

J. BENZ & P. ROSSBACH.
VENTILATING SASH.
APPLICATION FILED NOV. 10, 1909.

957,836

Patented May 10, 1910.

2 SHEETS—SHEET 1.

FIG. 1.

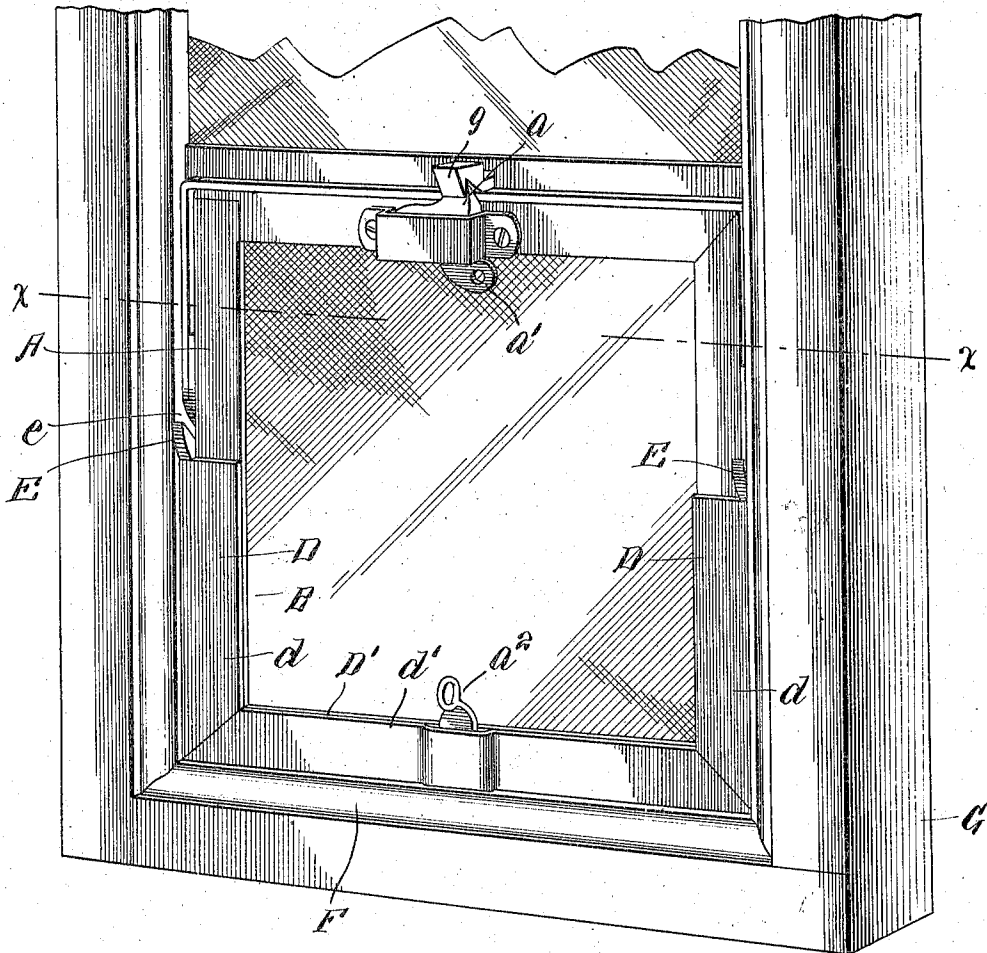
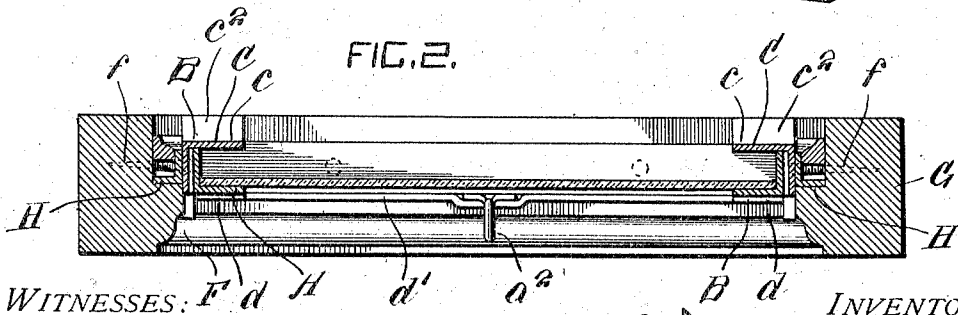


FIG. 2.



WITNESSES:

H. F. Koye
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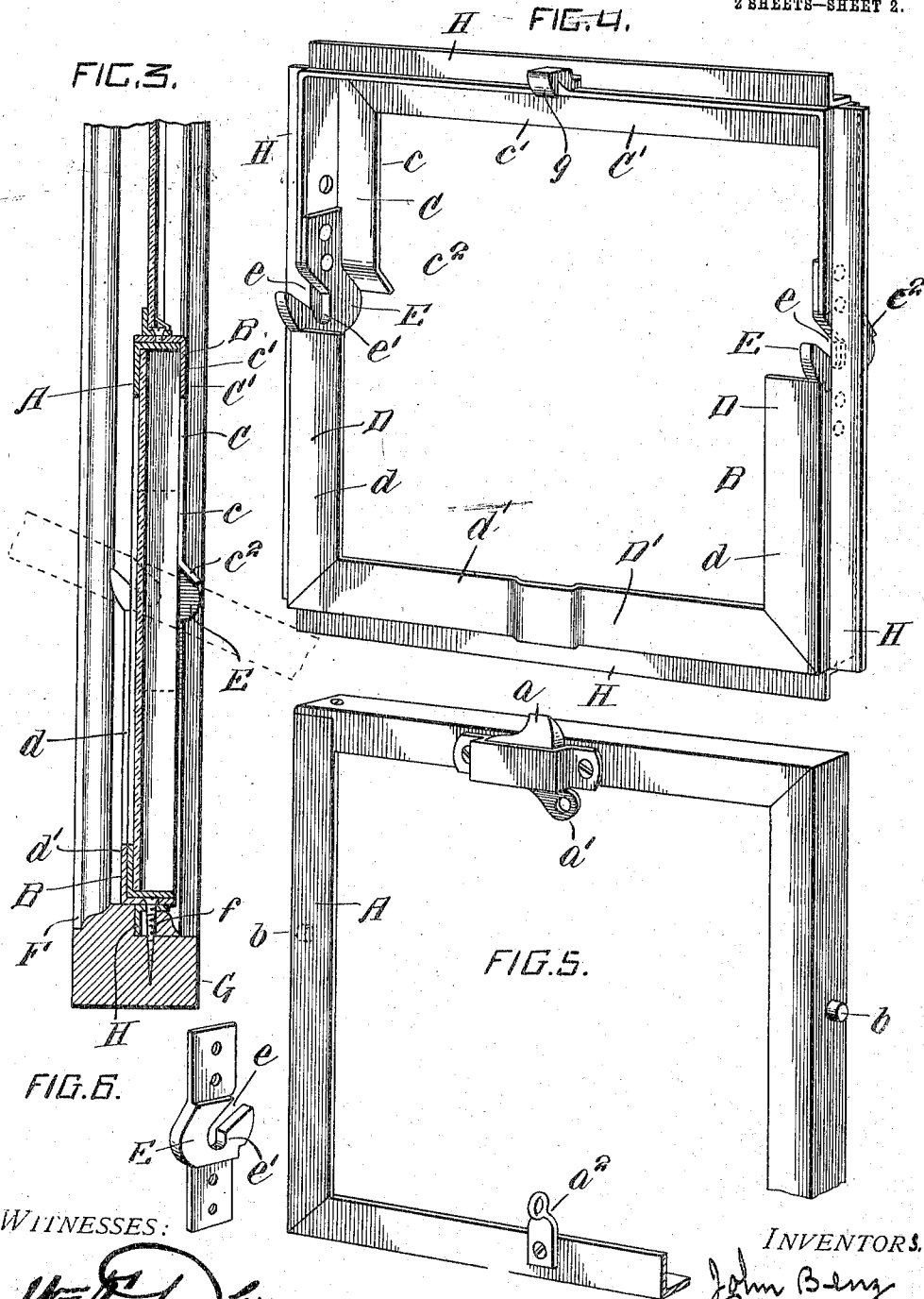
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN BENZ AND PAUL ROSSBACH, OF CHICAGO, ILLINOIS.

VENTILATING-SASH.

937,836.

Specification of Letters Patent. Patented May 10, 1910.

Application filed November 10, 1909. Serial No. 527,253.

To all whom it may concern:

Be it known that we, JOHN BENZ and PAUL ROSSBACH, citizens of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ventilating-Sash; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in ventilating devices, for attachment to windows, and consists of an adjustable sash and sash frame, the latter being adapted to be mounted in a window frame, and in such a manner that ventilation may be obtained without raising or otherwise opening the entire window.

Our invention is especially adapted for use in connection with long windows, used in churches or other large edifices, and in which small panes of stained glass are mounted and which are intended to remain permanently closed.

In using such ventilators heretofore, it has been necessary to cut the molding which retains the glass in the main frame, but by our construction this objectionable feature is avoided.

There are other novel and useful features of our invention which will be pointed out hereafter.

In order that our invention may be clearly understood, we have illustrated it in the accompanying drawings and described it in the following specification, the specific details of the invention being more particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a portion of a window and frame provided with our improved ventilating sash. Fig. 2 is a sectional view of the same, on line *x-x* of Fig. 1 and looking from above. Fig. 3 is a vertical sectional view of the same. Fig. 4 is a perspective view of the ventilator sash frame looking from the front. Fig. 5 is a similar view of the sash. Fig. 6 is a view of one of our improved couplings.

Similar letters of reference indicate identical parts throughout.

A represents our improved ventilating sash which is constructed of angle iron and

bent in the form shown in the drawings, the meeting ends being united in any desired manner.

The sash may, if desired, be stamped from a single piece of sheet metal, and bent into the desired form.

The top of the sash is provided with a spring latch *a* of any desired form, having means as *a'* to operate the same. A part *a²* may be secured to the bottom of the sash to be used by the operator in opening and closing the ventilator.

Oppositely disposed pivots or trunnions *b b* are provided in the vertical sides of the sash upon which the ventilator sash is supported.

B represents the frame in which the sash is set and consists of an upper and lower section.

The upper section may be made of angle iron bent into the form shown in the drawings and consists of the flanges C, C adapted to lie parallel with the vertical sides of the sash and a horizontal flange C' connecting the upper ends of the flanges C, C.

The flanges C, C are bent inwardly, as at *c c* and the flange C' is bent downwardly as at *c'*, all being so arranged that the rear edges of the upper part of the sash when it is closed, fit snugly against these flanges.

The lower ends of the flanges *c c* are deflected as at *c²* for the purpose of protection against rain, or water used in washing the windows.

The lower section of the sash frame B is constructed substantially in the same manner, with inturned flanges *d d* and *d'* from flanges D, D' except that the flanges *d, d* and *d'* project from the front edges of the flanges D, D' while the inturned flanges *c, c, c'* project from the rear edges of the flanges C, C', it being understood that the flanges C, C and D, D when united, as hereafter described, form continuous pieces.

The upper and lower portions of the frame B are united by means of the couplings E, E, rigidly secured to the flanges C, C and D, D on the inner sides. The couplings E are preferably constructed as shown in Figs. 4 and 6 of the drawings and project slightly beyond the edges of the flanges C, C and D, D and are provided with slots *e* which lead to bearings *e'* for the trunnions or pivots *b b* of the sash. These couplings are preferably constructed to be

fastened to the inner faces of the sides of the sash frame, and the said sides are cut away to allow a part of the couplings to intervene between the sections, the outer faces of said couplings and sides of the frame being flush. That portion of the coupling in which the bearings are formed is preferably thicker than the sides of the frame.

It is obvious that when the sash is turned on its pivots, only those portions of the vertical sides which contact with the couplings will give rise to any friction, so that the friction is reduced to a minimum.

The flanges C, C and D, D are adapted to be set within the molding F of the window frame and to extend rearwardly therefrom. In order to secure the frame of the ventilator sash in the window frame G, angle irons H are provided for the sides of the sash frame, one flange of the said angle irons being adapted to lie against the rear side of the molding F, flush with its inner edge and the other flange of said angle iron along the sides of the sash frame. Bolts or screws *f* are passed through the sides of the sash frame and flange and into the window frame to secure the sash frame in place. An additional molding may be inserted in the window frame in the rear of the flange of the angle iron which extends laterally, to further secure the same.

The angle iron which extends along the top of the sash frame may be screwed or riveted thereto and is provided with flexible metal clamps to engage the glass of the main window. This angle iron is also provided with a catch *g* adapted to be engaged by the spring bolt of the latch *a* of the ventilator sash.

The operation of our improved sash is obvious. When it is desired to open the same, the bolt of the latch is retracted and the sash swung outwardly as far as desired.

By our use of the slotted bearings for the pivots or trunnions of the sash, it is obvious that the ventilator sash can be readily removed for any desired purpose.

What we claim and desire to secure by Letters Patent is:—

1. An improvement in ventilators comprising a metal frame made in sections, united by metal couplings, secured to the sides of the frame, a part of said couplings intervening between the sides of the frame sections and having their outer surfaces flush with the outer surfaces of the sides of the frame sections, said couplings being provided with slots forming pivot bearings, the inner surfaces of the central portions of the said couplings which intervene between the said sections being thickened and projecting slightly beyond the inner surfaces of the sides of the frame whereby frictional contact between the sides of the frame and sash is limited to the inwardly projecting portions of said couplings.

2. An improvement in ventilators comprising a metal frame made in sections, united by metal couplings, secured to the sides of the frame, a part of said couplings intervening between the sides of the frame sections and having their outer surfaces flush with the outer surfaces of the sides of the frame sections, said couplings being provided with slots forming pivot bearings, the inner surfaces of the central portions of the said couplings which intervene between the said sections being thickened and projecting slightly beyond the inner surfaces of the sides of the frame, the said frame being provided with angle irons secured to the outer faces of the sides thereof having one flange extending outwardly from the frame, whereby the sides of the frame are additionally strengthened and braced in the window frame.

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

JOHN BENZ.
PAUL ROSSBACH.

Witnesses:

HENRY H. PIERCE,
IRA G. WOODEN.