

No. 702,587.

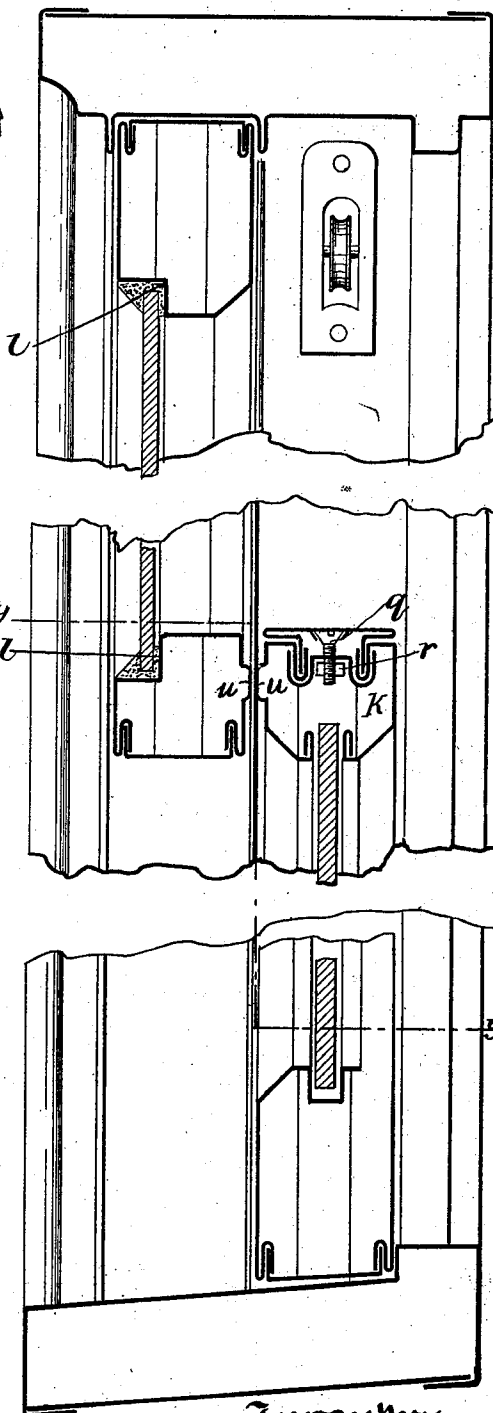
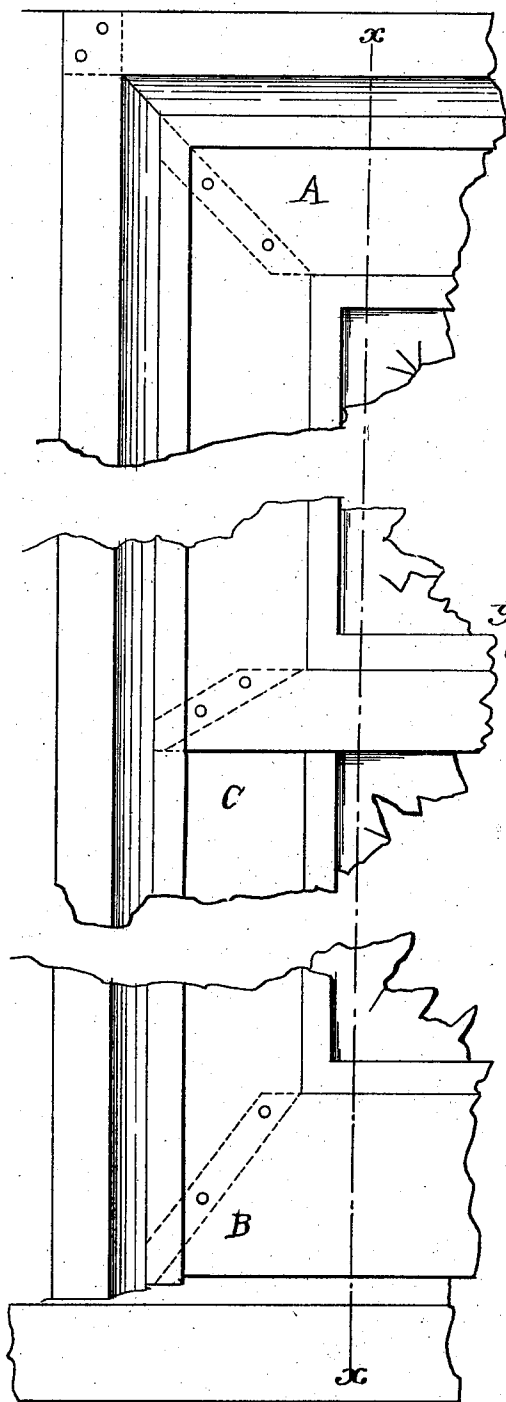
Patented June 17, 1902.

A. RASNER.
WINDOW FRAME AND SASH.

(Application filed Jan. 24, 1899.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses
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(Application filed Jan. 24, 1899.)

3 Sheets—Sheet 2.

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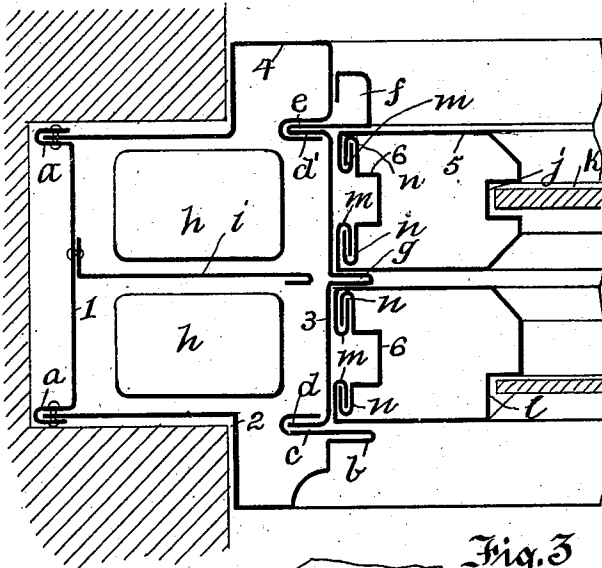


Fig. 3

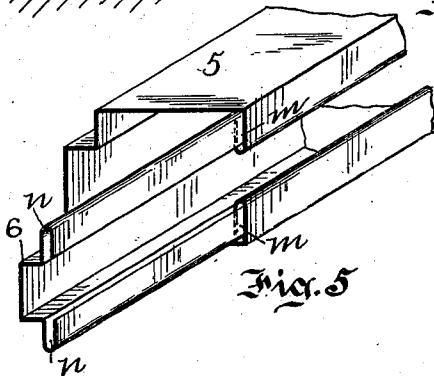


Fig. 5

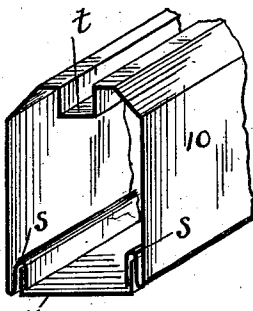


Fig. 6

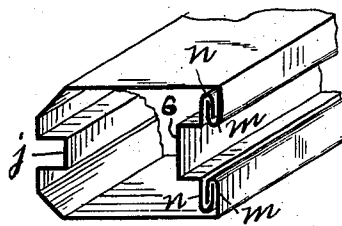


Fig. 4

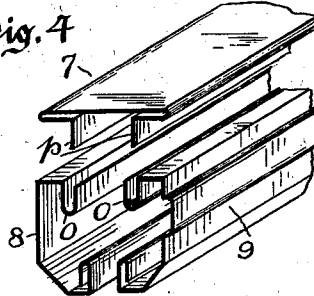


Fig. 7

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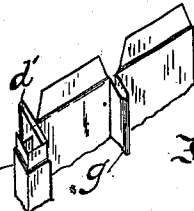


Fig. 9.

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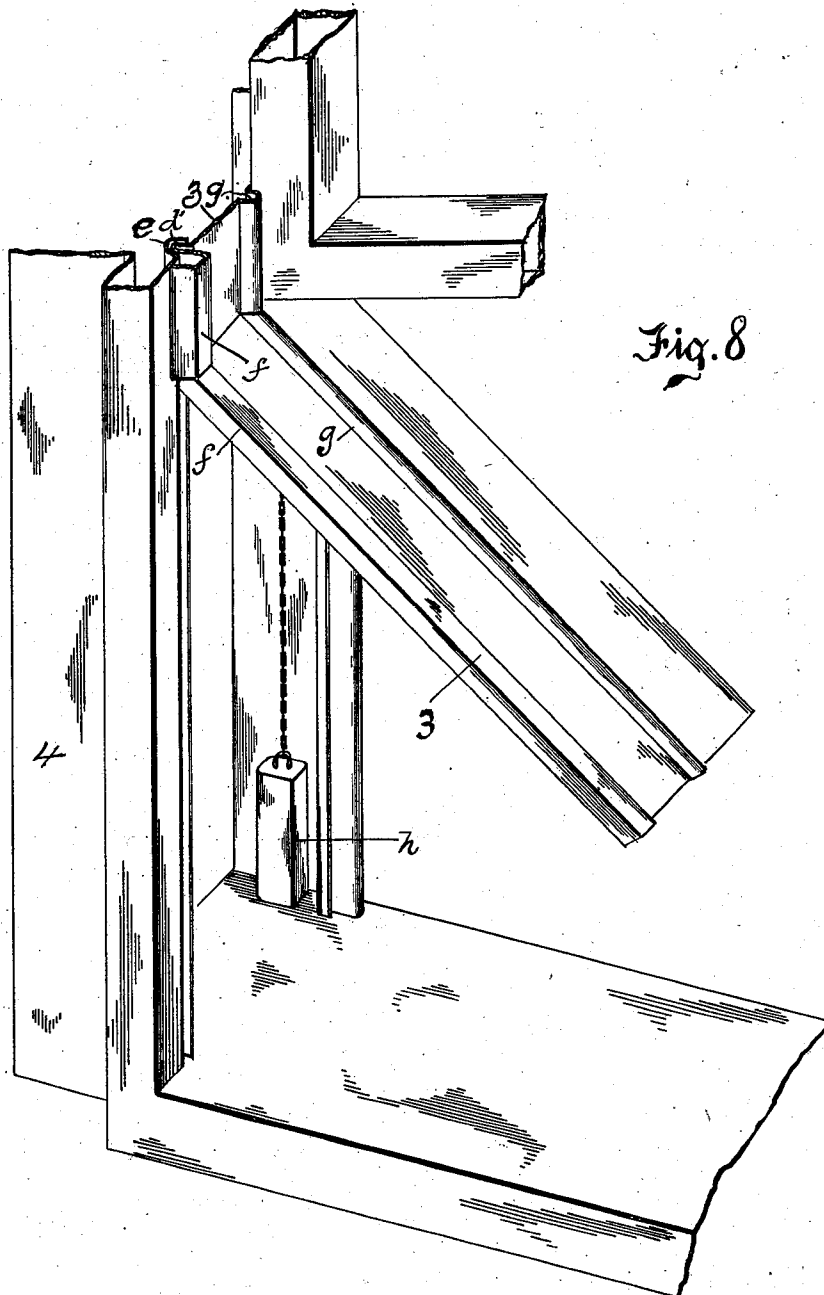
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(Application filed Jan. 24, 1899.)

(No Model.)

3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

ABRAHAM RASNER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO RASNER & DINGER COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 702,587, dated June 17, 1902.

Application filed January 24, 1899. Serial No. 703,221. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM RASNER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Window Frames and Sashes; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 indicates a front elevation of my improved metallic frame and sash, partly broken away. Fig. 2 is a vertical longitudinal section on lines *xx* of Fig. 1. Fig. 3 is a transverse section on line *yy* of Fig. 2. Fig. 4 is a perspective view of a portion of one of the side pieces or side rails of a sash. Fig. 5 is a perspective view of the same, showing the inner end secured adjustably in the body thereof. Fig. 6 is a perspective view of a portion of the lower rail of the sash. Fig. 7 is a perspective view of a portion of the top rail of the sash, showing cap or top of same removed. Fig. 8 is a perspective view of the lower portion of the frame, showing the manner of removing lower portion of part 3. Fig. 9 is a perspective view of the upper end of the lower portion of part 3.

My invention relates to improvements in metallic window frame and sashes, the object of my invention being to produce a frame and sashes formed of sheet metal, the frame being so constructed that access may be readily had to the interior thereof for the purpose of adjusting the weights and for the further purpose of the easy removal of the sash, the sash being so constructed that the lights of glass may be readily secured therein; and to these purposes my invention consists in the novel construction and arrangement of parts hereinafter described, reference being had to the accompanying drawings, which form a part of this specification, in which like reference characters indicate like parts wherever they occur throughout the several views.

Referring to the accompanying drawings, A is the top of the frame, B the bottom, and C C the sides thereof, the ends of the same be-

ing conjoined and secured together in any suitable manner. The sides C of said frame comprise the parts 1, 2, 3, and 4, part 1 forming the inner side of the frame and having edges which terminate in U-shaped flanges or grooves *a a*, in which the inner ends, respectively, of parts 2 and 4 project and are secured by rivets or in any other suitable manner. The said part 2 forms the outer side of the frame and is provided with an exterior stop or guide *b* for the sash integral therewith and terminates in a U-shaped flange or groove *c*, in which one of the inwardly-projecting ends *d* of the part 3 is secured. The opposite end or edge of said part 3 terminates in an inwardly-projecting part *d'*, which is secured in a similar manner in a similar U-shaped groove or flange *e*, which terminates in the outer end or edge of the part 4. The said part 3 on its inner edge may terminate in the interior stop *f*, the said stop being integral therewith, between which and the parting-strip *g* (which is integral with said part 3) the outer sash is secured. The said stop instead of being formed as an integral part of part 3 may be formed of an independent piece the inwardly-projecting vertical edge of which is secured in the U-shaped flange *e*. The said part 3 is formed in two sections, the upper and lower, respectively, the lower section or that below the meeting-rail being detachably secured in the flanges of parts 2 and 4, respectively, to admit of its being quickly and easily removed for the purpose of removing the sash and enabling access to be had to the weights *h* in the interior of the frame, as shown in Fig. 8.

The interior of the chamber or channel, formed by the parts 1, 2, 3, and 4, is divided into two compartments by the partition-strip *i*, in which the weights *h h* are respectively located. Both sides of the frame are similar in construction.

The side pieces or rails of the sash comprise the parts 5 and 6, the said part 5 having in its inner face an oblong channel or groove, longitudinally the same for the reception of the edges of the glass *k*, or the said sash may be formed with a shoulder *l*, as shown in Figs. 2 and 3 of the drawings. The said part 5 at

its outer edges is provided with inverted-U-shaped flanges *m*, in which the U-shaped flange *n* of the part 6 interlocks, the said part 6 being inserted or slid into the said flanges *m*, as shown in Fig. 5 of the drawings, and forming, as shown therein, a longitudinal channel in the outer face of the sash of sufficient depth to admit of the reception of a chain and pulley to which the weights may be secured.

If desirable or preferred, the side and top rails of the sash may be formed with inverted-U-shaped flanges *s s* and inwardly-extending edges instead of the inwardly-extending inverted flanges *n* and *m*.

The top rail of the sash comprises the parts 7, 8, and 9, the said parts 8 and 9 at their upper inner edges, respectively, terminating in U-shaped flanges *o o*, respectively, in which the downwardly-extending portions or parts *p* of the cap or part 7 are detachably secured by means of the screws *q*, which engage in recessed nuts or sockets *r* between the U-shaped flanges of the parts 8 and 9 near the ends of the top rail. The said part 7 is detachably secured to the parts 8 and 9 to admit of the removal of the same for the purpose of inserting the glass. The bottom rail of said sash is formed of two independent parts 10 and 11, the said part 11 being a strip having upwardly-extending edges which project into the inverted-U-shaped flanges *s s*, forming the lower edges of the part 10. The upper surface of said part 10 is provided with a channel or groove *t* for the reception of the lower edge of the glass, or a shoulder, as heretofore stated. The meeting-rails of said sash are provided with inward projections *u* for the purpose of making dust-proof connections between the same when closed. Upon comparison of the present construction with those shown in my earlier patents, Nos. 615,047 and 620,669, it will be seen that I now remove the strip or piece 6 from contact with the stationary frame, the main side piece or bar 5 taking such contact and receiving any pressure or friction along the side edges of the sash, so that there is no displacing strain imparted to the central part 6.

The openings in the hollow metallic frame may be of a shape different from that of those illustrated and the part which closes each of said openings may be modified—that is, I do not limit myself to having the detachable stops shaped and applied in exactly the way here presented. The section indicated as a whole by “3” and having the parts *d*, *d'*, *f*, and *g* may be regarded as made up of stops for properly holding the sash. The wider transverse parts of the section 3 serve as stops to prevent the sash from moving in the direction of the side frames, and the parts at *f* and *g* serve as stops to prevent it from moving outward or inward.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a hollow metallic frame for windows, comprising parts 1, 2, 3, and 4, part 2 forming the outer edge of the frame and having an exterior stop or guide for the sash integral therewith, and an inward U-shaped groove, and part 3, the inner edge of the frame, being formed in two sections, and having an outwardly-projecting rib forming the parting-strip, the lower one of said sections, or that below the meeting-rail of the sash, being detachably secured to parts 2 and 4, whereby the same may be removed to enable access to be had to the interior of the frame and the removal of the sash, substantially as set forth.

2. As a new article of manufacture, a hollow metallic frame for windows comprising parts 1, 2, 3, and 4, part 2 forming the outer edge of the frame and having an exterior stop or guide for the sash integral therewith, and an inward U-shaped groove, and part 3 the face of the frame being formed in two sections and having an outwardly-projecting rib forming the parting-strip, and a stop integral therewith the lower of said sections or that below the meeting-rail of the sash being detachably secured to the parts 2 and 4, whereby the same may be removed to enable access to be had to the interior of the frame and the removal of the sash, substantially as set forth.

3. A hollow metallic sash the side rails of which are formed of a body-piece 5 and a piece 6 having an inwardly-projecting recess or channel the said parts terminating in U-shaped hooks adapted to interlock, said piece 6 being inside of the outer side edges of the body part 5, whereby they are kept out of contact with the stationary frame substantially as herein set forth.

4. A hollow metallic sash the side rails of which are formed of a body-piece 5 and a piece 6 having an inwardly-projecting recess or channel, the ends of said piece 6 terminating in U-shaped hooks adapted to interlock with correspondingly-shaped hooks or flanges of the body-piece, said part 6 being supported by the part 5 out of contact with the stationary frame and the top rail of said sash having a removable or detachably-secured top for the purpose of enabling the glass to be inserted in the sash, substantially as set forth.

5. A hollow metallic sash the side rails of which are formed of two independent parts 5 and 6, part 5 forming the body of the side rail its inner edges terminating in U-shaped hooks in which the correspondingly-shaped parts of the part 6 are adapted to interlock, the outer edge of said part 5 having a channel centrally of the same longitudinally for the reception of the glass, the said part 6 projecting outwardly into said part 5 forming a channel for the reception of the cord or chain and having its surfaces supported out of contact with the stationary frame, substantially as set forth.

6. A metallic sash for windows, having a

horizontal rail consisting of separable halves adapted to receive the glass between them and being provided with flanges, an outer fastening-strip having flanges adapted to engage the flanges on the rail, a clamping-strip engaging the flanges on the rail, and detachable fasteners connecting the fastening-strip to the clamping-strip, whereby the halves of the rail are held together.

10 7. A metallic sash for windows having upright members constituting its sides each of which consists of a box-like or hollow body-piece having two free portions, and an inde-

pendent or separate strip for the outer face of the body, said strip being attached to the free portions of the body-piece and provided with a channeled portion reëntrant in the hollow body-piece and serving to seat the sash-cord. 15

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses. 20

ABRAHAM RASNER.

Witnesses:

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