(No Model.)

T. H. SCHMITZ.

WINDOW STRUCTURE.

No. 602,245. Patented Apr. 12, 1898.

Fig. 1.

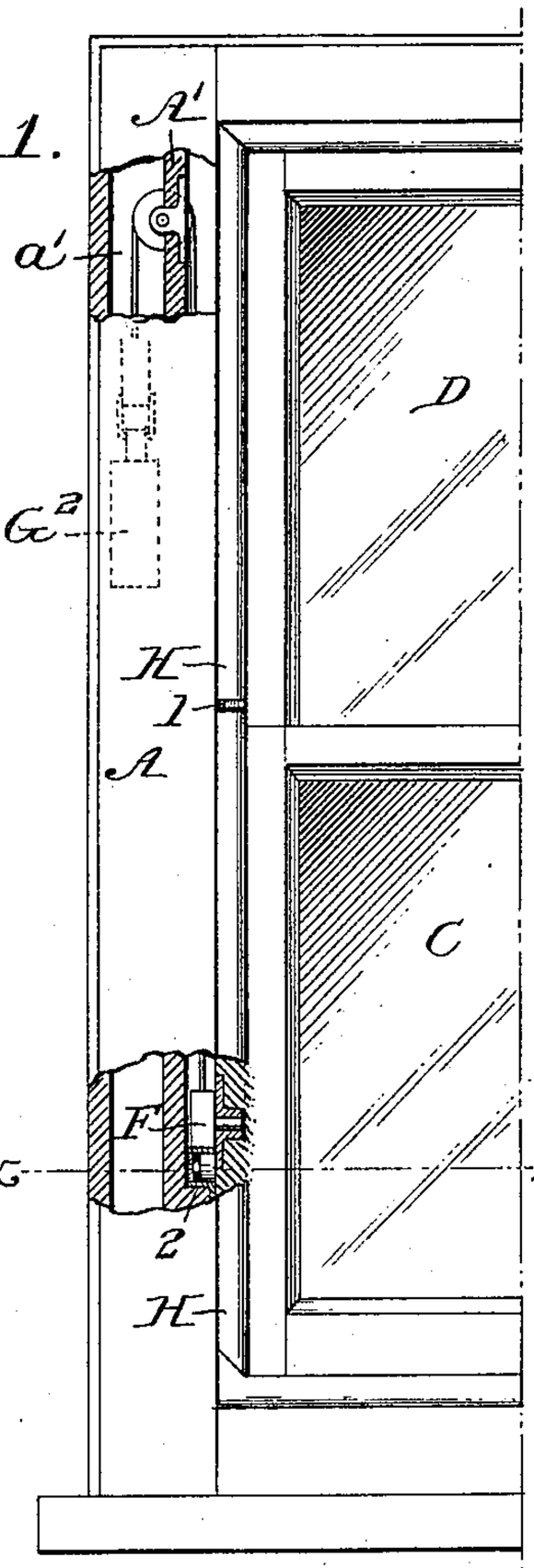

Fig. 2.

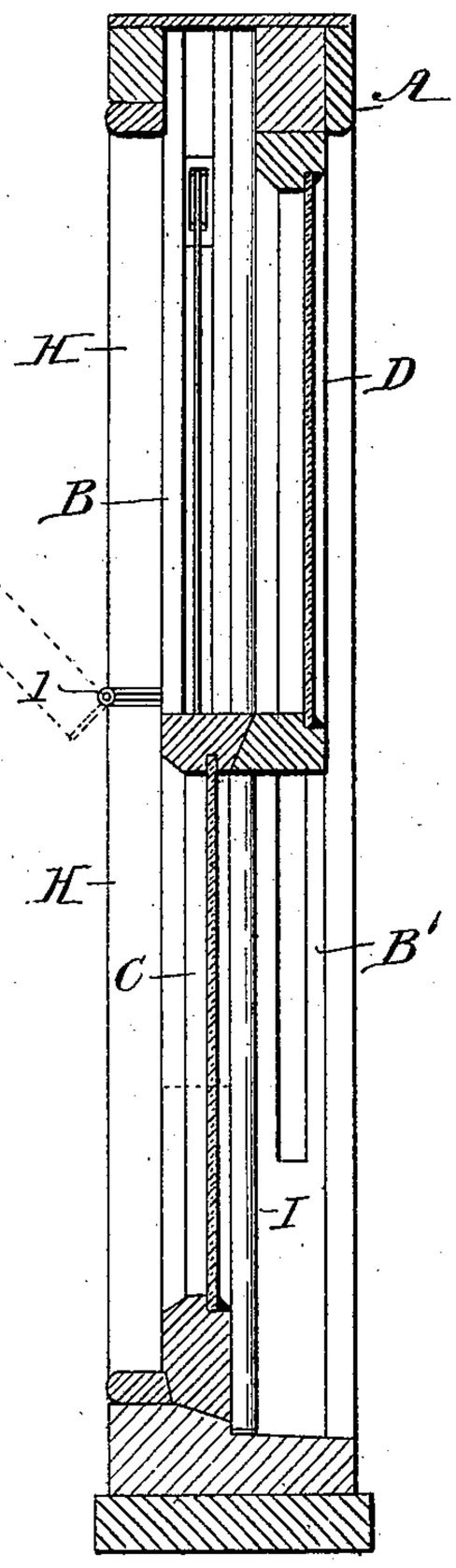

Fig. 3.

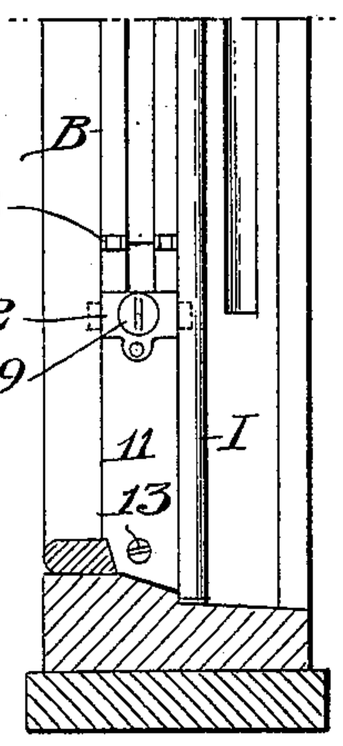

Fig. 4.

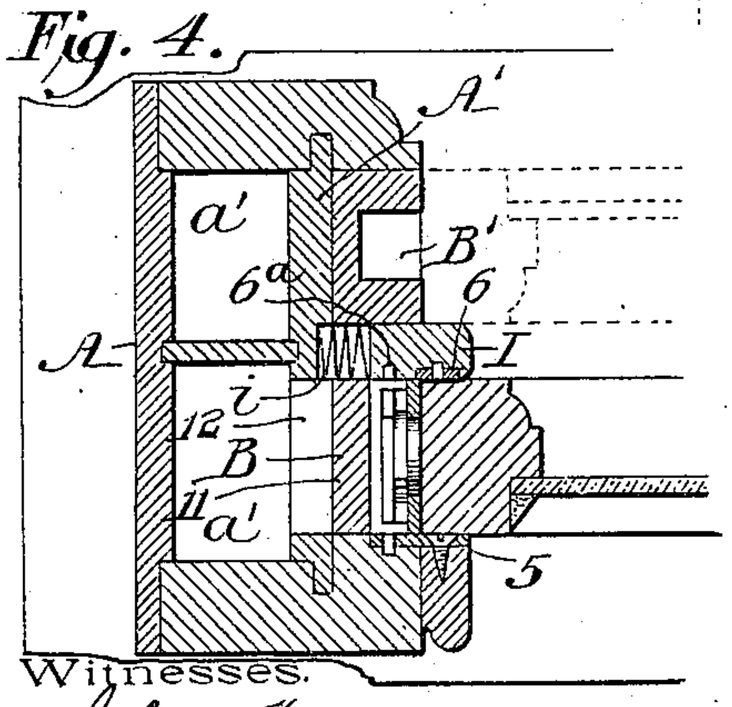

Fig. 5.

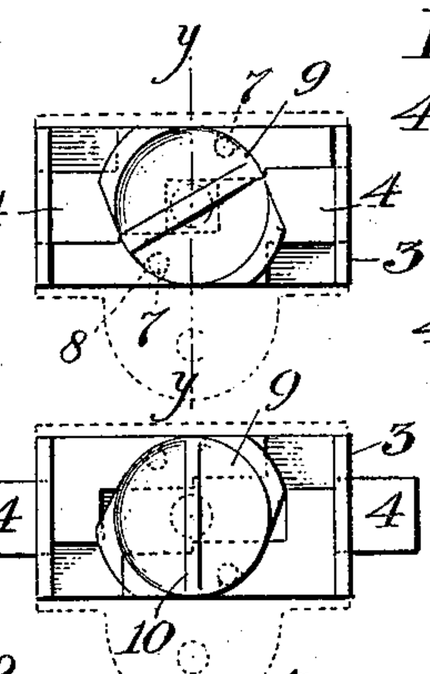

Fig. 7.

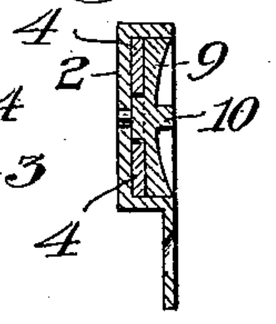

Fig. 6.

Witnesses.

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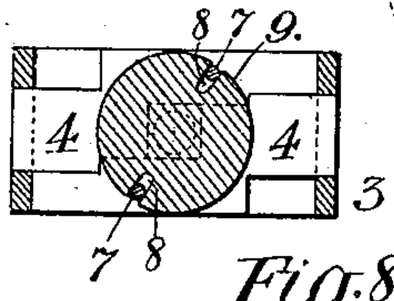
Fig. 8.



Inventor.

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Attorney.

UNITED STATES PATENT OFFICE.

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WINDOW STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 602,245, dated April 12, 1898.

Application filed August 21, 1897. Serial No. 648,991. (No model.)

To all whom it may concern:

Be it known that I, THEODORE H. SCHMITZ, a citizen of the United States, residing in the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Window Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The object of this invention is to simplify and improve in certain particulars the window structure set out in Letters Patent of the United States No. 583,004, dated May 18, 1897, to which reference may be had, my improvements therein comprehending, first, a construction of the sectional guide-beads whereby the lower portions thereof may be readily swung and maintained away from the window-frame to permit the revolving of the pivoted window sash or sashes; secondly, a simple and efficient locking device whereby the lower portions of said beads and the corresponding portions of the normally-projecting parting-strips may be simultaneously locked in position to afford a vertical guideway for the window-sash and whereby the parting-strips, when the inner bead-sections are swung from the frame, may be locked in retracted position to permit the revolving of the sash or sashes; thirdly, a novel construction of the supplemental guides for the sash-hangers whereby access may be readily had to the counterweight-boxes and the sash-weights therein, and, finally, various details of construction which will be hereinafter particularly described and claimed.

In the drawings, Figure 1 is a sectional elevation of a portion of a window embodying my invention. Fig. 2 is a vertical section thereof. Fig. 3 is a view of the lower part of Fig. 2 with the sash removed. Fig. 4 is a transverse vertical section as on the line $x\,x$ of Fig. 1. Fig. 5 is a plan of lock for the bead and parting-strip, the bolts being shown as retracted and the casing being indicated by dotted lines. Fig. 6 is a similar view showing the bolts projected. Fig. 7 is a section as on the line $y\,y$ of Fig. 5. Fig. 8 is a sectional plan of the lock, showing the pin-and-slot connections between the rotatable head and the bolts.

A represents the window-frame structure, provided with the usual sash-weight boxes a', the pulley-stiles A', and the parallel supplemental guide-strips B B'. I is the adjustable parting-strip intermediate said guide-strips, and i is one of the springs interposed between the stile and parting-strip, so as to maintain the strip normally projected beyond the guide-strips, yet permit said parting-strip to be pushed or retracted inward.

C D are the window-sashes, the same being pivoted in and between the sliding sash-hangers F, which are fitted to and guided in the supplemental guide-strips and are provided with the usual sash-cord and counterweight G^2, whereby the sashes, or either of them, may be raised and lowered in the usual manner.

H is one of the inside sectional beads of the window-frame, the lower portion of which bead is movable inward to permit either or both of the sashes to be revolved when the parting-strips have been retracted against the compression of their springs.

The parts above referred to are, excepting as hereinafter explained, identical in construction and operation with the like parts of the patented structure above mentioned. In the said patented structure the lower or movable sections of the inside beads are provided each with a pin, which fits into a socketed block at the bottom of the window-frame, while the upper end of the section engages a suitable guide device on the frame. Each section is also provided with an appropriate locking device whereby it may be secured in place. Such construction, aside from the expense of the many fittings, necessitates the removal of the sections bodily from the frame, In the present construction the upper ends of the lower sections are connected with the adjoining ends of the upper sections by means of spring-hinges 1, the tendency of which is to swing the sections normally outward away from the frame. Hence when the sections are unlocked they are swung automatically outward and remain thus projected, as indicated by the dotted lines in Fig. 2.

If desired, ordinary hinges or pivots may

be used in lieu of the spring-hinges shown, in which case a suitable latch may be provided to retain the sections projected.

In the patented structure there is also employed, in addition to the lock for the inside bead, a separate and independent lock for securing the parting-strip in its retracted position, whereas in the present construction there is employed a lock which performs the double function of locking both the parting-strip and the bead-section. This lock comprises a casing 2, which is mortised in the supplemental guide-strip and incases a plate or frame 3, carrying two transverse bolts 4 4, which may be projected into or retracted from keepers 5 6 on the opposing sides of the bead and strip, respectively. The bolts are provided with lateral studs 7, which enter diametrically opposite recesses 8 in the periphery of a partially-rotatable head 9 in the frame and casing, whereby when the head is turned to the right or left the bolts will be projected or retracted, as desired. The forward end of the head projects through the outer face of the casing and is formed with a thumb-piece 10 or the like, whereby the head may be conveniently manipulated.

The keeper 5 on the bead projects laterally thereof, so as to enter a recess in the side of the window-frame and thereby retain the bead in place in opposition to the spring-hinges, the latter being constructed to permit the lower end of the bead to be swung laterally from the frame in a manner to disengage the keeper from the recess and permit the bead to be swung outward. When the keeper is in the recess, the adjacent bolt 4 may be projected into the keeper 5 to lock the bead fixedly in place.

The parting-strip is preferably provided with a suitably-located socket 6^a, with which the other bolt at the same time registers, so as to lock the parting-strip in its normally-projected position. The keeper 6 on this strip is so disposed that when the strip is pushed inward against the action of the springs the adjacent bolt may be shot into the keeper, so as to lock the strip in the retracted position.

In the patented structure there was no provision for access to the interior of the sash-weight boxes and the weights therein other than by taking out the entire side of the window-frame. In the present construction I make each of the supplemental guide-strips B with a hinged lower portion 11, which may be swung outward, and I cut in the stile, directly in rear of the hinged portion, a slot or opening 12. Said hinged portion is held in closed position by a screw, or the like, which may be readily removed to permit the portion to be swung upward on its hinge 13 to secure access to the interior of the weight-box.

I claim—

1. In a window structure, the combination, with the main frame, the sash-hangers, the guides therefor, and the sashes journaled or pivoted to said hangers, of an adjustable parting-strip, an inside bead, a spring-hinge therefor, and a lock arranged between the bead and the parting-strip and adapted to lock said bead in closed position, substantially as described.

2. In a window structure, the combination, with the main frame, the sash-hangers, the guides therefor, and the sashes journaled or pivoted to said hangers, of an adjustable parting-strip, an inside bead, a spring-hinge therefor, a laterally-projecting keeper on said bead adapted to enter a recess in the window-frame, a lock arranged between the bead and the parting-strip and adapted to engage said keeper and thereby lock the bead in closed position, substantially as described.

3. In a window structure, the combination, with the main frame, the sash-hangers, the guides therefor, and the sashes journaled or pivoted to said hangers, of the movable bead, the adjustable parting-strip, and a lock arranged between said strip and bead and adapted to lock them in positions of adjustment, substantially as described.

4. In a window structure, the combination, with the main frame, the sash-hangers, the guides therefor, and the sashes journaled or pivoted to said hangers, of the movable bead, the adjustable parting-strip, and a lock arranged between said strip and bead and provided with oppositely-movable bolts and with means for simultaneously operating them so as to engage and lock the said strip and bead in positions of adjustment, substantially as described.

5. The herein-described lock for windows, said lock comprising a frame or support, two oppositely-movable transverse bolts therein, a partially-rotatable head, and means whereby the head is loosely connected at diametrically opposite points with the respective bolts.

6. The herein-described lock for windows, said lock comprising a casing, a plate incased thereby, two transverse bolts in said plate, lateral studs on said bolts, a partially-rotatable head in said plate and casing provided with diametrically opposite recesses engaged by said studs respectively, and means for turning said head.

7. In a window structure, the combination of the main frame provided with the weight-box and the slotted or open pulley-stile, the grooved guide-strip having a hinged portion adjacent to the slot or opening in said stile, the sash-hanger, the sash journaled or pivoted thereon, the adjustable parting-strip, and the movable inside bead, substantially as described.

In testimony whereof I have hereunto affixed my signature this 16th day of August, A. D. 1897.

THEODORE H. SCHMITZ.

Witnesses:
JOHN R. NOLAN,
H. T. FENTON.