No. 746,477. PATENTED DEC. 8, 1903.

J. EBERLE.

METALLIC WINDOW FRAME AND SASH.

APPLICATION FILED JUNE 23, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

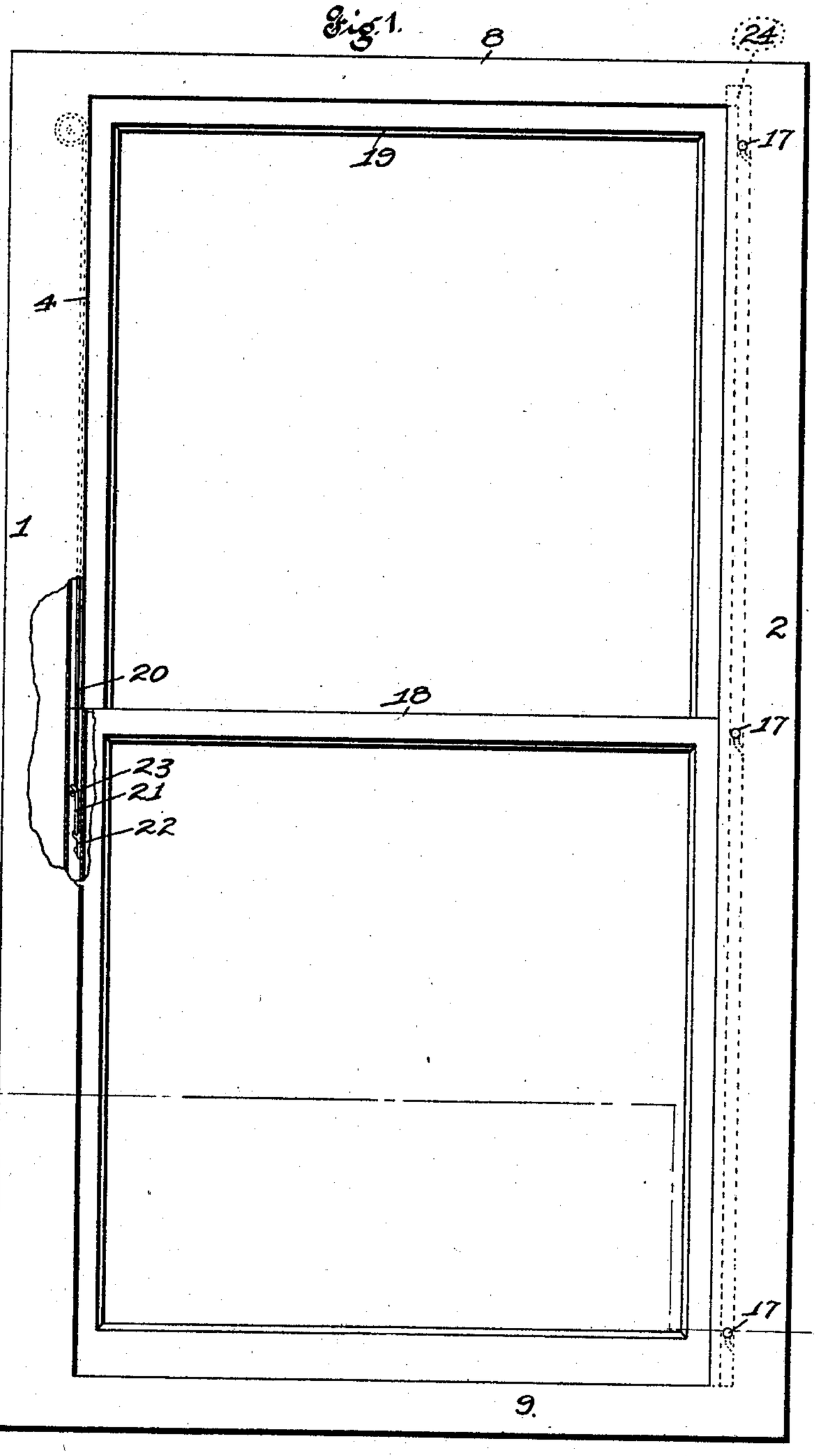
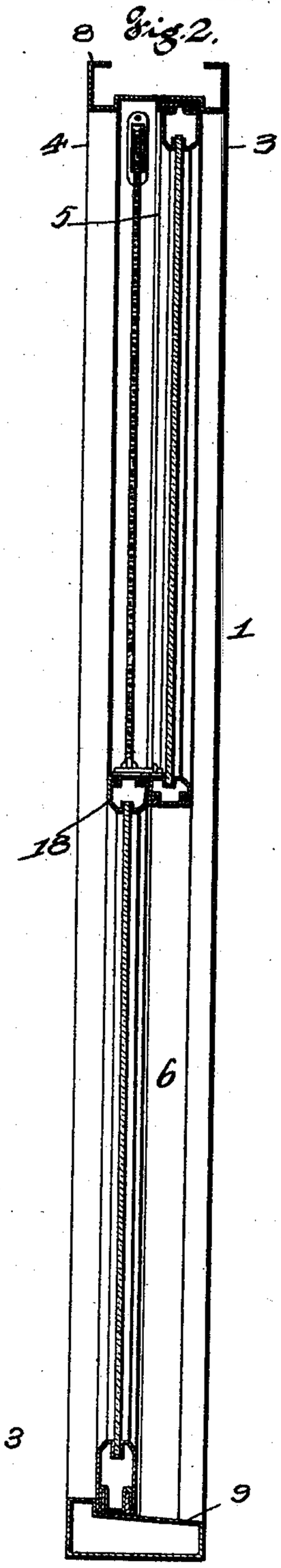


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3

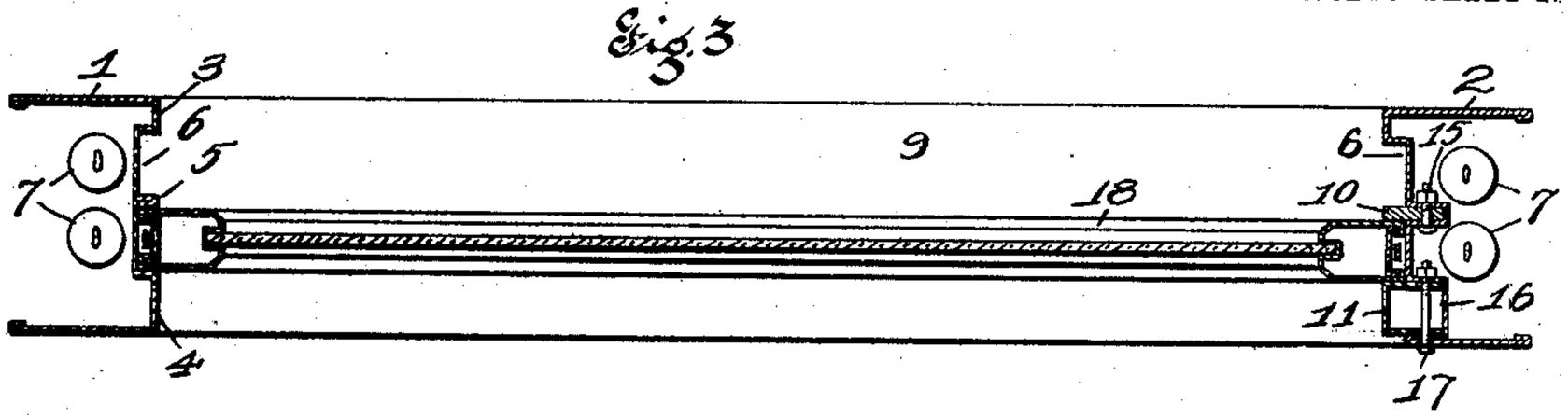


Fig. 5

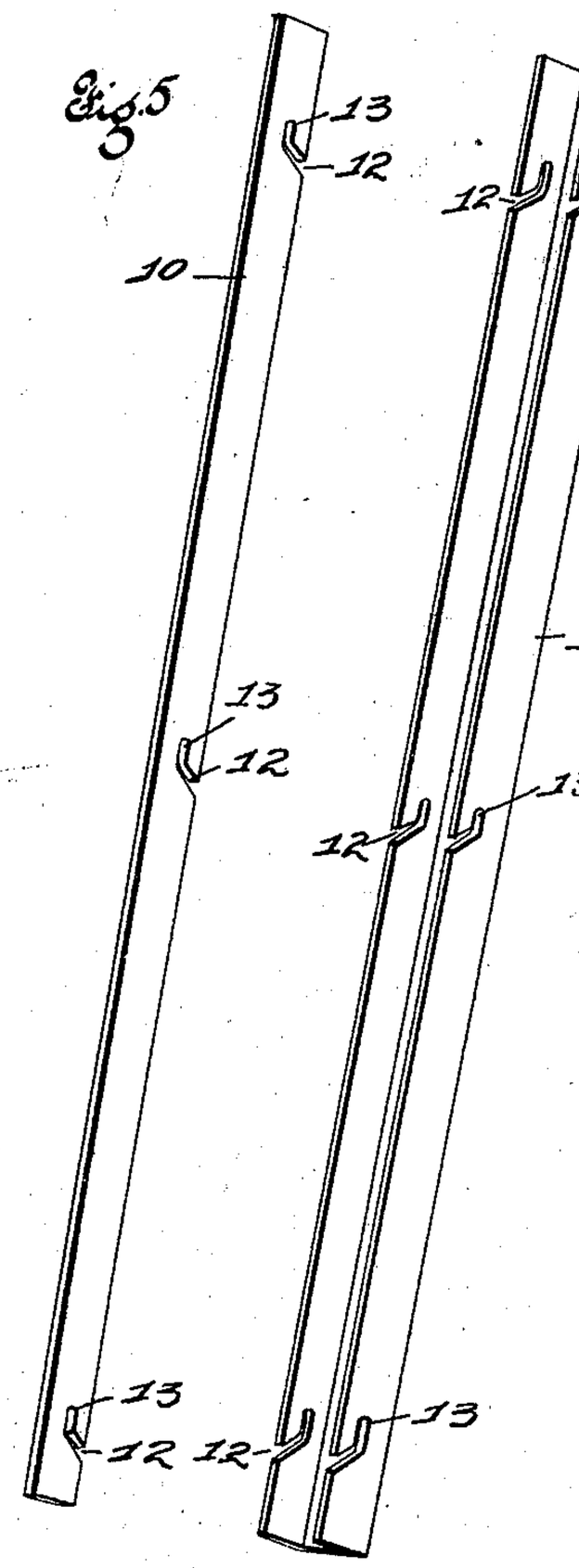


Fig. 6

Fig. 4.

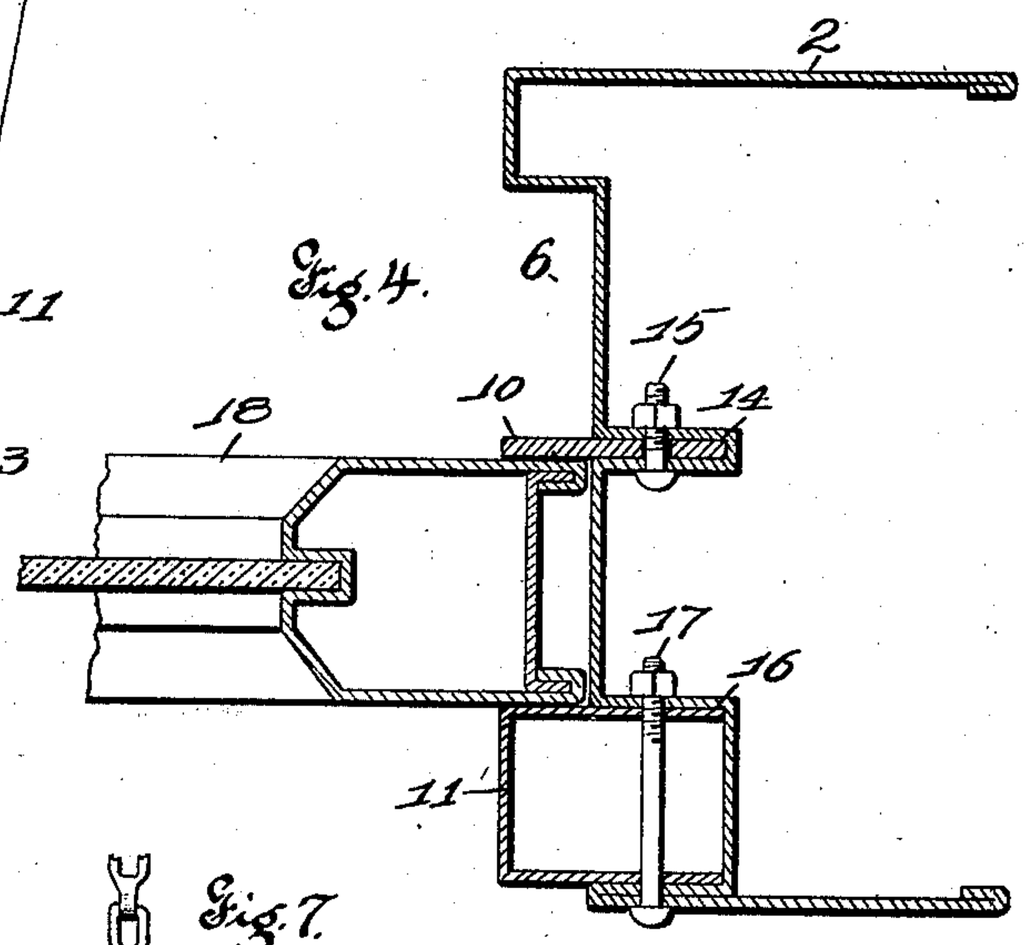
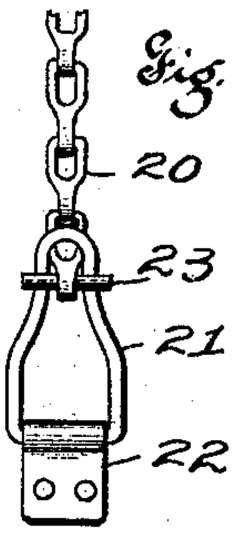


Fig. 7.



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No. 746,477. Patented December 8, 1903.

UNITED STATES PATENT OFFICE.

JOHN EBERLE, OF ST. LOUIS, MISSOURI.

METALLIC WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 746,477, dated December 8, 1903.

Application filed June 23, 1903. Serial No. 162,738. (No model.)

To all whom it may concern:

Be it known that I, JOHN EBERLE, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Metallic Window-Frames and Sashes Therefor, of which the following is a specification, containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a metallic window-frame and sash therefor; and it consists in the novel construction hereinafter described and claimed.

The object of my invention is to provide an improved metallic window-frame and sash wherein every part will be composed of metal except the glass itself.

A further object is to provide a metallic window-frame with improved means whereby stops and parting-strips may be conveniently and quickly applied and removed.

In the drawings, Figure 1 is a sectional front elevation of a metallic window-frame embodying my invention. Fig. 2 is a vertical central section. Fig. 3 is a sectional plan view taken on the line 3 3 of Fig. 1. Fig. 4 is a detail sectional plan view of one side of the frame and sash. Fig. 5 is a perspective view of the parting-strip detached. Fig. 6 is a perspective view of one of the detachable stops. Fig. 7 is a detail view of the chain-fastener.

1 and 2, respectively, indicate the vertical sides of the frame, which are preferably of a single sheet of metal. The left-hand side 1 is properly bent to form integral stops 3 and 4, the parting-strip 5, and sash-grooves 6 and provided with the usual space in the rear of same for the reception of sash-weights 7. The top 8 of the frame is also made of metal in the same manner and is suitably secured upon the upper ends of the sides 1 and 2. The sill 9 is also made of metal in box form and is suitably connected to the lower ends of the sides in any desired manner.

One of the vertical sides of the frame, preferably the right-hand side 2, as shown, is provided with a removable and adjustable metallic parting-strip 10 and a removable and adjustable metallic inner stop 11. (See Fig. 4.) Said parting-strip 10 is preferably composed of a single thickness of metal having a series of downwardly-inclined slots 12, formed in its inner edge and terminating at their upper ends in vertical slots 13.

The adjustable inner stop 11 is preferably composed of a unitary sheet of metal U-shaped in cross-section and provided with pairs of inclined slots 12 in its inner edges, and said slots also terminating at their upper ends in vertical slots 13, identical with those of the parting-strip 10, previously described. The vertical side 2 of the frame is specially formed to receive said parting-strip and stop. Said vertical side 2 is formed with a central vertical recess 14 for the reception of the inner edge of said parting-strip 10, and the latter is adjustably retained within said recess by means of bolts 15, which pass through apertures in the opposite walls of said recess and through the slots 12 and 13, formed, as described, in said parting-strip 10.

The inner stop 11 is adjustably and removably mounted within a recess 16, formed in the vertical right-hand side 2 of the frame, and said stop is secured in position by means of bolts 17, passing through apertures formed in the opposite walls of said recess and engaging the slots in said stop.

18 indicates the lower sash, and 19 the upper sash, both of which are made of sheet metal, as shown, with proper grooves for the reception of the glass.

20 indicates the usual counterbalance-chains, which are attached in the usual manner to the weights 7. I preferably attach said chains to the sash by means of my improved chain-fastener. (Shown in Figs. 1 and 7.) This fastener preferably consists of a metal loop 21, which is narrowed to fit the chain at its upper end and wider at its lower end. The lower end of said loop 21 is hinged to the sash by means of a bearing or bracket 22, which is secured to the sash by means of screws or rivets. The upper narrowed end of the said loop is preferably curved outwardly, as shown in Fig. 1, so that said upper end will project a distance from the surface of the sash and present a vertical opening for the reception of the chain. The chain 20 is inserted in said opening formed by the narrowed upper end of said loop, and then the chain is detachably secured in position by inserting the pin 23 through one of the links

of the chain beneath said narrowed portion of the loop, and this effectually prevents the withdrawal of the chain until said pin has been removed. It will be observed that the length of the pin is such that it will be impossible for the same to become accidentally detached.

The operation is as follows: The sash may be readily inserted or removed from the window-frame by detaching the parting-strip 10 and stop 11, and this may be readily accomplished by grasping said strip and stop and sliding the same upwardly until the bolts 15 and 17 are removed from the vertical slots 13 into the inclined slots 12. Said inclined slots will then offer very little resistance to the inward movement of the said parts, and they can be readily detached. The upper ends of said parting-strip and stop work loosely within suitable openings formed in the top 8 of the window-frame, as indicated by dotted lines at 24 in Fig. 1. After said parting-strip and stop have been detached the sash may, of course, be readily removed, and the counterbalance-chains 20 may be readily detached from the sash by withdrawing the fastening-pin 23.

What I claim is—

1. In a metallic window-frame, the vertical sides formed of sheet metal with an integral fixed parting-strip on one side and a detachable parting-strip on the opposite side detachably mounted in a recess, bolts extending across said recess and mounted in apertures formed in the walls of the same, and a sash-stop having a series of inclined slots terminating at their upper ends in vertical slots, and said sash-stop detachably mounted within another recess in the frame and having bolts engaging said slots, substantially as described.

2. In a metallic window-frame, the vertical sides formed of sheet metal with an integral fixed parting-strip on one side and a detachable parting-strip on the opposite side, detachably mounted in a recess, bolts extending across said recess and mounted in apertures formed in the walls of the same, and a stop U-shaped in cross-section, and having pairs of inclined slots terminating at their upper ends in vertical slots, and said stop detachably mounted within a recess with said bolts engaging said slots, substantially as described.

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

JOHN EBERLE.

Witnesses:
ALFRED A. EICKS,
JOHN C. HIGDON.