F. C. BORGMEYER.

WINDOW SASH.

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918,271.

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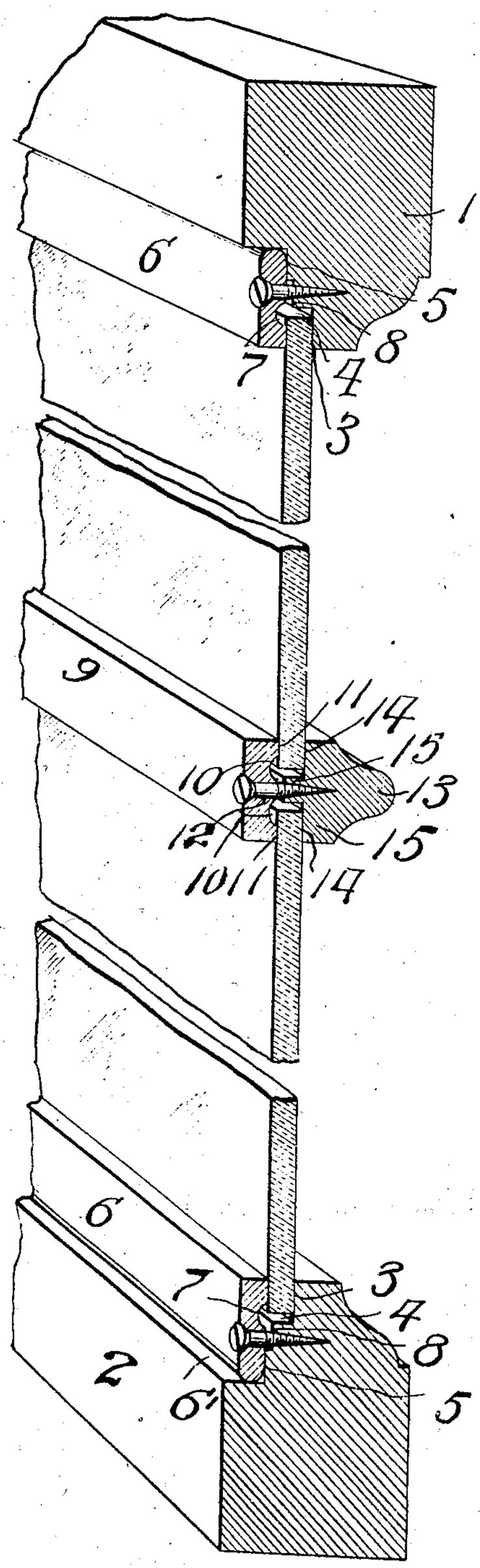

Fig 1.

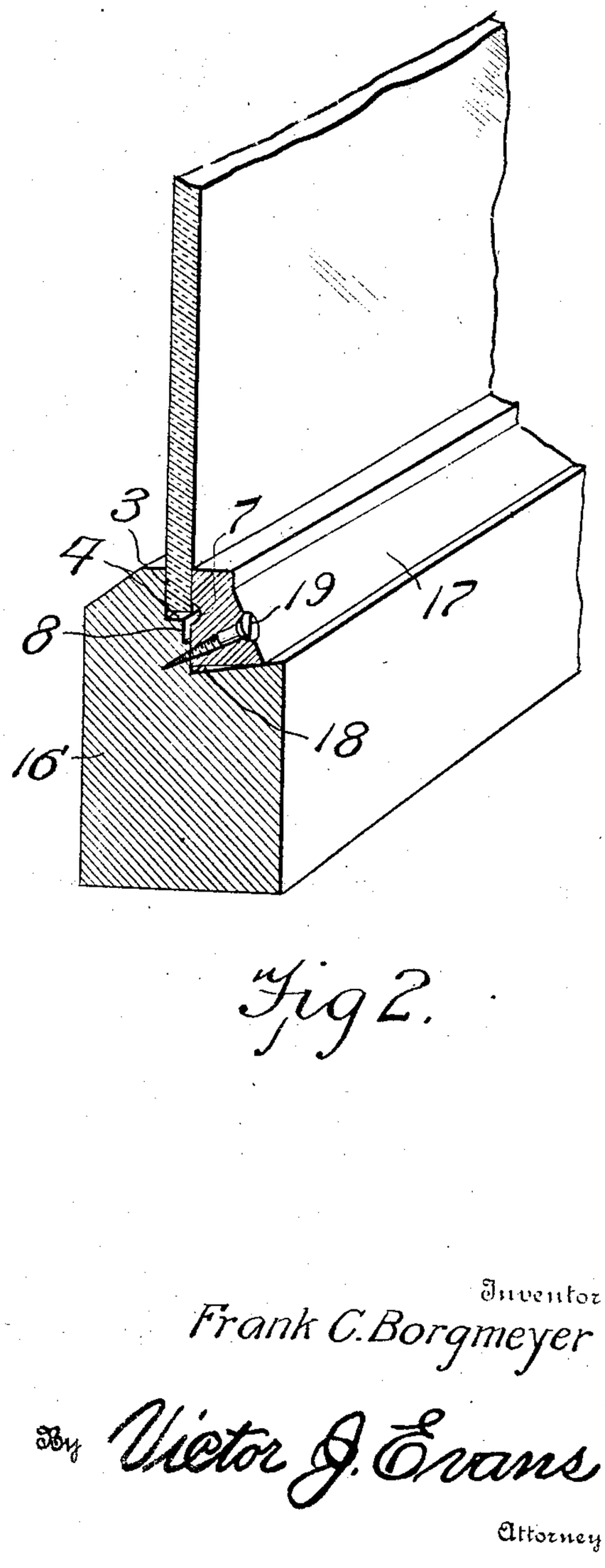

Fig 2.

Witnesses

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FRANK C. BORGMEYER, OF ST. CHARLES, MISSOURI.

WINDOW-SASH.

No. 918,271. Specification of Letters Patent. Patented April 13, 1909.

Application filed February 12, 1908. Serial No. 415,559.

To all whom it may concern:

Be it known that I, FRANK C. BORGMEYER, a citizen of the United States, residing at St. Charles, in the county of St. Charles and State of Missouri, have invented new and useful Improvements in Window-Sashes, of which the following is a specification.

This invention relates to window sashes, and the object of the invention is to provide a sash of a peculiar construction whereby the glass or transparent material may be secured to the sash, and effectively retained in position thereon, without the use of putty and springs.

With these objects in view the invention resides in the novel construction of sash frames and strips therefor, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a vertical transverse sectional view of a sash constructed in accordance with my invention, and illustrating the means employed for securing one or more glasses, thereto. Fig. 2 is a similar view of a slightly modified form of construction, which can be used to a better advantage for one glass in a sash.

In the accompanying drawings, and referring particularly to Fig. 1, the numeral 1 designates the top bar of my improved sash and 2 the bottom bar thereof. The top, side and bottom bars are of a substantially same formation, and the numeral designating the construction of one of the bars may be taken in connection with the opposite bar. The bars are of a construction similar to that commonly employed in the construction of an ordinary window frame, and are provided with a longitudinal glass receiving recess or groove 3, terminating in a shoulder 4, of a width slightly less than that of the thickness of the glass and upon which the glass is adapted to rest. The free end of the shoulder 4 is provided with a vertical wall 5, which is also provided with a shoulder 6^1, at a right angle from its connection with the vertical wall to the side of the bar. The distance between the glass receiving groove 3, and wall 5 approximately equals that of the glass or transparent material, thus providing a step-like construction upon the bars. A retaining strip 6, is employed for securing the glass upon the upper groove of the bar. This strip 6 is of a height slightly less than the distance between the inclined wall 6^1 and the top of the bar. The strip 6 is provided with a longitudinal groove 7, upon its inner face, at a point approximately equaling that of the point of engagement with the lower edge of the glass. The object of this groove 7 is to offer flexibility to the strip and allow the face of the strip secure engagement with the glass. In order to more surely provide a tight contact between the strip and the glass, the wall 5 is recessed as at 8 for a suitable distance from its connection with the horizontal wall 4 of the upper recess. This construction, it will be seen, provides a space between the inner face of the strip 6 and the engaging face of the strip when the strip is positioned against the wall 5 of the bar, and which will allow for the springing of the engaging face of the strip into contact with the glass when the screws or retaining elements are secured to the strip and the bar. With this construction it will be seen that I have provided a substantially air and water tight connection for the effective securing of glass upon a window frame.

In order to secure several panes of glass upon a frame I have provided a strip 9, provided with a pair of longitudinal grooves 10 positioned from each other so as to provide bearing faces 11 upon each side of the grooves, and a central portion 12 between the grooves. Directly opposite the strip 9, is arranged a mullion 13, provided with a central rib 15, of a width less than the thickness of the glass. Upon each side of the rib 15 the strip is provided with bearing faces 14 adapted to contact with the glass upon the opposite sides thereof to that engaged by the bearing faces 11 of the mullion 9. When the retaining elements are inserted into the mullion and strip, it will be readily seen that a tight connection between the two members is provided and that the glass is retained rigidly in position between the members.

In Fig. 2 I have illustrated a slight modification of my improvement. The bar 16, is of a similar construction and formation to that previously described, but the strip 17 has its lower edge beveled at a slightly greater angle than the bevel provided by the inclined surface 18 of the bar 16. The strip 17 is provided with a longitudinal groove near its point of engagement with the glass to allow the face of the strip to hold more securely to said glass or transparent material, and it will be seen, that when the strip is positioned upon the recess provided by the bar 16, the retaining elements 19, may be insert-

ed at an angle, to force the inclined lower face of the strip upon the inclined portion of the bar and tends to draw the strip and the bar tightly into engagement with each other, and thus force the bearing face of the strip securely against the glass.

From the above description it will be seen that I have provided a simple and effective manner of securing glass or transparent material to window frames, one by which the use of putty and springs is dispensed with, and which not only securely retains the glass upon the frame but effectively provides an air and water tight joint between the glass and the frame.

Having thus fully described the invention what is claimed as new is:

1. A window sash comprising a frame provided with glass receiving recesses, retaining strip recesses, and recesses disposed between the first and second named recess, retaining strips disposed in the second named recesses having portions spaced from the third named recess to offer flexibility to said strips, and means engaged with said frame and with said strip respectively for forcing the inner portions of said strips into engagement with a glass.

2. A window sash having a frame provided with a glass receiving recess, a retaining strip recess and a recess provided between the glass and strip recesses, a retaining strip having a longitudinal channel upon its inner face, and means engaged with the strip and with the sash for holding a portion of the strip adjacent to said channel engaged with the glass, said third named recess being provided so that said strip will yield and tightly bind at its inner end against a glass.

3. A window sash having a glass receiving recess, glass positioned within the recess, the frame having a retaining strip recess and a smaller recess communicating with the glass receiving recess, and a flexible strip secured to the sash and engaging the glass.

4. A window sash provided with glass receiving recesses, a pair of glasses disposed at their outer edges in said recesses, means carried by the sash for locking engagement with the glasses adjacent to their outer edges, said glasses midway between the upper and lower edges of the sash being disposed in spaced relation, a mullion having a rib located between the glasses, a strip disposed at the opposite sides of the glasses and provided with a pair of longitudinal grooves, and fastening devices engaged with said strip and with said mullion, the rib of the mullion being spaced from the strip to offer flexibility to the latter when said fastening devices are engaged with the said mullion.

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

FRANK C. BORGMEYER.

Witnesses:
CASPER EHRHARD,
JOSEPH A. BRASS.