E. T. GASKILL.

SASH FRAME HOLDING MEANS.

APPLICATION FILED JULY 2, 1913.

1,142,954.

Patented June 15, 1915.

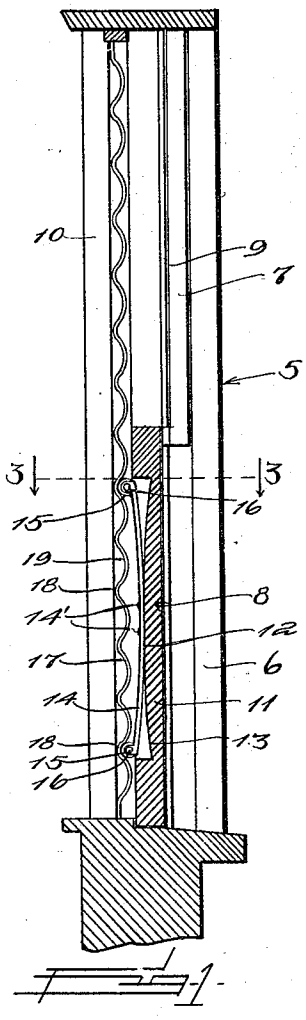


Fig. 1.

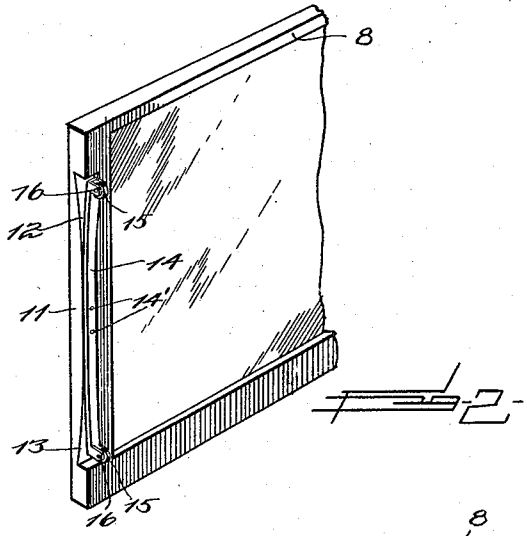


Fig. 2.

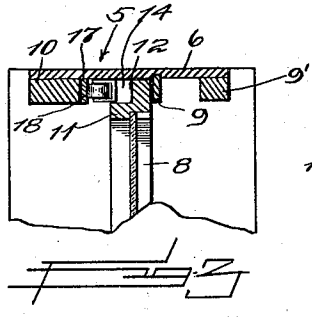


Fig. 3.

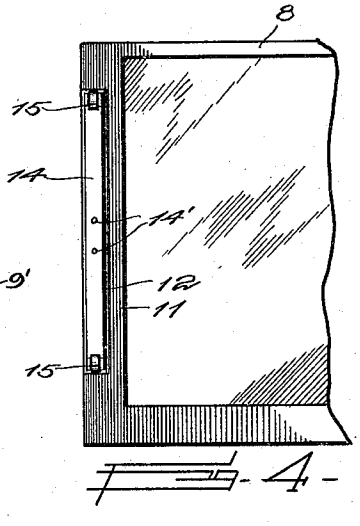


Fig. 4.

Inventor

Elijah T. Gaskill,

Witnesses

M. Lyles.

By C. L. Parker.

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELIJAH T. GASKILL, OF NEWBERN, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO JAMES A. BRYAN, OF NEWBERN, NORTH CAROLINA.

SASH-FRAME-HOLDING MEANS.

1,142,954. Specification of Letters Patent. Patented June 15, 1915.

Application filed July 2, 1913. Serial No. 777,064.

To all whom it may concern:

Be it known that I, ELIJAH T. GASKILL, a citizen of the United States, residing at Newbern, in the county of Craven and State of North Carolina, have invented certain new and useful Improvements in Sash-Frame-Holding Means, of which the following is a specification.

My invention relates to window constructions wherein novel spring means are provided to hold the sash or sashes in adjustment at desired vertical positions.

An important object of this invention is to improve, in general, the construction of the means of the above mentioned character, whereby the same are rendered more convenient in use, durable, and efficient in fulfilling their function.

A further object of the invention is to provide novel spring means to hold the sash or sashes in adjustment at desired vertical positions, such means being so constructed that the same will evenly distribute the pressure upon the sash, whereby the same is not only held against vertical movement but both ends thereof are held against shaking or rattling.

A further object of my invention is to provide means of the above mentioned character which may be installed upon many different window structures, without materially altering their construction.

A further object of this invention is to provide means of the above mentioned character which are simple in construction, cheap to manufacture, strong and durable.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a longitudinal sectional view through the window structure, taken adjacent and inwardly of one of the side portions thereof, Fig. 2 is a perspective view of the lower sash, parts being broken away, Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 1, and, Fig. 4 is an outer side elevation of the lower sash frame, parts thereof being broken away.

In the drawings, wherein is illustrated a preferred embodiment of my invention, the numeral 5 designates a window frame, as a whole, including upstanding side pieces 6, as shown.

The numeral 7 designates an upper preferably stationary sash frame, while the numeral 8 designates a lower vertically movable sash frame. Disposed between the sash frames 7 and 8 is a parting-bead 9, as shown.

The numeral 9′ designates an inner binding strip, and 10 an outer binding strip.

The lower sash frame 8 includes oppositely arranged vertical strips or sides 11, each of which is provided upon its outer face with a longitudinal recess or opening 12, having a longitudinally curved bottom wall 13, the ends of which are curved or bowed inwardly toward their opposite ends, as more clearly illustrated in Fig. 1. Disposed within each of the openings or recesses 12 is a suitably stiff leaf-spring 14, which is attached to the side 11 by means of screws 14′ or the like, the same being disposed equidistantly between the ends of the leaf-spring. The leaf-spring is permanently bowed or curved longitudinally throughout its entire length, the same extending outwardly toward its opposite ends, that is, in opposite direction to the curvature of the wall 13. The curved leaf-spring 14 preferably has its free ends forked, to receive rollers 15, held therein by means of pins 16 or the like.

Mounted upon the inner face of each binding strip 10 is a preferably rigid serpentine track or rail 17, attached thereto by any suitable means. This track or rail is engaged by the rollers 15. The serpentine track or rail is formed of alternate small outwardly extending turns 18 and large inwardly extending turns 19, the same being made upon the arc of circles having different length diameters. The turns in each set are made upon arcs of circles having the same length diameters. Each small and large turn is curved in opposite directions in uniform manner, the small turns being formed upon the arc of a circle having a radius of a same length as the radius of the peripheries of the rollers 15, whereby the rollers will fit snugly therein. The large turns 19 so space the small turns that the two rollers 15 carried by the leaf-spring will always move into registration with two of the small turns, whereby the spring will uniformly distribute the pressure upon the sash frame. By providing the inwardly longitudinally curved wall 13 to the central portion of which is

attached the outwardly longitudinally curved leaf-spring 14, upon swinging the free ends of the leaf-spring 14 inwardly, the inner portions thereof engage the wall 13, whereby the length of the end portions of the leaf spring are gradually shortened, with the result that the pressure that the leaf-spring affords is gradually increased. By this means the leaf-spring may be constructed relatively slight and at the same time properly hold the sash frame in place.

It is obvious that the sash frame 8 may be moved vertically to the desired position, and will be held therein by the leaf-spring or springs 14 and associated elements.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that certain changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having described my invention, I claim:—

In combination; a window frame provided with spaced guide strips; a vertically movable sash frame disposed for movement between the guide strips and provided upon one side thereof with a longitudinal recess terminating near and spaced from the opposite ends of the sash frame and having a longitudinally curved bottom wall increasing in depth toward the opposite ends thereof; a serpentine track secured to the inner side of one guide strip and having alternate large and small equidistantly spaced turns, all of the small turns having substantially the same radii; a normally longitudinally curved leaf spring arranged upon one side of the sash frame within the longitudinal recess and terminating near and spaced from the opposite ends of the sash frame with its ends extending away from the sash frame; means rigidly attaching the central portion of the curved leaf spring to the intermediate portion of the curved bottom wall of the longitudinal recess; and rollers attached to the opposite ends of the leaf spring and adapted to simultaneously engage within two of the small turns, said rollers having substantially the same radii as the small turns.

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

ELIJAH T. GASKILL.

Witnesses:
C. K. Steth,
W. W. Griffin.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."