said stub shaft and provided with a series of annularly arranged ratchet notches, a tie cord wound on the drum and extending from the housing to place the spring of the drum under tension when the tie cord is unwound from the drum, means on the tie cord for attachment to the curtain for draping the curtain to one side when the cord is wound upon the drum, a release means slidably mounted in the guide way of said cap and embodying a keeper arm movable in the keyway of the stub shaft and engageable in said ratchet notches, and a mounting disc for threaded reception of the inner end of the tubular body portion.

8. In a tieback for curtains and the like, a housing for fixed mounting at one side edge of the curtain, a reel rotatable in the housing, a tie cord wound on the reel, means carried by the tie cord for attachment to the curtain transversely thereof to hold the curtain draped to the side when the cord is wound upon the reel, spring means in the housing acting to normally wind the tie cord on the reel, and release means for the spring means.

WILLIAM OCCHIUZZO.