F. RAUSCH & J. DAVIS.

SASH PIVOT.

APPLICATION FILED JUNE 8, 1910.

988,286. Patented Mar. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1

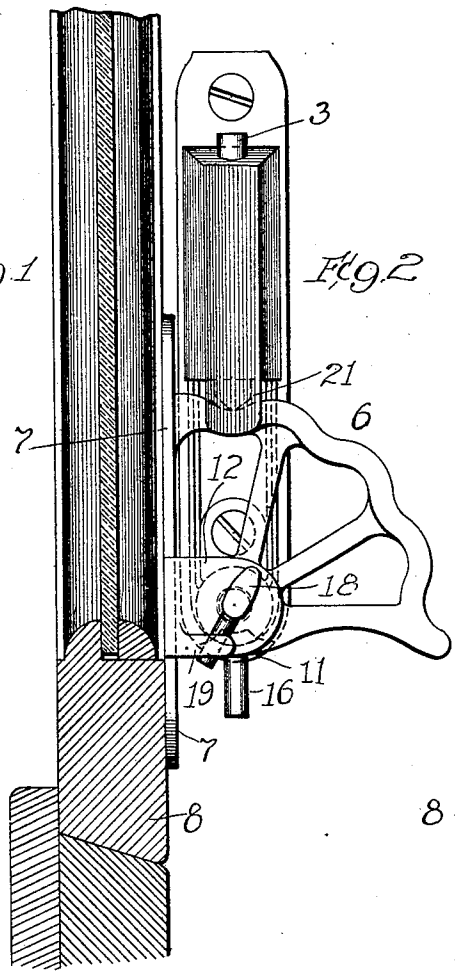

Fig. 2

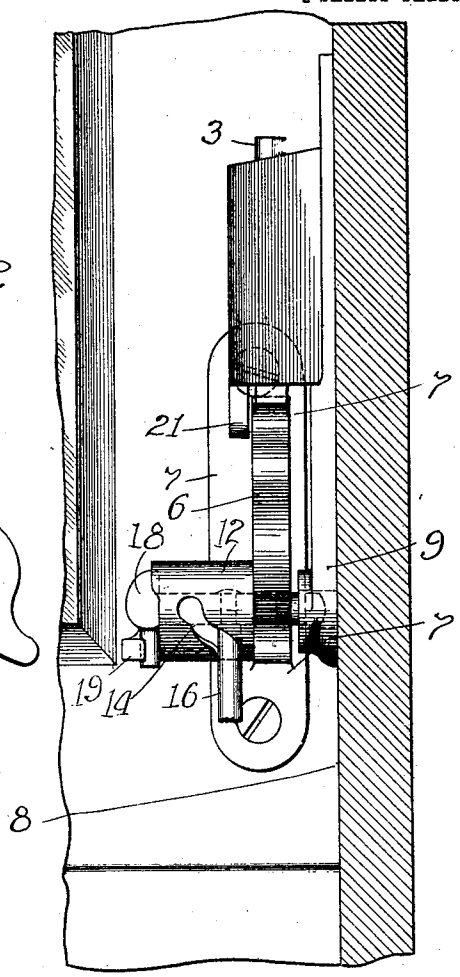

Fig. 7

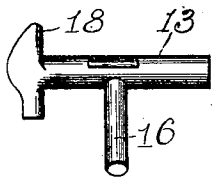

Fig. 8

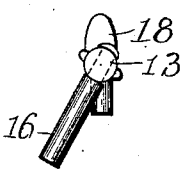

Fig. 9

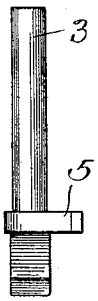

Fig. 10

Fig. 11

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2 SHEETS—SHEET 2.

Fig. 3

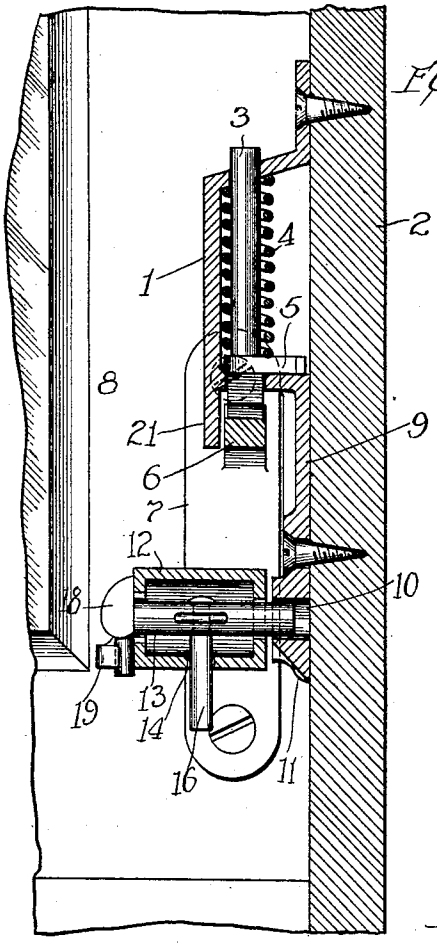


Fig. 4

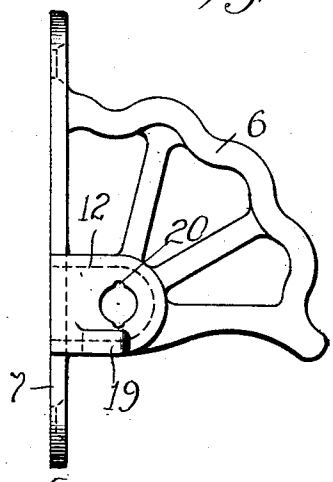


Fig. 5

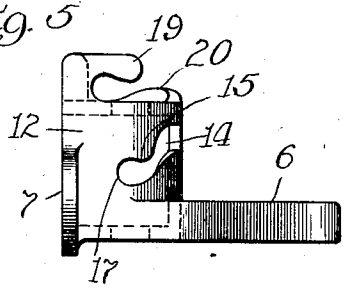
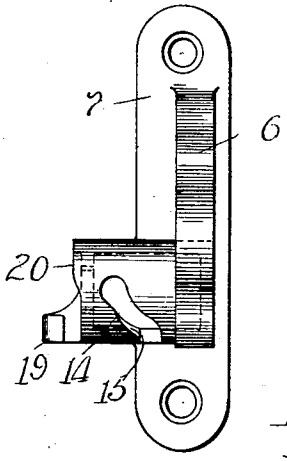


Fig. 6



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UNITED STATES PATENT OFFICE.

FRED RAUSCH AND JOSEPH DAVIS, OF CHICAGO, ILLINOIS, ASSIGNORS TO GENERAL RAILWAY SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SASH-PIVOT.

988,286. Specification of Letters Patent. Patented Mar. 28, 1911.

Application filed June 8, 1910. Serial No. 565,767.

To all whom it may concern:

Be it known that we, FRED RAUSCH and JOSEPH DAVIS, citizens of the United States, and residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sash-Pivots, of which the following is a complete specification.

The main objects of this invention are to provide a sash pivot for a deck sash which will permit the sash to be quickly inserted in or removed from the window frame; to provide a sash pivot in which the pivot pin is adapted to be moved in or out of operative position by a partial rotation of the pin; and to provide a sash pivot for deck sash which will afford a safe and positive support for the sash and entirely eliminate the danger of the sash falling from its bearings.

A specific construction embodying the invention is illustrated in the accompanying drawings, in which:

Figure 1 is a fragmentary section of a sash provided with a pivot embodied in this invention, and shown in side elevation. Fig. 2 is a fragmentary view of the sash and showing the pivot in front elevation. Fig. 3 is a vertical section of the sash pivot with parts in elevation. Fig. 4 is a side elevation of the ratchet member and the barrel for the pivot pin. Fig. 5 is a bottom plan view of the ratchet member and the barrel for the pivot pin. Fig. 6 is a front elevation of the ratchet member and the barrel for the pivot pin. Fig. 7 is a side elevation of the pivot pin. Fig. 8 is an end elevation of the pivot pin. Figs. 9 and 10 are side elevations of the ratchet bolt. Fig. 11 is an end elevation of the ratchet bolt.

In the construction shown, a housing 1 is secured in a vertical position to the window post 2 at the side of the window opening. A vertically movable ratchet bolt 3 is contained in said housing and projects through the bottom thereof. A coiled spring 4 is carried on the bolt 3 and bears at one end against the top of the housing and at the other end it bears against a flange 5 on the bolt, which flange also contacts with the bottom of the housing and limits the downward movement of the bolt. Said spring normally holds the bolt at the lower limit of its movement.

A quadrant ratchet 6 is provided with an attaching plate which is adapted to be attached to the sash 8 in position for the toothed edge of the ratchet to engage the ratchet bolt 3.

For the purpose of pivoting the sash in the window opening in position for the ratchet to coact with the ratchet bolt 3, a plate or extension 9 extends downwardly from the housing 1 and is provided with a bearing socket 10. In the bottom of the plate is a guide groove 11 which extends upwardly and inwardly from the back of the plate to the end of the socket 10. Mounted upon the side of the ratchet 6 is a barrel 12 having apertured ends in which is rotatably mounted a retractable or longitudinally movable pivot pin 13, which, when in one position, is adapted to project from the end of the barrel and into the socket 10. For convenience of description that end of the barrel 12 which is adjacent to the ratchet is referred to as the inner end, and the opposite end of the barrel is referred to as the outer end.

The barrel is provided in its side with a cam slot 14 which extends from the bottom of the barrel upwardly and laterally toward the outer end of the barrel. Near the bottom of the slot and on the side thereof adjacent to the outer end of the barrel is a stop lug 15. The pivot pin 13 is provided with a laterally directed handle 16 which is formed of spring steel and projects outwardly through the slot 14. When the handle is at the lower end 17 of the slot 14 the pivot pin projects from the inner end of the barrel into the socket 10. The outer end of the pin 13 is provided with a head 18 which is adapted to abut against the outer end of the barrel and limit the movement of the pivot pin into the socket. When the pin is at the inner limit of its movement in the socket the handle 16 is beneath the stop lug 15 and cannot be raised above said lug without sufficient force being applied to the handle to cause the lug to spring the handle laterally. After the handle passes said lug, further movement of the handle toward the upper end of the slot acts to retract the pin from the socket.

The head 18 of the pivot pin is elongated and one end thereof is adapted to engage behind a hook 19 on the outer end of the barrel when the handle is at the lower limit of its movement. The hook affords an addi-

tional resistance to retraction of the pin when the latter is extended into the socket. On the outer end of the barrel 12, above the hook 19 is a wedge surface or incline 20 upon which the opposite end of the head rides when the handle is at the bottom of the slot. The wedge surface acts to force the head against the hook and prevent rattling of the pin. A guard 21 extends downwardly from the housing and overlaps the ratchet, and in case the pivot at the opposite side of the sash should become disconnected the ratchet would bind against the guard and prevent the sash from tilting edgewise.

The operation of the construction shown is as follows: The sash is provided at each end with a sash pivot and when it is desired to mount the sash in the frame the handles 16 are raised above the stop lugs 15 of the slots 14. If the pivot pins then project slightly from the inner ends of the barrels, the sash is placed in the window opening with the pins in the guide slots 11 and upward pressure on the sash will cause complete retraction of the pins and bring them into register with the sockets 10. The handles are then turned downwardly and the inclination of the slots forces the pins into the sockets. When the handles reach the lugs 15 they are sprung past said lugs to the bottom of the slots, thereby locking the pins in the sockets, and preventing removal of the sash until the pivot pins are retracted. When the sash is thus mounted it may be turned on its pivots to closed, open or any intermediate positions and will be held in its adjusted position by the action of the ratchets and ratchet bolts.

While but one specific embodiment of the invention has been herein shown it will be understood that various details of the construction may be varied or omitted without departing from the spirit of the invention.

We claim:

1. A sash pivot, comprising a barrel, a pivot pin journaled in the barrel, coacting means on the barrel and pin adapted, when the pin is rotated, to move the pin longitudinally, means providing a socket for said pin and having a groove leading upwardly to the socket and adapted to guide the pin into the socket when assembling the pivot.

2. A sash pivot, comprising a barrel open at its ends and having an inclined slot in one side thereof, a lug projecting into the lower end of said slot, a pivot pin journaled in the barrel, a resilient handle on said pin and projecting through said slot and coacting therewith to move the pin longitudinally, said lug being adapted to yieldingly hold said handle in one position, a transverse head on said pin, and a hook on one end of the barrel adapted to engage the transverse head and prevent longitudinal movement of the pin when the pin is in operative position.

3. A sash pivot, comprising a barrel having an eccentric slot in one side thereof and a stop lug in said slot, a pin journaled in the barrel, and a resilient handle on the pin and projecting through said slot and adapted to be sprung laterally past said lug, said slot acting, when the handle is operated, to move the pin longitudinally and said lug acting, when the handle is beneath it, to yieldingly hold the pin from movement.

4. A sash pivot, comprising a barrel having a cam slot therein, a longitudinally movable pin journaled in the barrel, a resilient handle extending laterally from the pin through said slot, and means in the slot adapted to spring the handle laterally when the handle is moved therepast, and to yieldingly hold the pin from movement when the handle is at one limit of its movement.

5. A sash pivot, comprising a barrel having an inclined slot therein, a pin journaled in the barrel, a handle on the pin and projecting through said slot, means providing a socket adapted to receive one end of said pin and a lug in the slot adapted to yieldingly hold said handle at one limit of its movement and hold the pin firmly in the socket.

6. A sash pivot, comprising a barrel having a cam slot therein, a longitudinally movable pivot pin journaled in the barrel and having a head on one end thereof, a hook on the barrel adapted to receive said head when the pin is extended, a resilient handle extending laterally from the pin through said slot, and means in the slot adapted to engage the handle and yieldingly hold the pin at one limit of its movement.

7. A sash pivot, comprising a housing having a downward extension thereon with a socket in said extension and a guide groove leading to the socket, a spring pressed ratchet bolt in said housing, a ratchet adapted to engage said bolt, a guard on the housing adapted to overlap the ratchet, a barrel on the ratchet, a pivot pin journaled in the barrel, and coacting means on the pin and barrel adapted to throw the pin into and out of said socket.

In witness whereof we have hereunto subscribed our names in the presence of two witnesses.

FRED RAUSCH.
JOSEPH DAVIS.

Witnesses:
CLARENCE H. POOLE, Sr.,
WM. MCLAREN.