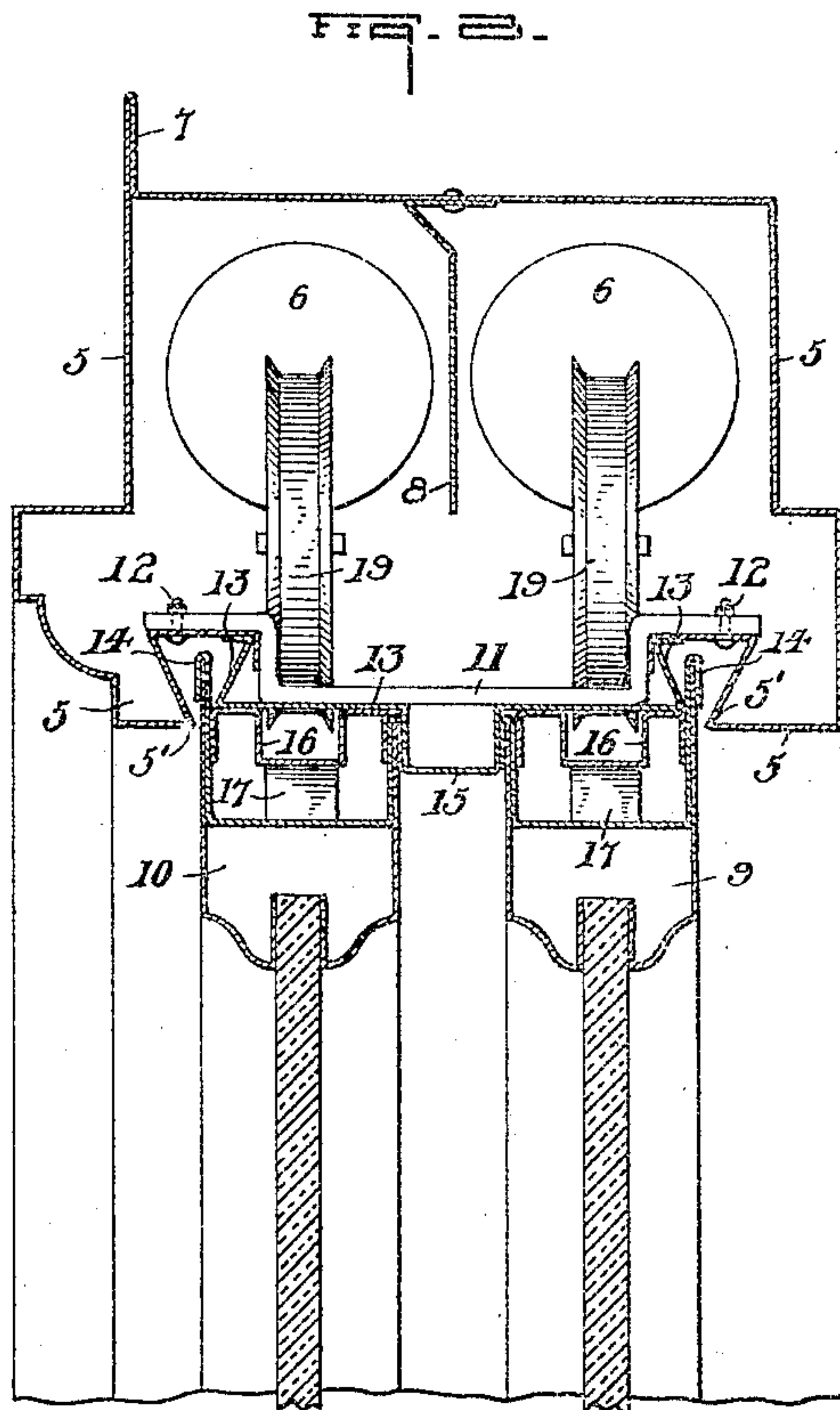
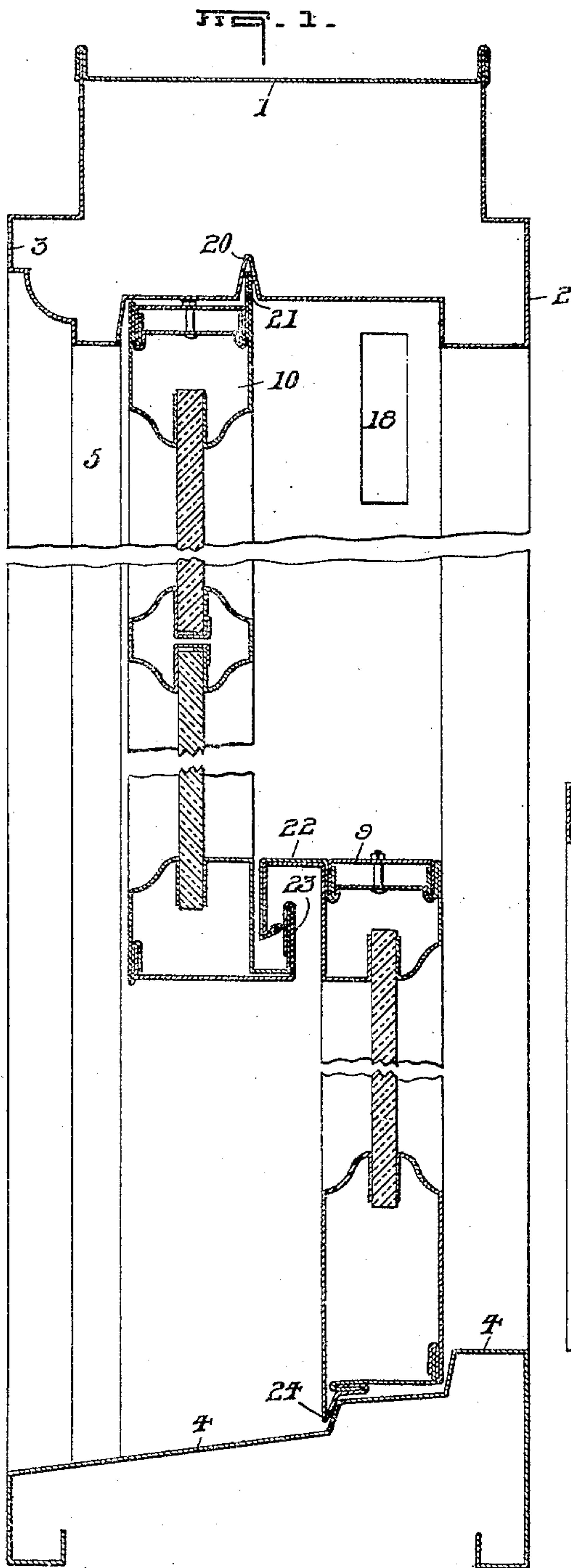


R. PURSCH.
METAL WINDOW FRAME.

APPLICATION FILED DEC. 21, 1907.

903,771.

Patented Nov. 10, 1908.



WITNESSES:

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RUDOLPH PURSCH, OF BELLEVUE, PENNSYLVANIA.

METAL WINDOW-FRAMES.

No. 908,771.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed December 21, 1907. Serial No. 407,467.

To all whom it may concern:

Be it known that I, RUDOLPH PURSCH, a citizen of the United States, residing at Bellevue, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metal Window-Frames; 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 letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a new and useful improvement in metal window frames, the primary object being to provide a device of the character before mentioned, that will be fire proof, simple in construction, and practically inexpensive of manufacture.

The construction set forth in the following specification is intended to be used in connection with the device shown and described in my application filed November 2d, 1906, Serial No. 341,729 for metal window sash.

With the above objects in view my invention further consists of the novel construction and arrangement of parts, as will be more fully described in detail, reference being had to the accompanying drawing in which:—

Figure 1 is a side elevation, partly in section, showing relative position of the sashes with respect to the jamb and frame. Fig. 2 is a sectional top plan view of one side of the jamb showing sashes seated therein.

Throughout the drawing corresponding numerals of reference denote like parts, in which 1 designates the upper or head portion of the window frame, which may be constructed as shown, or any other suitable configuration may be substituted. This aforesaid section of the frame can be formed from one sheet of metal bent or pressed as shown, and joined at any suitable point, or it may be constructed of a plurality of sections likewise joined together. The inside face of this upper portion is designated by the numeral 2 and the outer face by the numeral 3. The lower or sill portion of the frame, designated by the numeral 4, is bent or pressed so as to provide suitable inclined bearing surfaces for the upper and lower sash portions.

The side sections or jamb 5 of the frame

in which are suspended the sash operating weights 6—6, are likewise constructed in a similar manner to the head portion 1, and made to conform in cross section to the configuration of the said top portion. These side sections or jambs 5 are preferably formed with a flange portion 7 which is intended as a locking means to enter the masonry and aid in holding these jamb portions firmly in position. A partition wall 8 is likewise provided about midway between the sidewalls of the jamb, which performs a function of separating the weights 6—6. The two end portions 5' of the said jamb 5, which determine the width in cross section of the two sashes 9 and 10 and intervening space, are preferably bent in a Z formation, or in other words having two horizontal and parallel flanges connected by an acute angle. The free ends of this jamb portion are connected by one or more suitable braces 11 secured by bolts 12 or any other fastening means. The recess formed by bending the ends of this jamb portion 5 as above described affords a ready means for getting at the securing bolts 12 and also provides a space for the admission of a portion of the operating sashes, as will be more fully described. Seated between said two ends 5' of the jamb, and rigidly secured by any suitable fastening means to the said braces 11, is an angled side section or pulley stile 13 which is preferably constructed in two sections an upper and lower member, the same being removable from their normal positions in the jamb 5 to facilitate getting at the sash weights. Sufficient clearance only is left between the ends 5' of the jamb and ends of said pulley stile 13 for the admittance and play of a guide portion or flange 14 formed in the sides of each sash. The central portion of said pulley stile is formed at 15 with a U shaped conformation, whose sides provide guide bearing surfaces for the two sash members. The sides of this pulley stile are also bent to a Z formation in order to provide a single contacting edge for engagement with the sash portions.

Arranged between the sides of each sash and the pulley stile is an angled weather strip 16 which extends the full length of said sash. This member is intended to operate up and down with the movement of the sash but is carried and secured thereto in such a way that it will be in constant engagement with the pulley stile 13, being

kept in this position by spring or other tension members 17, which are secured to the sides of said sashes, and bear against the said weather strip. This tension means
5 aforesaid should not be strong enough to cause any binding action between the two contacting members but merely sufficient to afford a close enough engagement to preclude air and dust from entering the room
10 at the sides of the window and also prevent rattling. Suitable openings 18 are provided in the upper portion of the pulley stile through which project the sash pulleys 19 suitably supported in any well known manner.
15 It will be observed that in this invention less friction will be encountered between the sashes and pulley stile than was shown and described in my previous application, referred to in the beginning of this
20 specification, by reason of the arrangement of said pulley stile with respect to the limiting ends of the jamb portion 5'. This feature will be appreciated by those familiar with the art as affording a means for more
25 easily raising and lowering the sashes.

An inverted V shaped recess 20 is provided on the under side of the head portion 1 for the purpose of receiving a lip or flange 21 formed on the top rail of the outside sash
30 10. This arrangement acts as a retardant to any dust or air entering the room at that meeting point.

The lower or inside sash is herewith shown provided on its upper meeting rail with a
35 projecting spring portion 22 which is designed to closely engage an upwardly extending flange 23 formed on the lower or meeting rail of the upper sash. This arrangement is intended for the purpose of
40 excluding air or dust at that point. A spring contacting portion 24 provided on the bottom rail of the lower sash, which engages against the sill portion 4, will exclude
air and dust at that point.

45 Having thus fully shown and described my invention what I claim as new, and desire to secure by Letters Patent is:

1. In a window frame the combination of a hollow metallic jamb, the free limiting
50 ends of which are bent in a Z formation and joined together by suitable brace members, of a pulley stile seated between said limiting ends having a central guide and end bearing portions for engagement with the sides
55 of the operating sashes.

2. In a window frame in which are mounted two sashes, the combination of a hollow metallic jamb whose free ends are bent in a Z formation and limit the width in cross
60 section of the two sashes, of suitable brace members secured to and uniting the two ends of said jamb, and a removable pulley stile seated between the ends of said jamb,

whose end portions are also bent to a Z formation, and having a central guide and
65 end bearing portions for engagement with the sides of the operating sashes.

3. In a window frame the combination with the two operating sashes, of a hollow metallic jamb bent to any desired forma-
70 tion and having free ends bent in a Z formation which limit the width in cross section of the two sash portions and intervening space; suitable brace members secured to and uniting the ends of said jamb; a pulley
75 stile removably seated between the said limiting ends of the jamb having a central guide and end bearing portions bent in a Z formation; and a projecting flange portion formed on the sides of each sash designed
80 to enter the jamb and engage against the ends of said pulley stile.

4. In a window frame the combination with a hollow metallic jamb, the free limiting
85 ends of which are bent in a Z formation, top, sill and operating sash portions, of a pulley stile seated between the free ends of the said jamb having a central guide and end bearing portions bent in a Z formation for engagement with the sashes, a weather
90 strip carried by said sashes and kept in close engagement with the said pulley stile by means of tension members, and a recess provided in the under side of the top portion designed to receive a lip or flange
95 formed on the top rail of the upper sash.

5. In a window frame the combination with a hollow metallic jamb, top, sill, and operating sash portions, of a pulley stile
100 removably seated between the free ends of the said jamb having a central guide and end bearing portions for engagement with the sashes; brace members secured to and uniting the free ends of said jamb; flanged guide portions formed on the sides of both
105 sashes which enter the jamb and engage against the ends of the pulley stile; a weather strip carried by said sashes and kept in close engagement with the said pulley stile by means of tension members; a recess
110 formed in the under side of the top portion designed to receive a flanged lip formed on the top rail of the upper sash; a projecting spring member formed on the meeting rail of one sash adapted to engage against an
115 upwardly extending flange formed on the opposite sash; and a spring contact portion formed on the under side of the bottom rail of the lower sash for engagement with the sill.
120

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

RUDOLPH PURSCH.

Witnesses:

JAMES BELL,
JOHN YOUNG.