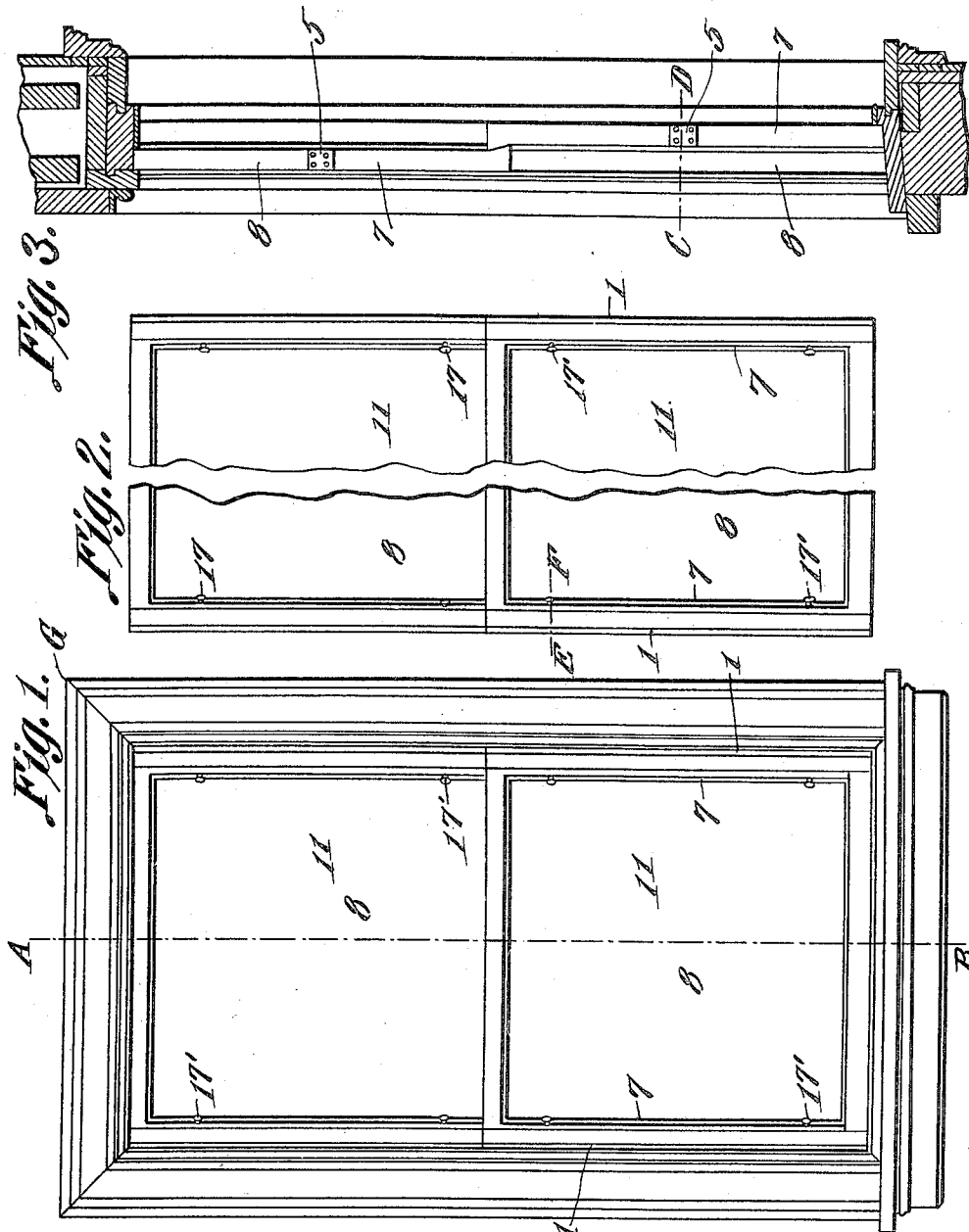


F. E. BRANDT.
WINDOW SASH.
APPLICATION FILED APR. 11, 1913.

1,107,580.

Patented Aug. 18, 1914

2 SHEETS—SHEET 1.



Witnesses

J. P. Tomlin
S. Willard

Folke E. Brandt,
Inventor

by

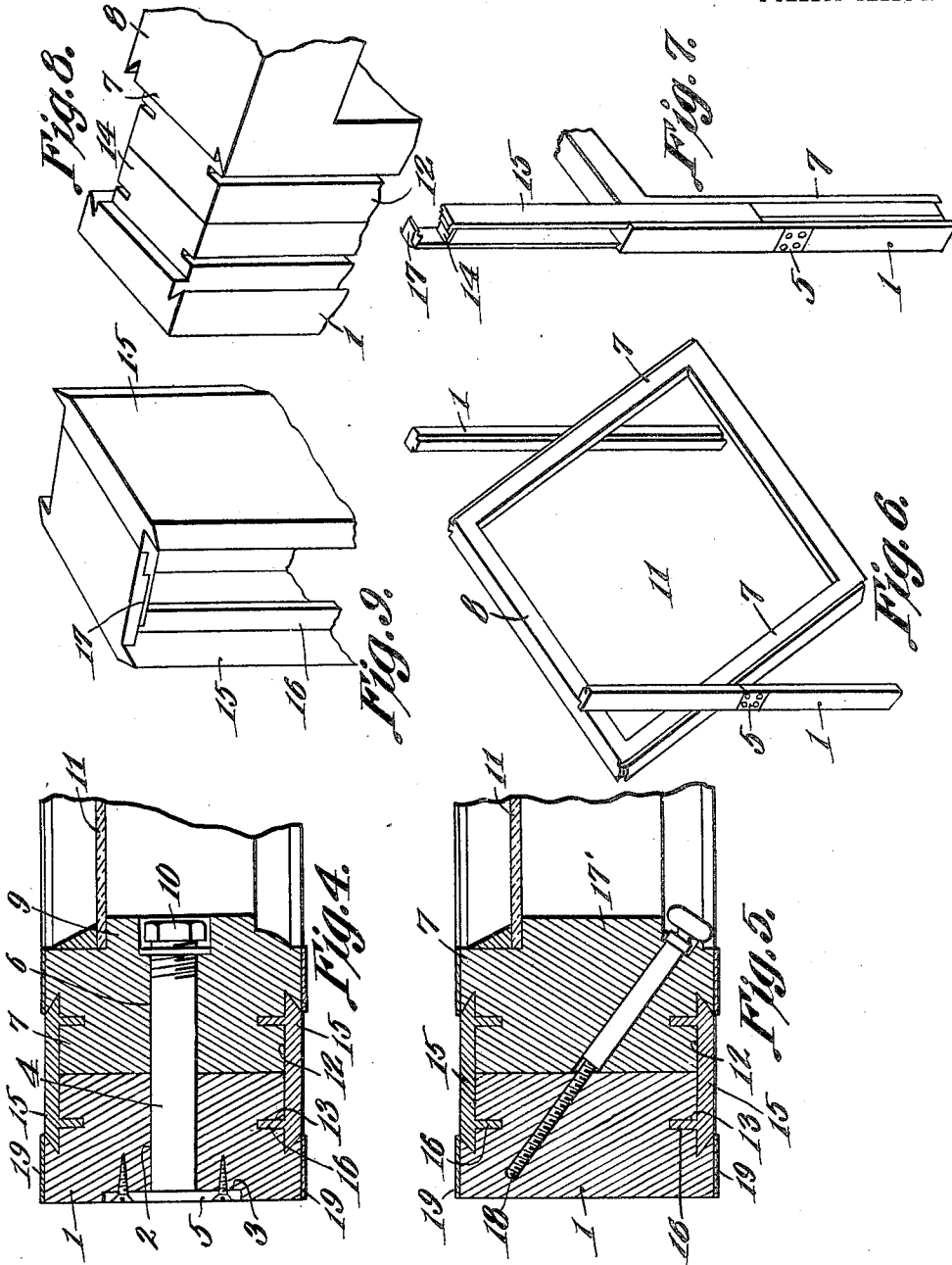
C. A. Snow & Co.
Attorneys

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Witnesses

J. P. Threlin
S. Wilcox

Folke E. Brandt,
Inventor

by

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

FOLKE E. BRANDT, OF BEMIDJI, MINNESOTA.

WINDOW-SASH.

1,107,580.

Specification of Letters Patent.

Patented Aug. 18, 1914.

Application filed April 11, 1913. Serial No. 760,505.

To all whom it may concern:

Be it known that I, FOLKE E. BRANDT, a citizen of Sweden, residing at the city of Bemidji, in the county of Beltrami and State of Minnesota, have invented a new and useful Window-Sash, of which the following is a specification.

This invention relates to window sashes, one of its objects being to provide a sash which is to be used in connection with the ordinary window frames, but the main portion of which can be easily reversed without removing the sash from the window frame so as to permit both sides of the glass light or lights to be cleaned by a person standing within the building.

Another object is to provide improved means whereby the parts of the sash are keyed together securely so as to prevent accidental movement thereof relative to each other and at the same time prevent currents of air from entering between the parts.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a front elevation of a window provided with sashes constructed in accordance with the present invention. Fig. 2 is an elevation of the sashes removed from the frame, portions of the sashes being broken away. Fig. 3 is a section on line A—B Fig. 1 the sashes being shown in elevation. Fig. 4 is an enlarged section through one portion of the sash, said section being on the line C—D Fig. 3. Fig. 5 is an enlarged section on line E—F Fig. 2. Fig. 6 is a perspective view of a sash, the light carrying frame being shown swung out of normal position and the keys being removed. Fig. 7 is a perspective view of a portion of the sash and showing the keys partly engaged therewith. Fig. 8 is a perspective view of one of the upper corner portions of the sash, the keys being re-

moved. Fig. 9 is a perspective view of the upper end portions of the keys.

Referring to the figures by characters of reference G designates a window frame of the usual form provided for sliding sashes. The sash constituting the present invention is adapted to be mounted therein in the usual manner and includes side strips 1 each of which is provided at its center with a transverse bore 2 extending from a recess 3 formed in the outer side of the strip. A pivot bolt 4 extends through this bore and has a flat head 5 which is fitted snugly within the recess 3 and adapted to be secured therein in any suitable manner. That end of the bolt 4 remote from its head 5 is adapted to extend within a bore 6 formed at the center of one of the stiles 7 of the frame 8 of the sash. This bore 6 is preferably counter-bored as shown at 9 so as to receive a nut 10 or the like whereby the stile 7 is held in proper relation to the side strip 1. Frame 8 of course carries the light 11 of the window. The stiles 7 and the side strips 1 are of the same thickness and extending longitudinally of the inner and outer faces of the stiles and side strips are dove-tail grooves 12, each groove extending partly into the stile and partly into the side strip 1, as shown particularly in Fig. 4. Longitudinal channels or depressions 13 are formed in the stiles 7 and side strips 1 and open into the dove-tail grooves 12. These channels or depressions 13 are parallel and extend throughout the length of the sash.

The upper ends of the dove-tail grooves 12 communicate through recesses 14 formed in the upper end of the sash, each recess extending into one of the stiles and into one of the side strips, as shown in Fig. 8.

Each of the dove-tail grooves 12 is adapted to receive a key 15 in the form of an elongated strip preferably of the same length as the sash, said strip being made of any desired material such as thin metal and being dove-tailed so as to fit snugly in the groove. Furthermore said key is preferably provided with parallel ribs 16 adapted to extend into the channels or depressions 13 and thus not only tie the stiles and the side strips together but also prevent currents of air from flowing between the stiles and side strips.

The upper ends of the keys 15 are pro-

vided with heads 17 adapted to lap, as shown in Figs. 7 and 9 and to fit snugly within the recesses 14 so that the upper surface of the uppermost head 17 will lie flush with the top face of the sash.

It will be apparent that when the keys 15 are in position, the stiles 7 are held positively against swinging movement relative to the side strips 1. Should it be desired to reverse the frame 8 so as to enable a person in the room to clean the outer side of the light 11 without leaning from the window, the two keys 15 are drawn upwardly until entirely removed from the dove-tail grooves 12. The frame 8 can then be swung about the bolts 4 as pivots and after the window has been cleaned, repaired or the like, the frame 8 can be swung back to its initial position and the keys 15 reinserted into the grooves 12, thus serving to lock the stiles against swinging movement relative to the side strips 1.

If desired locking pins 17 may be extended diagonally through the stiles 7 and into the side strips 1 near the upper and lower ends thereof and, as shown in Fig. 5, one of these pins can be formed with a screw threaded end as shown at 18, although if preferred, one or more of the pins can be smooth or, in other words, free of threads. With these pins in place it is obviously impossible to swing the frame 8 relative to the side strips even though the keys should be removed. It is deemed desirable to use these pins 17' only in connection with very large window sashes.

If desired the exposed faces of the side strips 1 and stiles 7 can be faced with thin metal strips, as shown at 19 in Figs. 4 and 5. Furthermore, instead of forming the parts of the sash of wood, it will be obvious that the sash can be made entirely of metal or of any other desired material.

What is claimed is:—

1. The combination with a window sash including side strips and a frame movably mounted therebetween, there being longitudinally extending grooves in opposed faces of the sash, each groove extending

partly into a stile and partly into a side strip, of a longitudinally movable key seated in each groove for holding the sash against movement relative to the side strips, and a head at the upper end of each key, the heads of opposed keys being adapted to lap and to lie flush with the upper edge of the frame and strip in which the keys are mounted.

2. The combination with a window sash including side strips and a frame movably mounted therebetween, there being longitudinally extending grooves in opposed faces of the sash, each groove extending partly into a stile and partly into a side strip, of a longitudinally movable key seated in each groove for holding the sash against movement relative to the side strips, a head at the upper end of each key, the heads of opposed keys being adapted to lap and to lie flush with the upper edge of the frame and strip in which the keys are mounted, and longitudinally extending flanges upon each key, there being longitudinal depressions in the frame and side strips respectively for the reception of the flanges whereby said frame and side strips are held against spreading apart.

3. In a window sash the combination with a side strip and a frame movably connected thereto, there being a longitudinal groove in each side of the sash, each groove extending partly into the side strip and partly into the frame, of a dove-tailed key extending throughout the length of the frame and removably seated in the groove, and a head extending at right angles from one end of the key, there being a recess in the sash at the upper end of the groove for the reception of the head, said head, when seated in the recess, being flush with the upper edge of the sash.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FOLKE E. BRANDT.

Witnesses:

OMER E. BAILEY,
S. C. BAILEY.