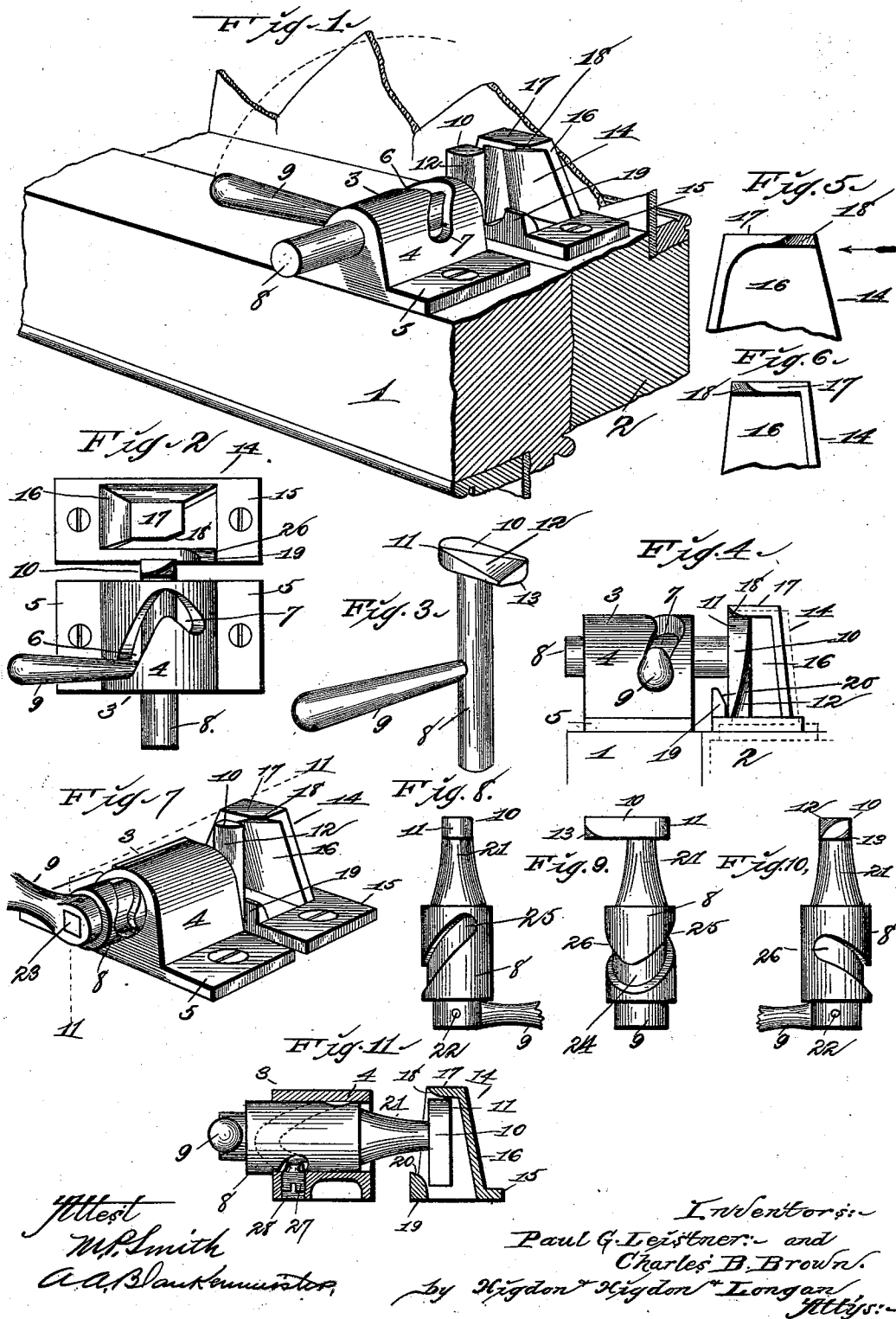


(No Model.)

P. G. LEISTNER & C. B. BROWN.
SASH FASTENER.

No. 549,924.

Patented Nov. 19, 1895.



UNITED STATES PATENT OFFICE.

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SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 549,924, dated November 19, 1895.

Application filed September 17, 1894. Serial No. 523,231. (No model.)

To all whom it may concern:

Be it known that we, PAUL G. LEISTNER and CHARLES B. BROWN, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Sash-Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to sash meeting-rail fasteners of that class in which a diagonally-slotted casing or housing is made use of, in which slotted casing operates a bolt.

The object of our invention is to construct a simple and inexpensive meeting-rail fastener, the same to be positive in its action and firmly lock the sash together.

A further object of our invention is to construct such an improved fastener with a rocking bolt having a cross-head that when the meeting-rails of the sash to which the parts of the fastener are secured are by various reasons separated a slight distance, or one of said sash-rails be slightly higher or lower than the other, the action of the bolt will be to draw the sash-rails tightly together and to their proper positions.

Our invention consists in a diagonally-slotted casing adapted to be attached on top of the upper rail of the lower sash, an axially movable or rocking bolt operating within said casing, said bolt being provided with a transverse cross-head that projects on opposite ends of said bolt, and that is adapted to enter a retaining-socket securely positioned upon the upper side or the lower rail of the upper sash.

Our invention further consists in certain novel features of construction, combination, and arrangement of parts hereinafter described and claimed.

Referring to the drawings, Figure 1 is a perspective view of our improved fastener, the same being in position upon the sash meeting-rails, as required for practical use. Fig. 2 is a top plan view of our improved fastener. Fig. 3 is a view in perspective of the bolt of which we make use in carrying out our invention. Fig. 4 is a side elevation of the fastener, the bolt here being shown in engagement within the retaining-socket. Fig. 5 is a detail view

of the top portion of the retaining-socket and showing a beveled edge thereof. Fig. 6 is a detail view of the top of the retaining-socket, this view being taken as indicated by the arrow in Fig. 5. Fig. 7 is a perspective view of a modified form of our fastener, the diagonal slot being located in the bolt instead of in the casing. Fig. 8 is a side elevation of the bolt used in our modified form. Fig. 9 is a front elevation of this bolt, and Fig. 10 is another side elevation of the bolt. Fig. 11 is a cross-sectional view on the line 11 11 of Fig. 7.

Referring by numerals to the accompanying drawings, 1 indicates the top rail of the lower sash, and 2 the lower rail of the top sash, these being of the ordinary construction.

Mounted in practice upon the top surface of the rail 1 is the casing 3, said casing consisting of a bottomless semicircular body 4, from which extend in opposite directions the ears or flanges 5, by means of which said casing is mounted upon the sash-rail.

In the body 4 of the casing is formed a slot which is really a double diagonal slot, the longer portion of said slot 6 extending from the lower left-hand side to the uppermost point of the semicircular casing. From thence it continues on the right-hand side of the casing, terminating at a point approximately in the center of said right-hand side, this latter diagonal portion of the slot being designated by the numeral 7.

Passing longitudinally through the body portion 4 of the casing 3 is a bolt 8, the same being provided at a point near its longitudinal center with a handle 9, that extends at right angles to the bolt 8 and out through the double diagonal slot. This handle is preferably screwed into the body of the bolt 8.

On the forward end of the bolt 8 is a cross-head 10, the ends of which project free on opposite sides of the bolt, and the head being approximately rectangular, constructed with a long arm and the rounded shorter arm 11, beveled face 12, and beveled corner 13.

Mounted in practice adjacent the corner 3 upon the top surface of the lower rail of the top sash, is the retaining-socket 14, the same comprising a rectangular plate 15, through

the ends of which pass ordinary screws whereby the retaining-socket is firmly secured upon the lower rail of the top sash. Extending upwardly from the central portion of the plate 15 is a casing 16, the same being approximately of pyramidal shape, having a flat top 17. The forward and right-hand or one side of this casing 16 is open. The under side of the lower left-hand corner of the top 17 is beveled, as indicated by 18.

Extending upwardly from the plate 15, on the forward edge thereof, is a lug 19, the same being provided with the beveled face 20 on the inside thereof.

In the modified form of our device the casing 3 is almost identical with the one just described, with the exception that the double diagonal slot 6 and 7 is dispensed with. The retaining-socket 14 is in every way similar to the one previously described. In this form the bolt 8 is enlarged throughout its body portion, the forward end being tapered as indicated by 21, on the forward end of which is the head 10, in every way similar to the one previously described. The handle 9 is secured by means of a pin 23 to the squared end 22 of the bolt 8.

In the periphery of the enlarged portion of the bolt 8 is constructed a double diagonal slot 24, one end 25 of which is somewhat longer than the other end 26. A screw-threaded plug 27 passes through an interiorly-screw-threaded aperture 28 in the rear of the plate 5. The upper end of said screw-threaded plug engages in the slot 24, thereby retaining the bolt within the casing 3 and controlling the movement of said bolt.

The operation of the preferred form of our device is as follows: The various parts being in the positions as shown in Figs. 1 and 2, and it is desired to lock the sash together, the operator grasps the handle 9 and moves the same in the direction of the dotted lines in Fig. 1. Thus the bolt 8 will be rotated, and at the same time, by reason of the handle 9, passing through the long portion of the double diagonal slot, said bolt 8 and head 10 will be thrown forward and toward the retaining-socket. When the handle 9 has reached the apex of the double diagonal slot, or at the meeting-point of the portions 6 and 7, the bolt 8 and head 10 will have made a quarter of a turn, and said head 10 will be within the retaining-socket 14. As the handle 9 is continued in its movement, and the bolt 8 rotates by reason of the inclination of the portion 7 of the double diagonal slot, the corner 13 of the head 10 will engage against the beveled inner surface 20 of the lug 19, and as the handle 9 is located in the lower end of the portion 7 of the slot, the end of the head 10 in which the beveled corner 13 is located will be located in the rear of the lug 19 and the forward portion of the plate 15, thereby securely positioning the head 10 within the retaining-socket and first draw-

ing and finally locking the sash together. By reason of the beveled surface 12 of the long arm of the head 10 and the beveled corner 18 of the retaining-socket, said head 10 can easily pass within the retaining-socket, though said retaining-socket be slightly out of alignment or out of the path of travel of the head 10. Should the lower rail of the upper sash, on which the retaining-socket is mounted, be positioned slightly below the top rail of the lower sash, and said sash-rails be slightly apart, as indicated by dotted lines in Fig. 4, when the head 10 enters the retaining-socket the socket and lower rail of the upper sash will be raised to the proper point by the short rounded arm 11 of the head 10 engaging against the under side of the top 17 of the retaining-socket and raising the same. At the same time the two rails of the sash will be thrown together by the corner 13 engaging against the beveled inner side 20 of the lug 19, together with the movement of the handle 9 within the portion 7 of the slot, whereby the bolt 8 is given a movement that would tend to draw together the two rails of the sash.

The operation of the modified form of our device is practically the same as the operation just described.

By reason of the plug 28, the upper end of which is located in the slot 24, the movement of the bolt is guided and restricted, said movement being in every way similar to the movement of the bolt that operates in the slotted casing 3.

Thus it will be seen how we have constructed a sash-fastener that possesses superior advantages in point of simplicity, durability, and general efficiency.

What we claim is—

1. The improved meeting rail-fastener, comprising a casing provided with suitable means for securing it upon one sash, a suitable bolt in said casing, suitable means for rocking and sliding said bolt, a laterally-projecting short arm 11, a long arm projecting opposite said short arm a greater distance than the latter, and a retaining socket 15 adapted to be mounted upon the upper side of the lower rail of the upper sash, and provided with an opening that is vertically and horizontally of greater dimensions than the combined length of both of said arms of said bolt, and provided with an overhanging ledge to engage said short arm and a lug to engage said long arm, substantially as herein specified.

2. The improved meeting rail fastener, comprising a casing provided with suitable means for securing it upon one sash, a suitable bolt in said casing, suitable means for rocking and sliding said bolt, a laterally-projecting short arm 11 the free end of which is rounded, a long arm projecting opposite said short arm a greater distance than the latter and having the outer beveled face 12 and the beveled corner 13, and a retaining socket 16 adapted to be mounted upon the upper side of the lower

5 rail of the upper sash, and provided with an opening that is vertically and horizontally of greater dimensions than the combined length of both of said arms of said bolt, and provided with an overhanging ledge to engage said short arm and a lug to engage said long arm substantially as herein specified.

In testimony whereof we affix our signatures in presence of two witnesses.

PAUL G. LEISTNER.
CHAS. B. BROWN.

Witnesses:

E. E. LONGAN,
MAUD GRIFFIN.