

2 Sheets—Sheet 1.

Patented Feb. 19, 1895.



(No Model.)

2 Sheets—Sheet 2.

E. KEUSER.
WINDOW APPLIANCE.

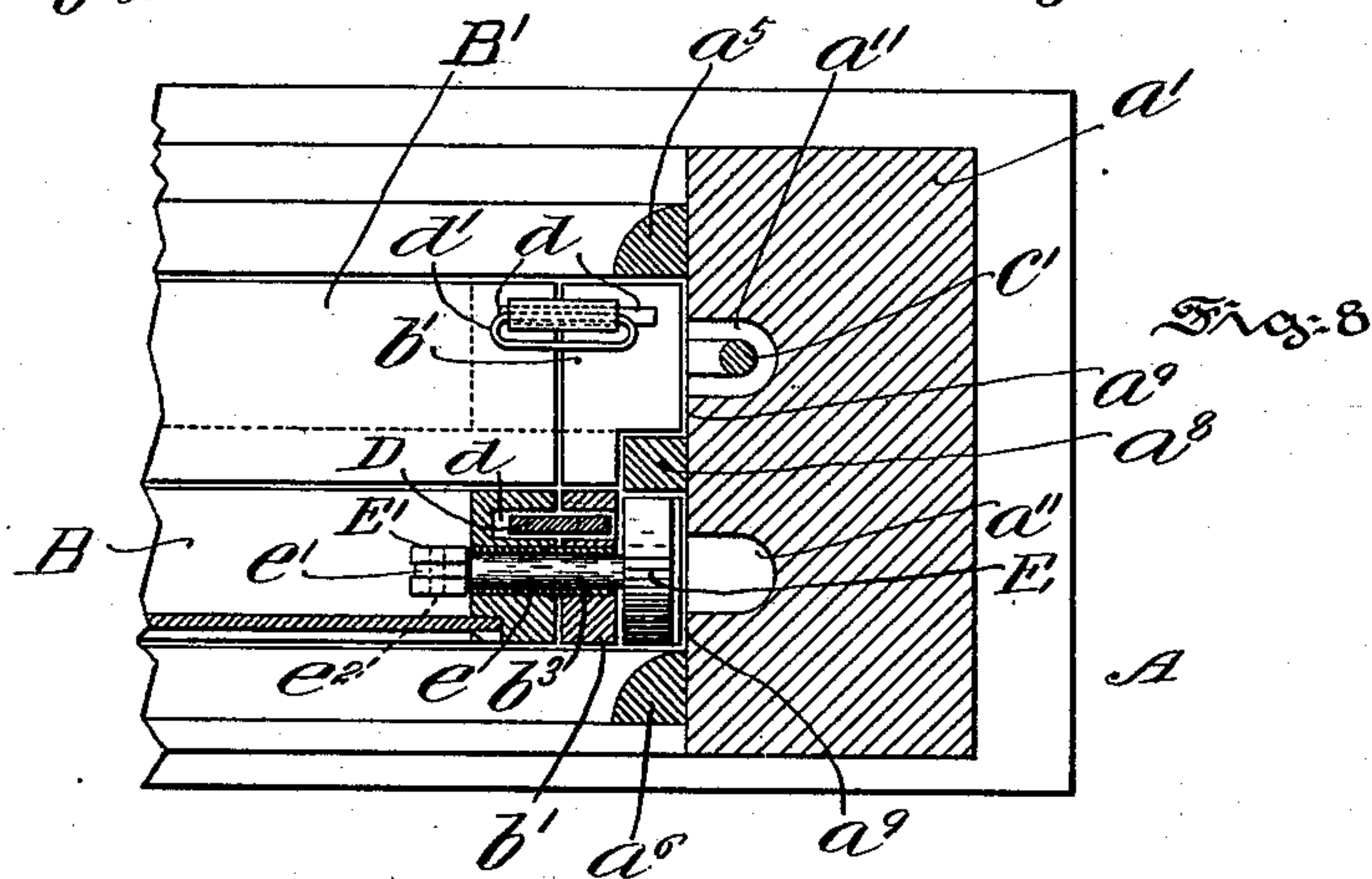
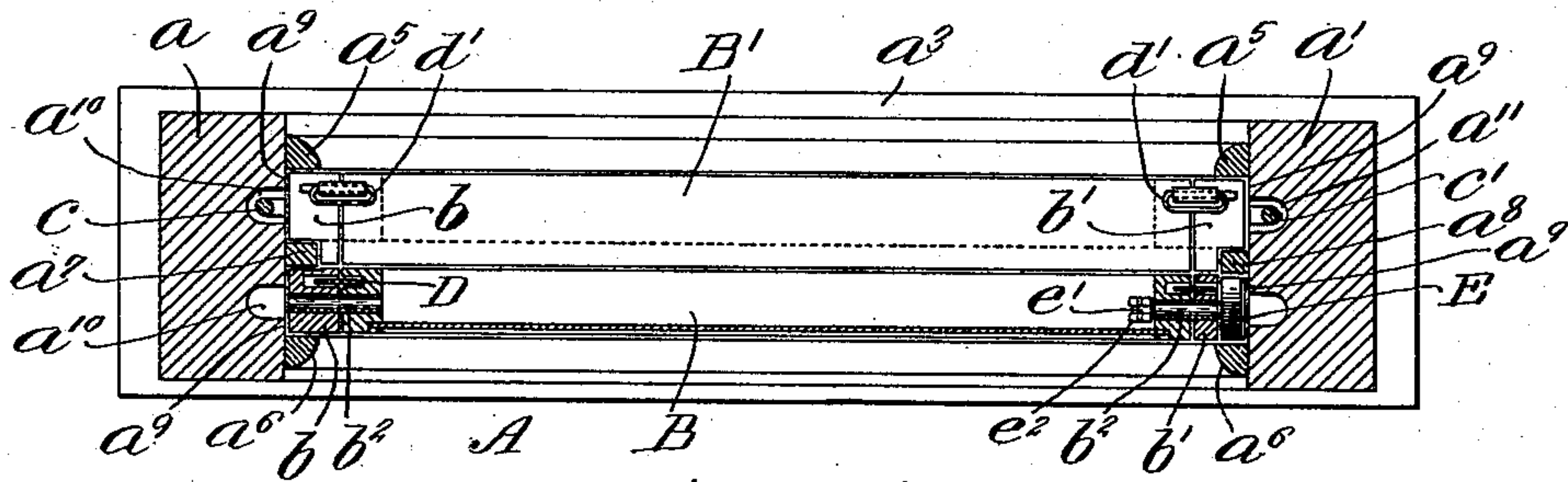
No. 534,607.

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Fig. 6



Fig. 7



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UNITED STATES PATENT OFFICE.

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WINDOW APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 534,607, dated February 19, 1895.

Application filed November 30, 1894. Serial No. 530,352. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL KEUSER, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Window Appliances, of which the following is a specification.

My invention has relation to improvements in window sash frame-work and in sash adapted therefor arranged to be manipulated in pivotal connection with rails to permit of the turning of the sash in said frame-work; and it relates particularly to the construction and arrangement of the window sash frame-work and to the sash provided with means for locking and unlocking the same from traveler rails in pivotal connection therewith and having devices connected with said sash and rails to prevent the raising and lowering of the sash in said framework.

The principal objects of my invention are first, to provide a simple, durable and effective sash in pivotal connection with traveler rails having means for locking the same to required position and the sash employed in a framework without weights or the like for supporting the sash to position and to permit of the manipulation of the same; second, to provide a sash framework without pockets, chambers or the like for the reception and for permitting of the travel of weights connected by means of strips, cords or chains with each sash; third, to provide a solid framework for two sashes in pivotal connection with traveler-rails having cords, chains, or strips passing over pulleys and locking devices movably connected with the sashes and rails for engaging the same with each other and to permit of the turning of the sashes in their pivotal connection with said rails; fourth, to provide two sashes pivotally connected to grooved traveler rails sliding in complementary channels and projections of the sash framework and connected with each other by means of a chain, cord, strip or fillet of metal, and each sash provided with a cam-locking lever for frictionally engaging a disk or cam wheel with the framework and thereby preventing displacement of the sash and its rail or rails until required by the release of said cam-

lever; fifth, to provide a window sash in pivotal connection with traveler rails, each of which is connected with the other by means of a cord, chain, strip or fillet of metal, passing over a pulley set into the sash framework and each sash and its rails engaged by a locking device to prevent turning of the sash; and sixth, to provide a window sash in pivotal connection with grooved rails adapted to travel in complementary channels of framework and each sash and rail locked to required position by means of a cam-lever to prevent raising and lowering of the same and also with locking means movably engaging said rails and side frames of the sash to prevent turning of the same.

My invention consists of the improvements in a window appliance, constructed and arranged in substantially the manner herein-after described and claimed.

The nature and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which—

Figure 1, is a front elevational view of the window appliance of my invention, showing the sash in normal position and also the locking device of the upper sash manipulated by a cam-lever in operative and in the lower sash in inoperative position. Fig. 2, is a view partly in vertical section through a window appliance of my invention, and also an end elevation of the lower sash, showing the detail construction and arrangement of the parts of the appliance. Fig. 3, is a view partly in broken section and partly in side elevation of the locking device, connected with the sash-frame and a traveler rail and operated by a cam-lever for locking the sash to required position in one of the channeled stiles or ways of the framework, for preventing up and down movement of a sash. Fig. 4, is an end view of the disk or wheel operated by a cam-lever and adapted to engage with the side walls of the channeled ways or stiles of the framework to produce a friction sufficient to prevent up and down movement of the sash. Fig. 5, is a perspective view of the slotted locking strip device adapted to be brought into engagement with the sash-frame and a traveler-rail for

preventing turning of the same, while in a locked position. Fig. 6, is a horizontal section enlarged of the frame and upper sash taken on the line $x-x$, of Fig. 1, just above the disk or wheel. Fig. 7, is a similar view taken on the line $y-y$, of Fig. 1, just above the pulleys; and Fig. 8, is an enlarged detail view of the right hand side of Fig. 7.

Referring to the drawings with reference to Figs. 1 and 2, A is the sash framework having solid vertical sides a and a' , and top and bottom cross strips a^2 and a^3 , engaging the vertical sides and supporting them in required position and the whole constituting the sash framework.

a^5 and a^6 , are bead moldings located about the inner edge of the frame and flush with the front and back of said framework, as clearly illustrated in Fig. 2, of the drawings.

a^7 and a^8 , are parting beads on both sides of the framework separated by and resting on the projections a^9 , of the window jamb or frame-work.

a^{10} and a^{11} , are channels or grooves on both sides located between the bead moldings a^5 , a^6 , a^7 and a^8 , as clearly illustrated in Fig. 2.

The upper portion of the vertical sides a and a' , of the framework A, are grooved out for the reception of pulleys a^{12} and a^{13} , journaled to the parting beads a^7 and a^8 , and to the frame work A as clearly shown in Fig. 2. These pulleys a^{12} and a^{13} , are arranged so as to occupy a position in connection with the said parting beads a^7 and a^8 , and framework A, parallel to the sashes B and B', as well as the traveler rails b and b' , which are in pivotal connection therewith. These rails b and b' , are complementally grooved and tongued to engage the step-like projections a^9 , on each side formed with or secured to the vertical sides a and a' , of the framework A, as clearly illustrated in Figs. 6, 7, and 8. The sashes B and B', containing lights of glass are pivoted at b^2 and b^3 , to said rails. These rails are adapted to travel in the grooved stiles or ways provided on the inner side of the vertical strips a and a' , by means of strips, fillets, cords or chains c and c' suitably secured to or into the traveler rails b and b' , and which strips, cords or chains pass over the pulleys a^{12} and a^{13} , and are connected with the rails of the other sash B'. In a word, the sash B, by means of the fillets, cords or chains are in traveling engagement or connection with the rails of the sash B'.

The bottom strip of the upper sash and the top strip of the lower sash are reversely beveled or made tapering, as illustrated in Fig. 2, so as to constitute a tight joint when each is brought into contact with the other.

d , are oblong slits formed in one or both of the vertical side frames b^4 and b^5 , of the window sashes B and B', and engaging therein is a metal strip D, as clearly illustrated in Figs. 6, 7 and 8 with a handle or loop d' , and having in the body thereof angular oblong slots d^2 and d^3 , engaged by cross pins d^4 and

d^5 , secured into and through the vertical side frames d^4 and d^5 , of the sashes B and B', and near one edge thereof at the top and bottom are provided notches or slits d^6 and d^7 , for engaging cross pins d^8 and d^9 , provided in the traveler rails b and b' , as clearly illustrated in Fig. 1, whereby through the manipulation of the said locking device D, of each window sash operated from the bottom of the upper sash and from the top of the lower sash, the said frames can be readily locked to and unlocked from the respective traveler rails b and b' , to permit in the one instance of a turning of the sash around and in the other, of the sash being firmly held in a vertical position to said rails.

E, is a disk or cam wheel either movable or rigidly secured into a pocket or recess b^6 , formed in the end wall of one or both of the rails b and b' . This disk or wheel E, is of greater circumference than the width of the traveler rails b and b' , and so extends into and travels as well as engages and firmly binds against the said outer bead molding and inner parting bead of the said framework A. Connected with the disk or wheel E, is a shank or stem e , as clearly illustrated in Fig. 3, which extends through said rail b or b' , and the sash B or B', and having the outer extremity thereof formed with a bearing piece or strip e' , which is engaged by a forked cam lever E', pivoted thereto at e^2 , and adapted to be so manipulated as that the stem of said lever E', is brought into engagement with the inner surface of the sash frame B or B', and thereby to press said disk or wheel E, when the cam-lever E', has assumed the position illustrated in Fig. 3, firmly against the inner parting bead and outer bead-molding of the framework in such a manner as to prevent a raising and lowering of the sash in the framework A, thereof.

It may be here remarked that in the construction and arrangement of a window appliance embodying the features of my invention and as hereinbefore described, the framework is not provided with boxes in the vertical strips a and a' , as has heretofore been usual, for the reception of weights connected by means of cords or chains with the sash and coming into play in the up and down movements of the sash of the window, for in the present instance the respective sashes of the framework A, are connected with each other by means of a strip, cord or chain passing over pulleys journaled in the upper part of said framework, as hereinbefore described, and each of the sash being pivoted to traveler rails and in such manner as that upon the release of the locking device D, from each of the sashes and their complemental rails with which they are in pivotal connection, the sash may be turned inside out by a rotary motion of the same, and when the cam-lever E', has been caused to assume, for example, the position illustrated in the lower left hand portion of Fig. 1, a free upward and

downward movement of the respective sashes will be permitted, as will be readily understood by reference to Figs. 1 and 2, of the drawings taken in connection with the foregoing description of my invention.

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

1. A window appliance, comprising a solid framework provided with stiles or ways, pulleys journaled to parting beads and to said framework, traveler rails mounted in said stiles or ways and in pivotal connection with sash, said traveler rails having slits formed therein and provided with pins, the side frames of the sash provided with slits and pins, a locking device movably engaging a side frame of said sash and having slots and notches engaging the pins spanning the slits of said rails and frame, and means connected with one of said rails and sash-frame and operated by a cam-lever to prevent up and down movement of said sash, substantially as and for the purposes set forth.

2. A window appliance, comprising a framework provided with grooved or channeled stiles or ways having pulleys journaled therein, sash pivoted to traveler rails having cords, chains or strips passing over said pulleys and connecting said rails with each other, said rails and sash frames provided with slits and pins, a locking device movably engaging said sash-frames and having notches engag-

ing cross-pins in slits of said rails, a disk or wheel connected with a rail and having a shank in pivotal connection with a cam-lever for locking each sash to a position so as to prevent raising or lowering of the same, substantially as and for the purposes set forth.

3. A window appliance, comprising a solid framework with end and meeting beads and channels forming stiles or ways, pulleys journaled thereto and to said frame-work, traveler rails connected with each other by means of narrow strips, cords or chains passing around said pulleys, said rails in pivotal connection with said sash and movable in opposite directions by said connection of one with the other, slits and pins formed in said rails and in said sash-frames, a notched and slotted locking device adapted to engage said sash and rails so as to prevent turning of the sash, a cam-lever operating a locking device extending through said sash-frames and rails and adapted to engage the walls of said stiles or ways so as to prevent in the operative position of said cam-lever the raising and lowering of said sash, substantially as set forth.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

EMANUEL KEUSER.

Witnesses:

THOMAS M. SMITH,
LOUIS WINTERBERGER.