L. ROMBAUT.

AWNING.

APPLICATION FILED JULY 16, 1910.

979,566.

Patented Dec. 27, 1910.

3 SHEETS—SHEET 1.

Fig. 1.

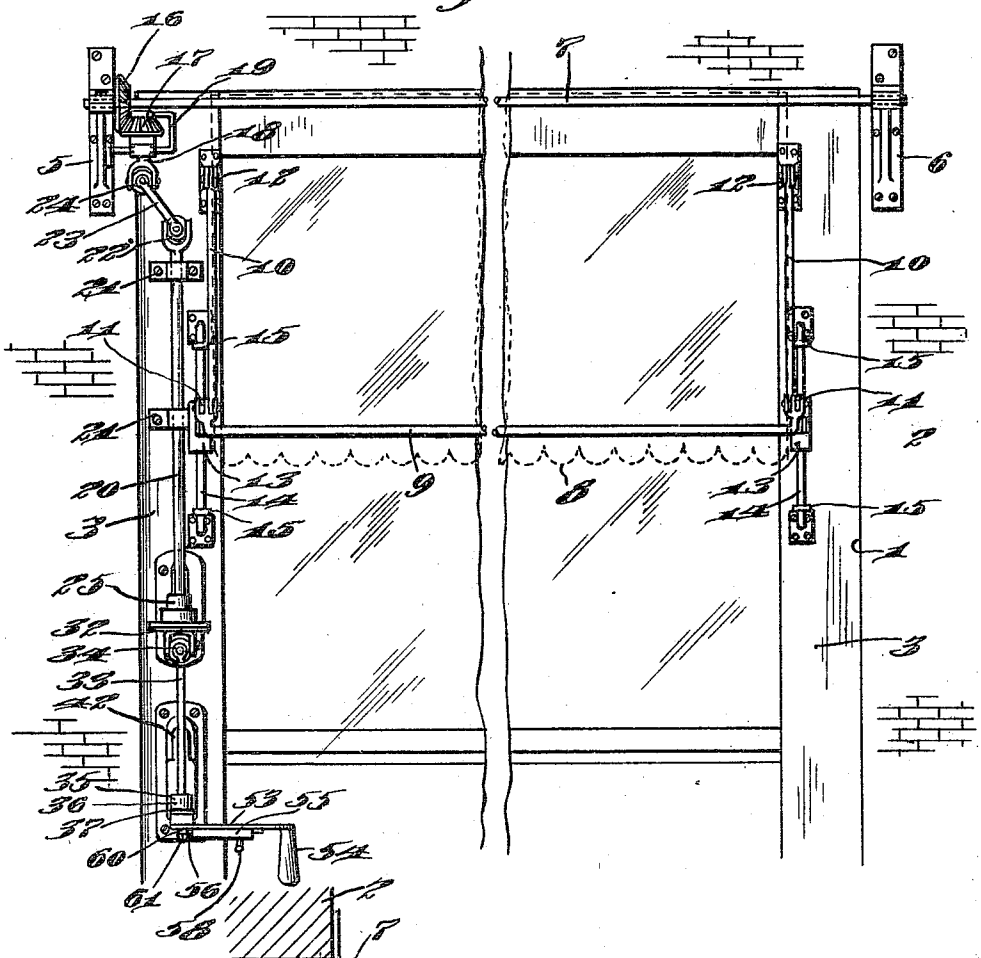
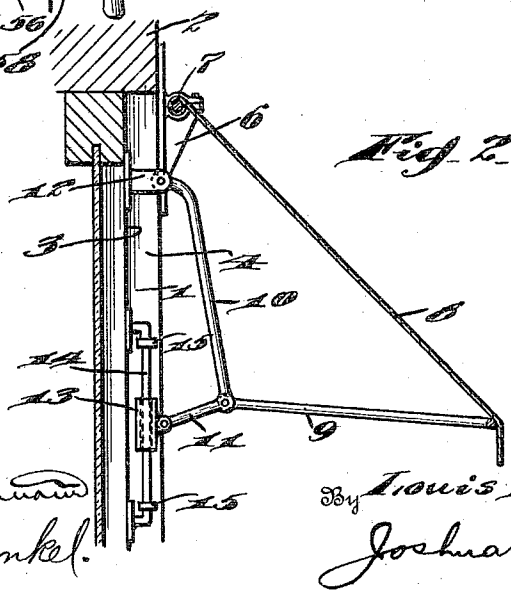


Fig. 2.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 3.

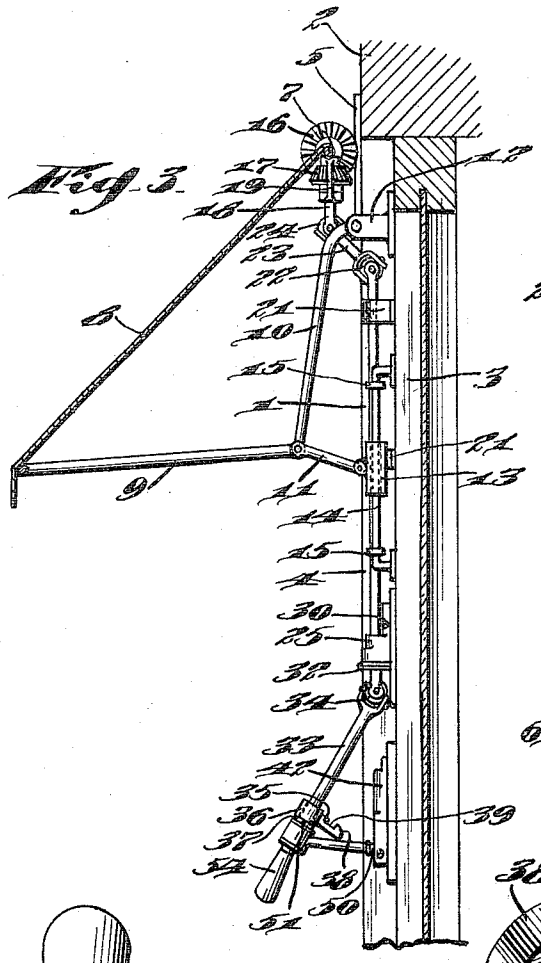

Fig. 9.

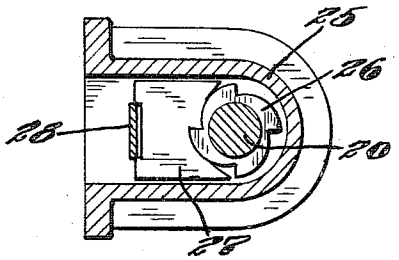

Fig. 10.

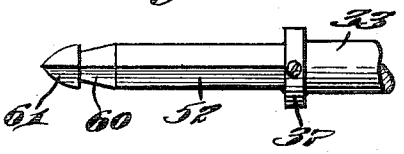

Fig. 11.

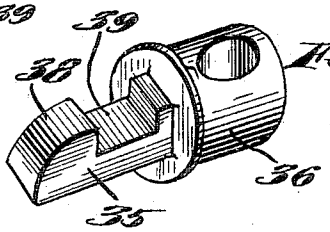

Fig. 12.

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3 SHEETS—SHEET 3.

Fig. 4.

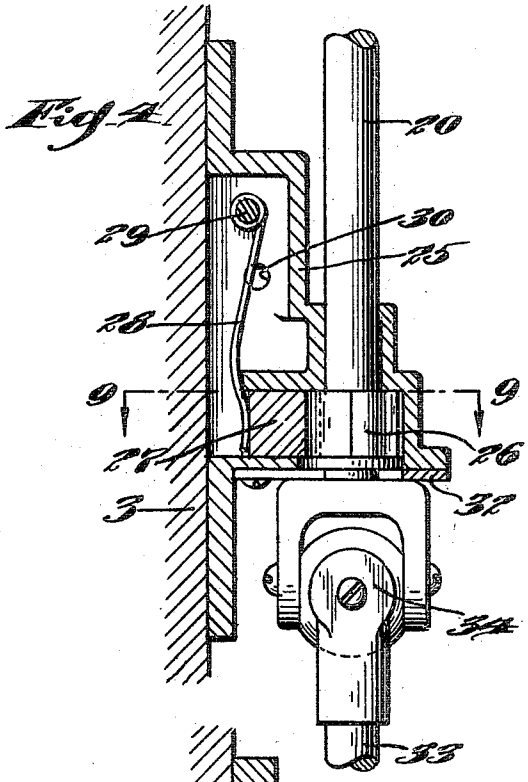


Fig. 5.

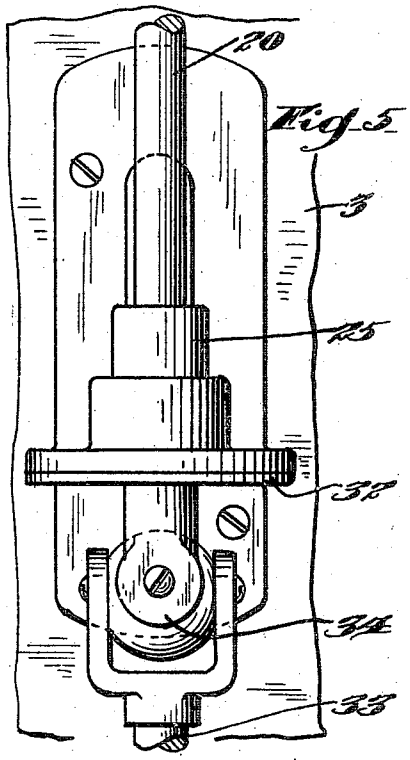


Fig. 6.

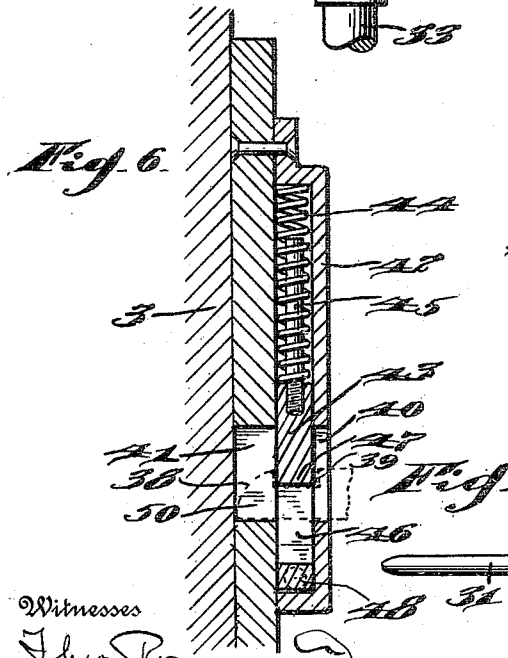
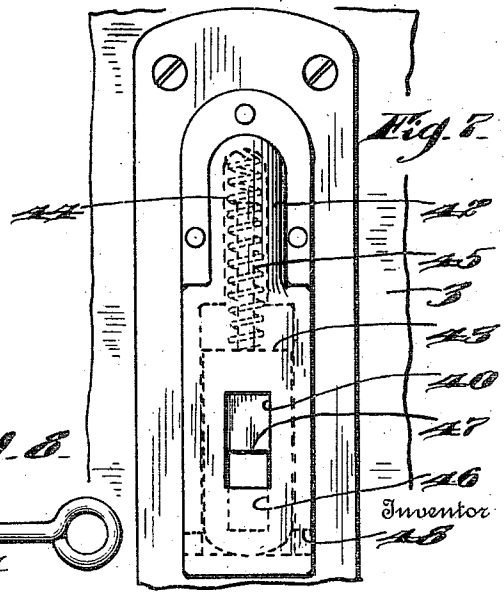


Fig. 8.

Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

LOUIS ROMBAUT, OF PHILADELPHIA, PENNSYLVANIA.

AWNING.

979,566. Specification of Letters Patent. **Patented Dec. 27, 1910.**

Application filed July 16, 1910. Serial No. 572,303.

To all whom it may concern:

Be it known that I, LOUIS ROMBAUT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Awnings, of which the following is a specification.

My invention relates to improvements in awnings, and more particularly to improved means for operating the awning to raise and lower the same, an object of the invention being to provide an improved arrangement of shafts with universal joints connecting them, enabling the operating mechanism to be positioned wherever desired regardless of the location of the awning.

A further object is to provide improved means for turning the awning roller to wind the awning thereon, improved folding framework for supporting the awning in its lowered position, improved ratchet means for holding the awning against accidental downward movement, and improved crank supporting means which is adapted to permit the crank to be removed whenever desired.

A further object is to provide improved awning operating mechanism which can be so locked as to prevent meddling therewith by unauthorized persons.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a broken view in front elevation illustrating my improvements. Fig. 2, is a view in vertical cross section looking to the right of Fig. 1. Fig. 3, is a similar view looking to the left of Fig. 1. Fig. 4, is a view in vertical longitudinal section through the ratchet mechanism. Fig. 5, is a view in elevation at right angles to Fig. 4. Fig. 6, is a view in vertical longitudinal section of the crank supporting and locking mechanism. Fig. 7, is a view in elevation at right angles to Fig. 6. Fig. 8, is a detail view of the pin for releasing the ratchet mechanism shown in Fig. 4, and the locking mechanism shown in Fig. 6. Fig. 9, is a view in section on the line 9—9 of Fig. 4. Fig. 10, is an enlarged view of the lower end of the operating shaft. Fig. 11, is a detail perspective view of the locking block on the operating shaft, and Fig. 12, is a view partly in elevation and partly in longitudinal section illustrating the crank and its supporting bar showing the parts in inverted position.

1, represents the window opening in a wall 2, in which a window frame 3 is secured, and for purposes of illustrating one arrangement of my improvements, the window frame is shown set inward from the outer face of the wall, and this face of the wall around the window opening I shall hereinafter refer to as the inner face 4 of the wall.

5, and 6, represent brackets which provide rotary mounting for a roller 7, to which the upper end of the awning 8 is secured and is adapted to be wound. The lower end of the awning is fixed to a U-frame 9, the inner ends of the latter pivotally connected to rods 10, and 11, respectively. The rods 10 are appreciably longer than the rods 11, and at their upper ends are pivotally secured to brackets 12 secured to frame 3. The inner ends of the rod 11 are pivotally connected to sleeves 13 mounted to slide on guide rods 14 bent at their ends, spaced from, and parallel with the side bars of the window frame, suitable stops 15 being provided on said rods 14 to limit the sliding movement of sleeves 13. Hence, when the awning is drawn upwardly by reason of its being wound on the roller 7, the movement of the U-frame will be compensated for by the rods 10, and 11, sleeves 13 sliding on rods 14 so as to position the U-frame close into the window frame, and extend it outwardly as the awning is permitted to lower. On one end of the roller 7, a beveled gear 16 is fixed and is turned by a beveled pinion 17 fixed to a short vertical shaft 18, the latter mounted to turn in an extension 9 on bracket 5, it being understood that the brackets 5 and 6 are preferably secured to the outer face of wall 2, outside of the window opening.

A vertical shaft 20 is supported in bearings 21 secured to an upright bar of the window frame 3. The upper end of this shaft 20 is connected by a universal joint 22, with a short shaft 23, the latter in turn being connected by a universal joint 24 with the short shaft 18 above referred to. The lower end of this shaft 20 projects into and through my improved ratchet casing 25, and in the casing a ratchet wheel 26 is fixed to or integral with the shaft, and is engaged by a block or pawl 27 preferably of the form

illustrated most clearly in Fig. 9. This block 27 is normally pressed into engagement with ratchet wheel 26 by means of a flat spring 28 secured to a pin 29 in casing 25. This casing 25 is provided at opposite sides with openings 30, across which the spring 28 extends. In these openings 30, a pin 31 as illustrated in Fig. 8 may be positioned, and as the end of this pin 31 is conical or reduced in diameter, when the pin is inserted in the openings 30 it will force back the spring 28, release the tension on the block 27, and allow the shaft 20 with its ratchet wheel 26 to be removed from the casing, or turned in the reverse direction.

To hold the shaft 20 against vertical movement, a slotted plate 32 is secured to the lower portion of the casing, and is positioned below the ratchet wheel as illustrated in Figs. 4, and 5. To the lower end of this shaft 20, a shaft 33 is connected by a universal joint 34, and on this shaft 33 a locking block 35 is located, said locking block having a perforated extension 36 thereon to receive the shaft 35, a collar 37 on the shaft preventing the block 35 from accidentally sliding off the same.

The block 35 is provided with a beveled end 38, and a recess 39 adapted to enter openings 40, and 41, in the casing 42 of my improved locking mechanism. In this casing 42, a vertically movable locking bar 43 is mounted and is normally pressed downward in locking position by means of a coiled spring 44, the latter bearing at one end against the casing, and at its other end against the locking bar, and positioned around a pin on the locking bar to hold the spring in normal operative position.

Locking bar 43 is provided with an opening 46, the upper wall 47 of said opening serving to enter the recess 39 in the block 35 and lock the block against movement, holding the shaft against turning by an unauthorized person. The opposite sides of the lock casing 42 are provided with registering openings 48 for the reception of the pin 31 above described, said openings 48 being so located with relation to the end of the locking bar 43 that when the pin 31 is inserted, locking bar 43 will be moved longitudinally to release the block 35. When it is desired to turn the shaft, the operating mechanism illustrated in detail in Fig. 12 is employed, said block 35 being released from the lock and moved to the position shown in Fig. 3. The turning mechanism comprises a supporting rod 49, which is provided with a locking block 50 at one end corresponding to block 35, and adapted to be secured to the casing 42 by the locking bar 43 in the same manner as is block 35. The outer end of this rod 49 is provided with a tubular journal 51, having an angular opening therethrough to receive angular end 52 of shaft 33. Below the rod 49 and fixed to the tubular journal 51, is a crank arm 53 having a hand-hold 54 thereon to turn the same. On the under side of this crank arm 53, a casing 55 is secured and supports a spring-pressed locking bar 56 normally pressed across the bore of journal 51 by means of a coiled spring 57.

A pin 58 is secured to the bar 56, is bent at right angles as illustrated, and projects through a slot 59 in the casing 55, so that the operator may, with his finger, manipulate this pin 56 to turn back the locking bolt 55 and the end of shaft 33 is provided with an annular groove 60 to receive this locking bolt 56, and lock the shaft in bearing 51, the extreme end of shaft 33 being pointed or beveled as illustrated at 61, so that the shaft may be inserted through the journal 51 and this pointed or beveled end 61 will force back the locking bolt 56, and then permit it to spring into the recess 60 to lock the shaft in the journal.

When the shaft is locked in the journal, crank arm 53 may be turned to turn the several shafts above described, and through the medium of pinion 17 and gear 18, revolve the roller 7 and wind the awning thereon, the ratchet mechanism in casing 25 permitting this rotary movement in one direction and locking the awning at the desired elevation.

When it is desired to lower the awning, it is necessary to insert pin 31 in the opening 30, forcing back spring 28, when a slight turning movement in one direction will push back the locking bolt or pawl 27, and allow the shaft to turn in the reverse direction to lower the awning. When the awning has been manipulated as desired, the turning mechanism is released from the lock illustrated in Figs. 6, and 7, by means of the pin 31, and the locking block 35 locked in its stead so that unauthorized persons cannot turn the shaft to manipulate the awning.

By reason of the construction above explained, it will be noted that the shaft turning mechanism may be located in any position without regard to the thickness of the wall or the position of the awning rod, and may be supported at the most convenient location in accordance with the construction of building on which the awning is used.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. The combination with an awning, of a

universally jointed shaft for raising and lowering the awning, a crank arm support, a lock to which said support may be secured, a crank arm on said support to which the shaft may be connected to turn with the arm, and a locking block on the shaft adapted to engage the lock when the support is disconnected therefrom, substantially as described.

2. The combination with an awning, of a universally jointed shaft for raising and lowering the awning, a crank arm support, a crank arm, a tubular journal mounted to turn in the support, a crank fixed to the journal, a spring pressed locking bolt adapted to engage the shaft and lock it in the tubular journal, a lock to which said support may be secured, and a locking block on the shaft adapted to engage the lock when the support is disconnected therefrom, substantially as described.

3. The combination with an awning, of a universally jointed shaft for raising and lowering the awning, a crank arm support, a crank arm, a tubular journal mounted to turn in the support, a crank fixed to the journal, a spring pressed locking bolt adapted to engage the shaft and lock it in the tubular journal, a lock to which said support may be secured, and a locking block on the shaft adapted to engage the lock when the support is disconnected therefrom, said locking block mounted to move longitudinally on the shaft, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS ROMBAUT.

Witnesses:
R. H. KRENKEL,
CHAS. E. POTTS.