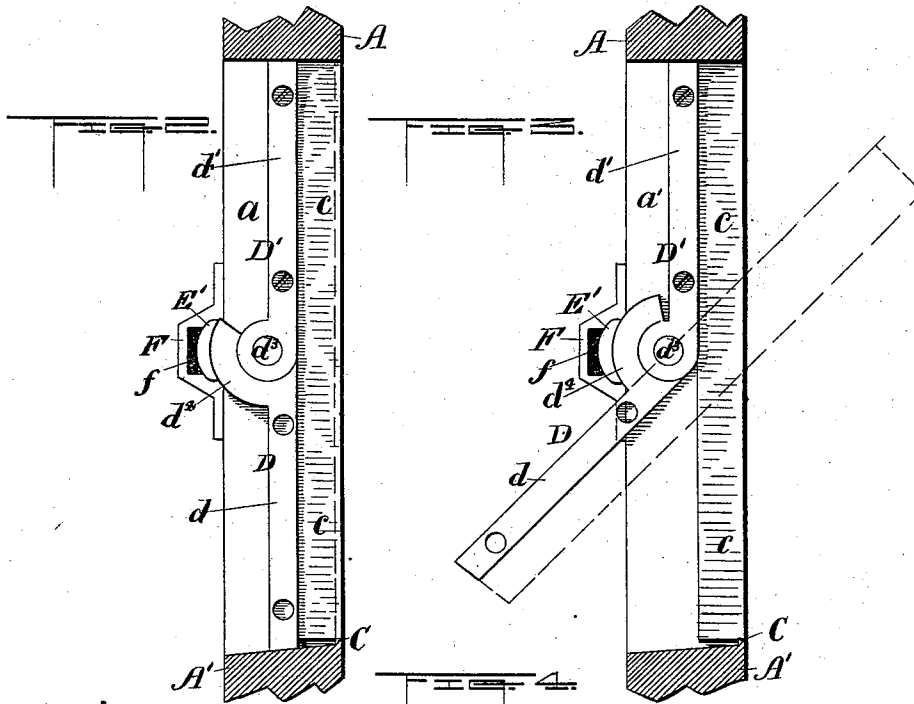
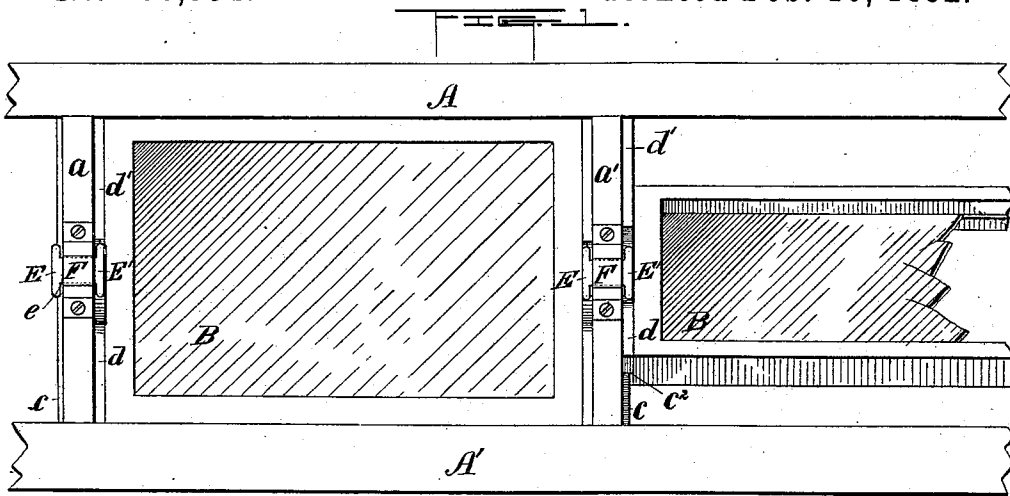


(No Model.)

H. MACFARLAND.
TRANSOM LIFTER.

No. 468,954.

Patented Feb. 16, 1892.



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UNITED STATES PATENT OFFICE.

HENRY MACFARLAND, OF BROOKLYN, NEW YORK.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 468,954, dated February 16, 1892.

Application filed November 16, 1891. Serial No. 411,976. (No model.)

To all whom it may concern:

Be it known that I, HENRY MACFARLAND, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Ventilator Attachments, of which the following is a specification.

My invention relates to an improvement in ventilator attachments, in which provision is made for holding a swinging sash at any desired angle and for preventing the passage of rain and dust through the joints between its ends and the frame in proximity to which they swing.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents in side elevation one of the swinging sections complete and a portion of an adjacent section. Fig. 2 is a view in transverse section taken on a line between the sash and the hinge and showing the hinge and frame contiguous thereto in elevation, the hinge being in the position which it assumes when the sash is closed. Fig. 3 is a similar view showing the position of the hinge when the sash is swung open, and Fig. 4 is a view in perspective in detail of one of the sections of the hinge.

The particular form of sash and frame which I have chosen to illustrate my invention is that adapted for use in connection with a street-car. I do not, however, wish to limit myself to its particular use in this connection, as it is well adapted for general use wherever a swinging sash is employed for purposes of ventilation.

A represents the upper and A' the lower rails of the frame, which are connected at suitable intervals by cross-bars or posts *a a'*, &c., forming sections within which the swinging sashes B B', &c., are mounted. The lower rail A' is provided along its inner and upper edge with a step C, against which the lower edge of the sash is adapted to abut when the sash is swung into a closed position, and the adjacent faces of two consecutive posts *a a'* are provided with jambs *c*, extending from top to bottom of the posts and either formed integral with or secured snugly to the posts. The sash is of such length as to fit with an easy swinging movement between the adja-

cent faces of the jambs *c*, while the sections of the hinges serve to form a water and dust tight closure between the ends of the sash and the edges of the jambs, as follows: As the several hinges are quite similar in their structure, a description of one will be sufficient for all. One section D of the hinge is secured to the end of the sash and the other section D' of the hinge is secured to the post at the end of the sash. Each of the sections D D' is provided with a shank, that on the section D being denoted by *d* and that on the section D' being denoted by *d'*. The shanks *d d'* extend in opposite directions from the central portion of the end of the sash, the shank *d'* occupying a position snugly against the edge of the jamb *c* and projecting toward the end of the sash beyond the face of the said jamb. The other shank *d* extends along the end of the sash and abuts against the edge of the jamb *c*, preferably formed by rabbeting the ends of the sash, and projects beyond the end of the sash sufficiently to swing into position and abut against the edge of the jamb *c* on the post. The head of the hinge-section D is provided with a socket *d²*, extending to a depth equal to about half the thickness of the section, and the head of the hinge-section D' is reduced in thickness and depth to fit within the socket *d²* within the head of the section D. The two sections of the hinge are united by a pivot *d³*, extending centrally through the socket in the section D and through the head of the section D', seated in said socket. Said pivot may conveniently be a rivet seated sufficiently loose to permit the hinge-section D to turn upon the head of the section D'.

To hold the sash in any desired swinging adjustment, I provide a shoe E, adapted to engage the curved edge of the extension *d⁴* on the head of the hinge-section D, the said shoe being normally pressed against said curved edge by means of a spring. In the present instance I have shown the shoe E as connected by a shank *e* with a corresponding shoe E' in position to engage the hinge-section D at the end of the next adjacent sash, and have secured the shoes in place by means of a clip F, attached to the face of one of the posts and embracing the shank *e*, a spring-cushion *f*—of

rubber, for example—being inserted between the shank *e* of the shoes and the inner face of the clip, so as to exert a constant pressure on the shoes *E E'* in a direction to cause them to exert a frictional grip upon the hinge-section. It will be observed that when the sash is closed the joint between the post and the end of the sash is perfect, because of the engagement of the shanks of the hinges with the edges of the jambs upon the face of the post and the end of the sash, respectively, and that said joint is what is commonly termed a "broken joint," which will effectually prevent the direct driving of the dust or rain there-through. It will further be observed that the hinge-sections not only perform the function of closing the joints dust and rain tight, but also have an extended bearing along the end of the sash and side of the post, whereby a very secure attachment is made which will not be liable to work loose or become strained by the repeated swinging of the sash.

What I claim is—

1. The combination, with the swinging sash and the post or frame adjacent thereto, the end of the sash and the adjacent face of the post or frame being each provided with an

abutment or shoulder extending along between the said sash and post or frame, of a hinge the sections of which are provided with extended shanks, the one in position to engage a portion of the abutment on the sash and the other a portion of the abutment on the post or frame when the sash is closed, substantially as set forth.

2. The combination, with the swinging sash, its frame, and the hinge for securing the sash to the frame, the said hinge being provided with a projection, of a spring-actuated bearing-shoe in position to engage the projection on the hinge and hold the sash in the desired adjustment, substantially as set forth.

3. The combination, with two adjacent spring-hinged sections provided with projections extending therefrom, the shoes in position to engage said projections, and a clip for holding the two shoes in position, of the spring-cushion for exerting pressure simultaneously upon the two shoes, substantially as set forth.

HENRY MACFARLAND.

Witnesses:

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