No. 729,665. PATENTED JUNE 2, 1903.

J. G. ROBBE.

REVERSIBLE WINDOW SASH.

APPLICATION FILED OCT. 1, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

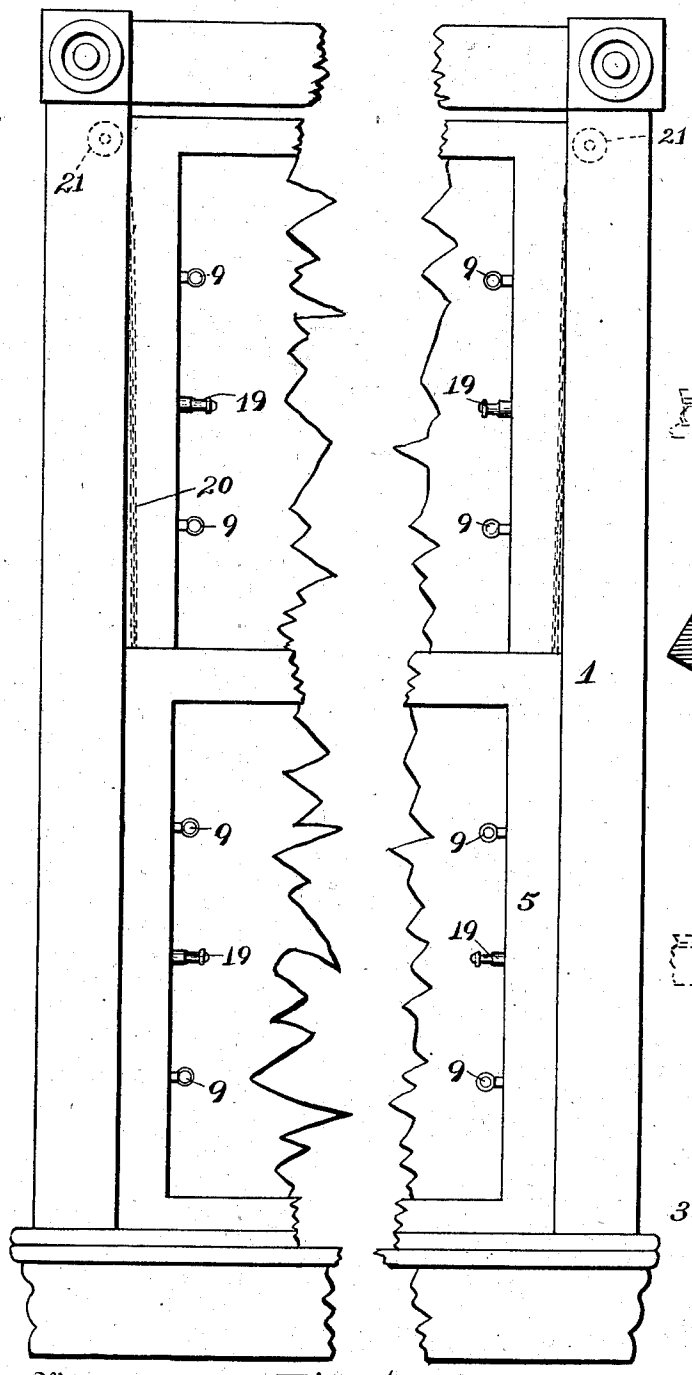


Fig. 1.

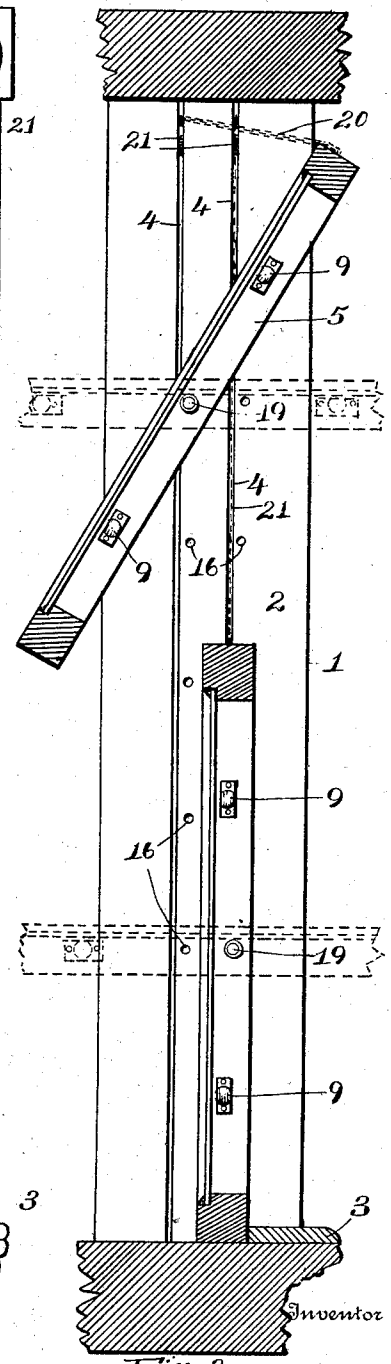


Fig. 2.

Witnesses
Berlin G. Brann.
Milton Lenoir.

Inventor
Jefferson G. Robbe
By Percy C. Bowen
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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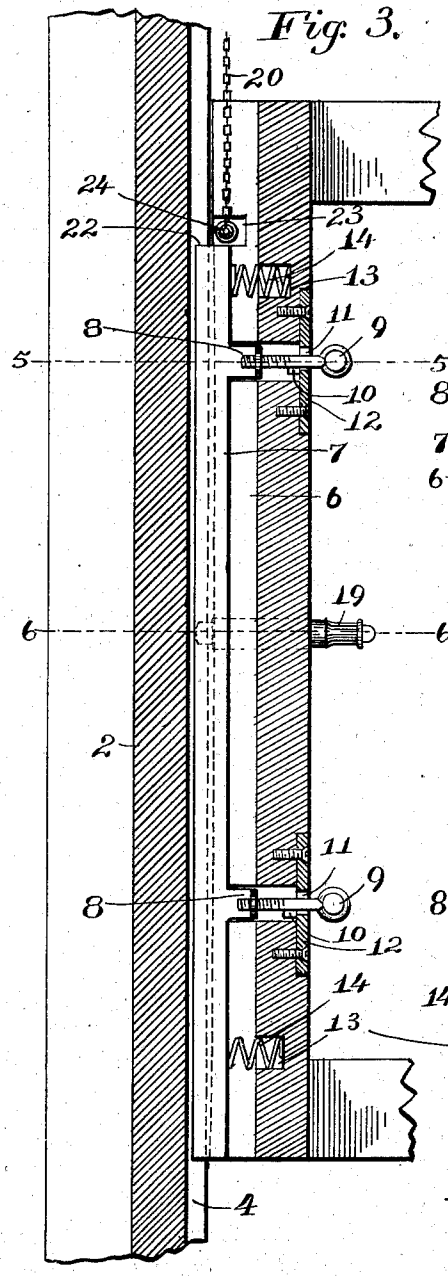
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REVERSIBLE WINDOW SASH.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.



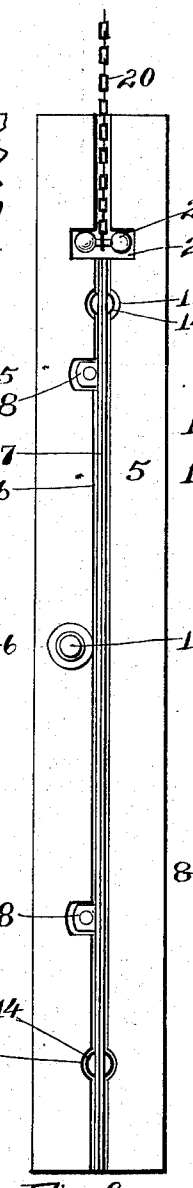
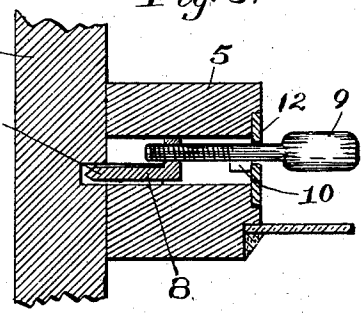


Fig. 4.

Fig. 5.



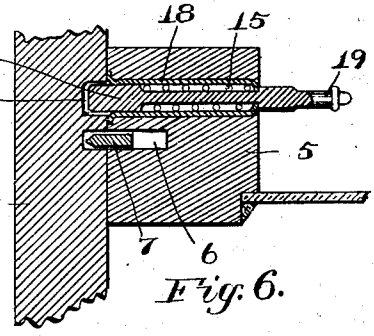


Fig. 6.

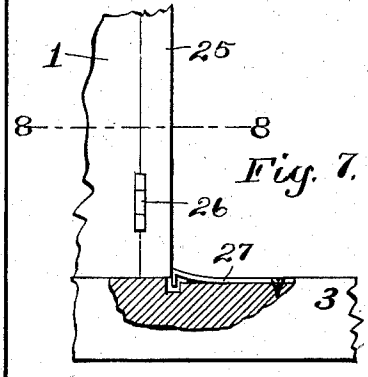


Fig. 7.

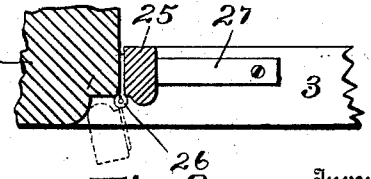


Fig. 8.

Inventor

Jefferson G. Robbe

Witnesses

Berlin V. Brown

Milton Lenoir

By

Percy C. Bowen

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 729,665. Patented June 2, 1903.

UNITED STATES PATENT OFFICE.

JEFFERSON GRANT ROBBE, OF CANON CITY, COLORADO.

REVERSIBLE WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 729,665, dated June 2, 1903.

Application filed October 1, 1902. Serial No. 125,567. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON GRANT ROBBE, a citizen of the United States, residing at Canon City, in the county of Fremont and State of Colorado, have invented certain new and useful Improvements in Reversible Window-Sashes; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in window frames and sashes, the objects being to construct a window in which the sash can be raised or lowered, can be swung over or reversed, and may be easily removed from the window-frame. These objects are attained by means of the construction and arrangement of parts hereinafter fully described and claimed.

Reference is had throughout to the accompanying drawings, in which the same parts are designated by the same numerals of reference throughout the several views, and in which—

Figure 1 represents an elevation looking at the inside of a window constructed in accordance with my invention. Fig. 2 represents a central vertical section of the same, showing one of the sashes partly swung around and showing in dotted lines both sashes swung to a horizontal position. Fig. 3 represents a vertical section through one of the pulley-stiles and the adjacent side of the sash, showing the grooves in the pulley-stile and sash and the guide-strip therein. Fig. 4 represents an elevation looking at the edge of the sash and of the guide-strip. Fig. 5 represents a horizontal section taken on the line 5 5 of Fig. 3. Fig. 6 is a similar view taken on the line 6 6 of Fig. 3. Fig. 7 represents an elevation, partly in section, of one corner of a window-frame with an inside bead hinged thereto. Fig. 8 represents a horizontal section of the same, taken on the line 8 8 of Fig. 7.

1 designates a window-frame having the pulley-stiles 2 and an inside sill 3. In each of the pulley-stiles are cut two or more grooves 4, which extend from the top to the bottom thereof and in which are adapted to slide guiding-strips in the edges of the sash, thus holding the sash in position and doing away with the usual beads.

Each sash 5 is provided with a groove 6, in which is housed a guide-strip 7 of such size and shape as to fit snugly within the said groove. This guide-strip is provided with lugs 8, which extend into recesses in the sash and have handles 9 connected therewith. The handles 9 are arranged to turn in the lugs 8, and these handles are provided with lugs 10, adapted to pass through slots 11 in plates 12, set into the sides of the sash, when the handles are turned to cause the lugs 10 to register with the slots 11. Recesses 13 are also formed in the sash and contain coiled springs 14, which press against the inner edges of the said guide-strips 7 and tend to hold the guide-strips outward, with their outer edges in the grooves 4 in the pulley-stiles. Thus the sash is free to slide up and down in the window-frame, being held therein by the guide-strips 7.

By taking hold of the handles 9 the strips 7 may be drawn within the slots in the sash and the handles turned until the lugs are out of line with the slots, which will hold the guide-strips 7 out of the grooves in the stile and permit the sash to be removed or reversed.

Each pulley-stile is provided with a series of holes 16 on one side of each of the grooves 4, and each sash is provided with two spring-actuated trunnions 17, set in barrels 18 in the side of the sash and provided with handles 19, by which they may be drawn within the sash.

The tendency of the springs 15 in the barrels 18 is to project the trunnions from the edge of the sash and cause them to enter the holes 16 in the pulley-stiles and retain the sash in any desired position, and this they would do, even if the window was without weights and cords or chains; but my invention contemplates using the usual weights secured to the window-sash by chains 20. In this instance the pulleys 21 are placed within the pulley-stiles, as shown in dotted lines in Fig. 1, and they extend just into the grooves 4. The chains 20, passing over the pulleys 21, extend into the grooves 6 in the sash, the up-

per part of the guide-strips 7 being shortened to make room for them, as shown at 22.

In the edges of the sash, just above the guide-strips 7, are formed recesses 23, communicating with the grooves 6, and to the ends of the chains 20 are secured cross-heads 24, having enlarged ends, which cross-heads are housed in the recesses 23, as shown in Fig. 4, thus securing the chains to the sash when the sash is in the frame. When the sash is swung out of the frame, the said cross-heads 24 may be removed from the recesses 23, thus leaving the sash free from the chains. When the chains are detached from the sash, the cross-heads 24 will prevent them from running over the pulleys into the frame, and the said chains may be easily attached to the sash again by replacing the cross-heads 24 in the recesses 23, as will be readily understood.

Although my invention contemplates dispensing with the usual beads in the window-frame, I may, if desirable, use a bead 25, hinged to the pulley-stiles, as at 26, (see Figs. 7 and 8,) and in case of such beads being used a spring 27 may be embedded in the window-sill 3 and arranged to hold the said beads in their normal position against the pulley-stiles.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a reversible window the combination with pulley-stiles having grooves and holes therein; of a sash having grooves, guide-strips in the said grooves in the sash means for projecting the said strips into the grooves in the pulley-stiles, handles connected with said strips and extending through the sides of the sash, and means for locking said handles to hold said strips back in the grooves in the sash, and trunnions on the sash engaging the holes in the pulley-stiles.

2. In a reversible window the combination with pulley-stiles having grooves therein; of a sash having grooves in its edges, guiding-strips held in the said grooves in the sash, springs for projecting the said strips into the grooves in the pulley-stiles, handles secured to the said strips and passing through plates having slots and lugs on said handles adapted to pass through said slots and lock said handles.

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

JEFFERSON GRANT ROBBE.

Witnesses:

CHAPMAN W. FOWLER,

BERLU G. BRANN.