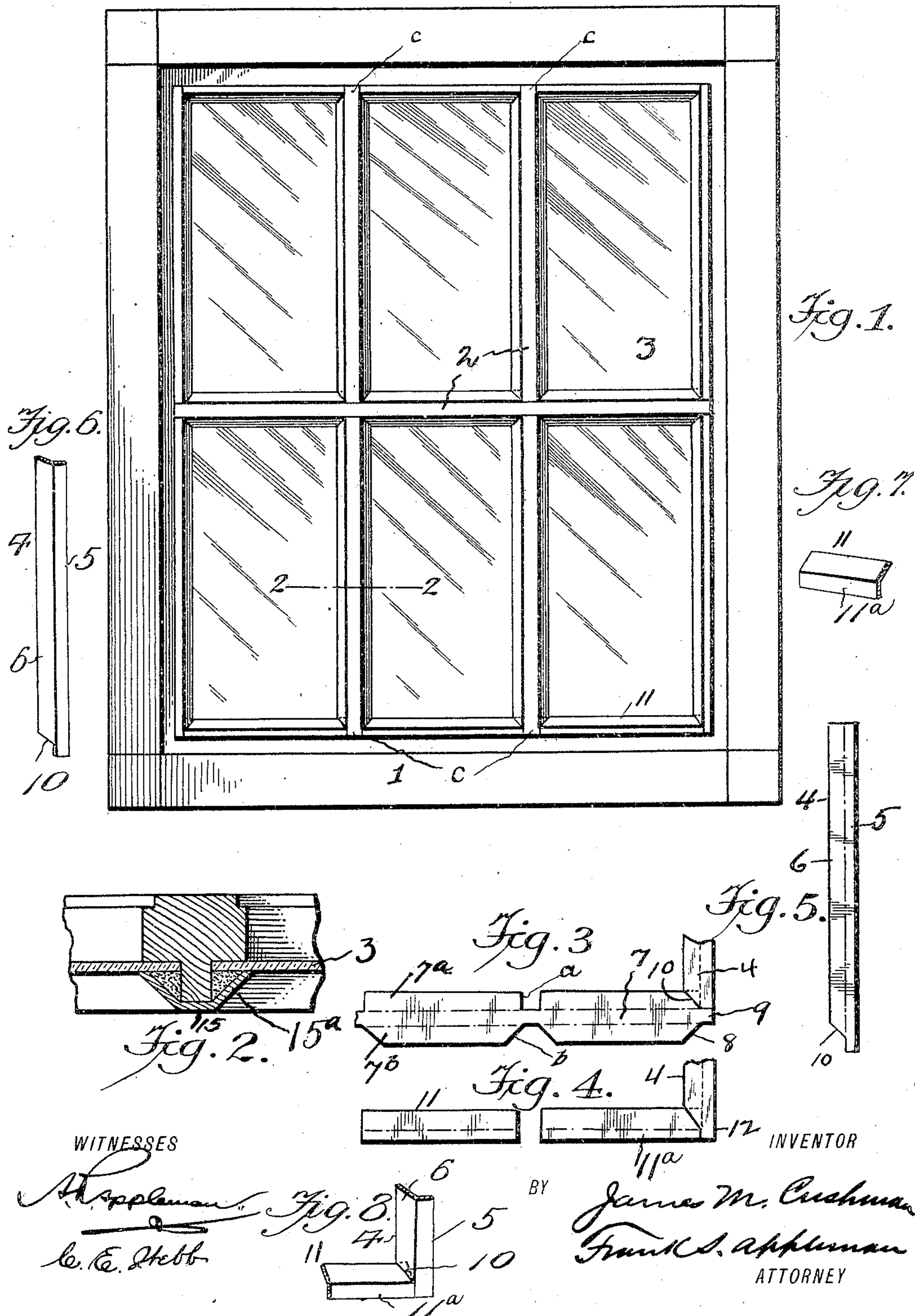


No. 789,965.

PATENTED MAY 16, 1905.

J. M. CUSHMAN.
WINDOW GLASS SECURER.
APPLICATION FILED APR. 10, 1903.



UNITED STATES PATENT OFFICE.

JAMES M. CUSHMAN, OF COLDWATER, MICHIGAN.

WINDOW-GLASS SECURER.

SPECIFICATION forming part of Letters Patent No. 789,965, dated May 16, 1905.

Application filed April 10, 1903. Serial No. 152,039.

To all whom it may concern:

Be it known that I, JAMES M. CUSHMAN, a citizen of the United States of America, residing at Coldwater, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Window-Glass Securers, of which the following is a specification.

This invention relates to devices for securing glass in windows and other sashes, such as are used in hotbed and greenhouse construction.

An object of the invention is to produce a fastener which will prevent loosening of the glass and also prevent water from gaining access to the sash.

Furthermore, an object of the invention is to produce a fastener in which a close joint is formed at the intersecting ends of the sections of the fasteners, and, furthermore, to produce a fastener which can be employed at the intersection of the sash members to form a continuous protector.

Finally, the object of the invention is to produce a glass-securing device which will possess advantages in points of simplicity, efficiency, and durability, proving at the same time comparatively inexpensive.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of the specification, wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a sash with the invention applied. Fig. 2 is a fragmental cross-section on the line 2 2 of Fig. 1. Fig. 3 is a fragmentary plan view showing the union between one of the transverse strips and a side strip, the details of the transverse strip being illustrated. Fig. 4 is a fragmentary plan view showing a union between a side strip and a bottom or top strip. Fig. 5 is a plan view of one of the side strips. Fig. 6 is a fragmentary perspective of one of the side strips. Fig. 7 is a fragmentary perspective of one of the bottom or top strips. Fig. 8 is a fragmentary

perspective showing a union between one of the bottom strips and a side strip.

In the drawings, 1 indicates a sash having the usual sash-bars 2.

The strip 4 is employed for the sides of the sash, and comprises a strip of metal having a flange 5 at one side thereof, the said flange being at an angle thereto. The flange 5 is secured to the side of the sash, and the edge 6 of the strip is adapted to bear against the glass. The strip 4 has a beveled lower end 10, terminating on a line with the flange 5.

The strip 11 is for the top or bottom of the sash and comprises a strip of metal having a flange 11^a on one side, at an angle thereto, adapted to be secured to the sash, the opposite side of the strip bearing against the glass.

The strip 7 is for the transverse sash-bars. It comprises a strip of metal having downturned portions 7^a and 7^b, the free sides of which bear against the glass, and the strip 7 proper is secured to the bars. The ends of the flange 7^a are square, while the ends of the flange 7^b are flared. The strip 7 extends entirely across the sash and has in its flanges the oppositely-disposed recesses *a*, having straight sides, while the sides of the recesses *b* are flared or beveled. The recesses *a* and *b* are to permit the strip to bridge the vertical bars.

The strip 15 is for the vertical bars and comprises a strip of metal having the downturned flanges 15^a for both, the free ends of which bear against the glass. The ends of the strips are square, while the flanges thereof are beveled.

In practice it is designed that the square upper corner of the strip 4 shall overlap the beveled edge 8, the flared end 10 of the strip 4 overlap the end of the strip 11, the ends of the vertical strips overlap the square end of the strip 11 and recess *a* of the transverse strips, and the square end of the vertical strips overlap the beveled sides of the flared recesses *b*. This is done in order that the water that may congregate on one strip will be shed onto the next strip in such a manner as not to reach the sash.

In order to effect a closer joint, projections 9, 12, and *c* are employed.

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

In combination with a window-sash having
5 vertical sash-bars, of strips having flanges at
their sides secured to the sides of the sash,
said strips having beveled lower ends; of strips
for the transverse bars extending entirely
across the sash, said strips having downturned
10 flanges at their sides, the said flanges being
provided with oppositely-disposed recesses,
one of said recesses having straight sides,
while the sides of the opposite recesses are

flared, said recesses being for the purpose of
bridging the vertical bars of the sash, strips 15
for the top and bottom of the sash lapping
with the side strips and strips for the vertical
bars having downturned portions, as and for
the purpose described.

In testimony whereof I affix my signature, 20
in the presence of two witnesses, this 17th day
of March, 1903.

JAMES M. CUSHMAN.

Witnesses:

HATTIE A. WELLS,
DUDLY M. WELLS.