

May 13, 1924.

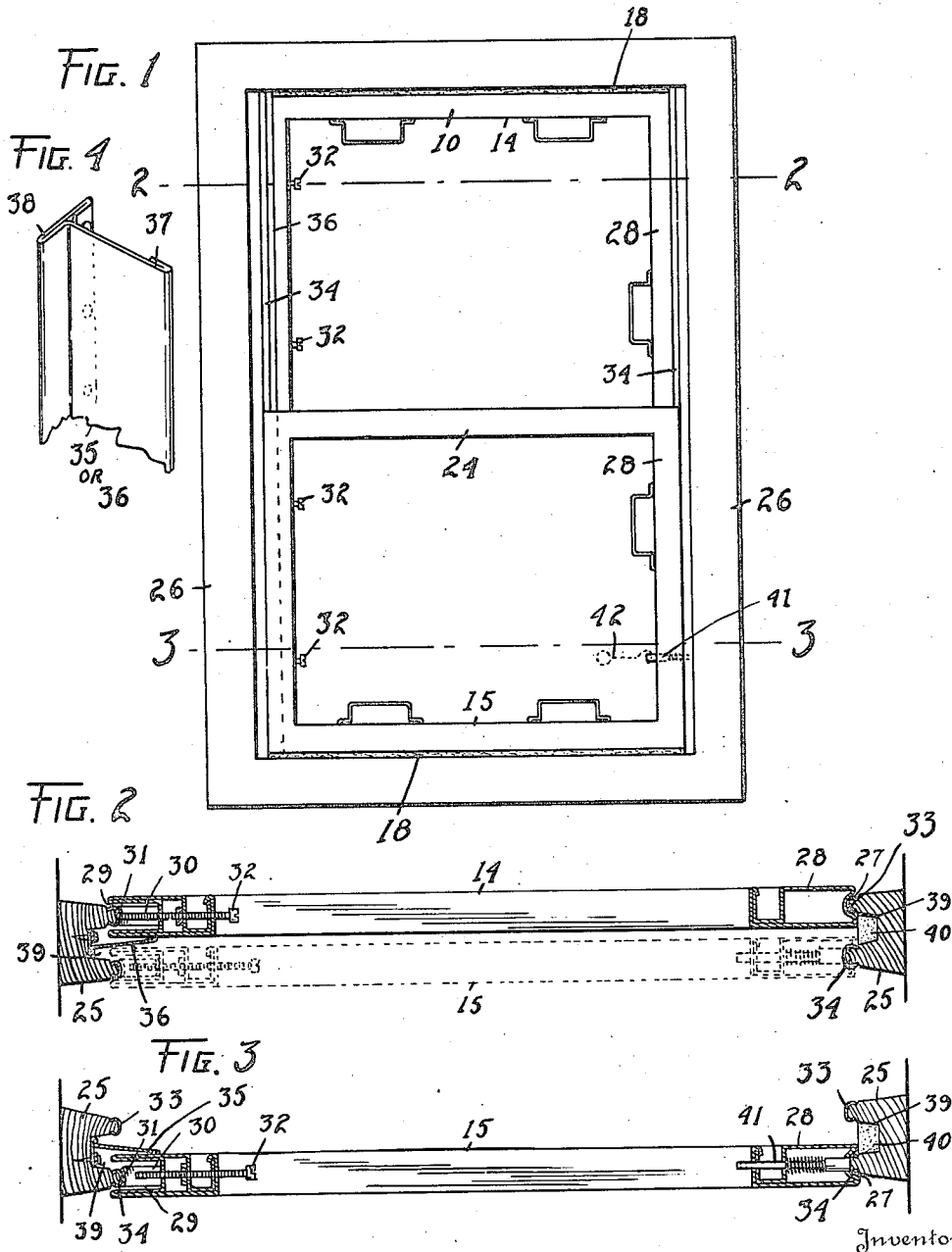
1,493,750

H. E. HOLBROOK

DUST STRIPPING FOR SCREENS

Filed Feb. 15, 1922

2 Sheets-Sheet 1



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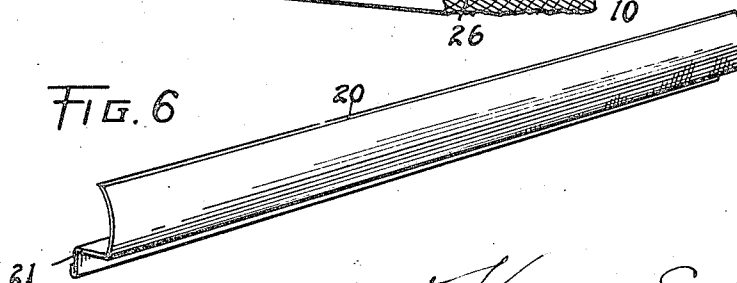
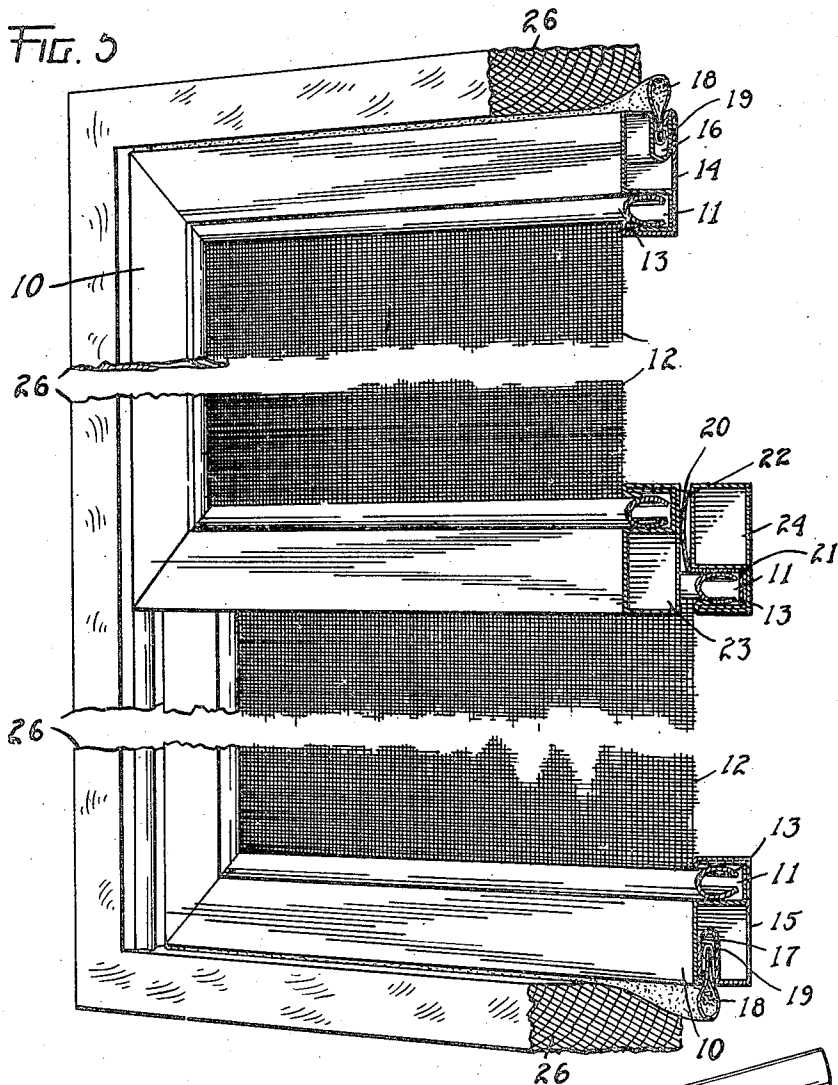
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

HENRY E. HOLBROOK, OF BOSTON, MASSACHUSETTS.

DUST STRIPPING FOR SCREENS.

Application filed February 15, 1922. Serial No. 536,732.

To all whom it may concern:

Be it known that I, HENRY E. HOLBROOK, a citizen of the United States, residing at the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Dust Stripping for Screens, of which the following, taken in connection with the accompanying drawings, is a specification.

Thorough ventilation is needed for compartments containing certain forms of delicate instruments, as for example, automatic or mechanical telephone exchanges, which demand air and at the same time means for preventing the intrusion of dust and dirt into said compartments. Accordingly, window screens of exceedingly fine mesh are used, as for example, from forty to sixty strands per inch of fine wire, said screens needing thorough dust stripping around and between the same to prevent said intrusion of dust and dirt.

The object of the present improvement is to provide a method of dust stripping for the joints between the window frame and the screen frames and between the meeting rails of said screen frames to entirely close all openings around and between said screen frames and said window frames to thereby exclude all dust and dirt, said screen frames being provided with a screen fabric of such fine mesh as to practically prevent said dust and dirt passing therethrough; and the invention consists in the novel features and combinations hereinafter set forth and claimed.

In the drawings, Figure 1 is an elevation of the window frame with the two screen frames therein. Fig. 2 is a crosswise sectional view at line 2—2 in Fig. 1; and Fig. 3 is a crosswise sectional view at line 3—3 in Fig. 1, showing the preferred construction and arrangement of the parts, and the oppositely inclined dust strips at the left side of the same, as well as the felt plug on the right side between the two window screens and the guide strip, one of the window screens being shown in dotted outline in Fig. 2. Fig. 4 is a perspective view of a portion of the lateral dust strip showing the preferred construction and arrangement of the same, ready for attachment in the double guide strip on the window frame. Fig. 5 is a perspective view of a portion of the window frame with the window screens therein,

the frame and screens being shown in vertical section to show the preferred construction and arrangement of the same. Fig. 6 is a perspective view of the protective dust strip for the joint between the two window screens to close said joint and prevent all dust and dirt filtering through the same.

Like characters of reference refer to corresponding parts in the several views.

The numeral 10 designates the preferably sheet metal frame side which is cut and bent from flat sheet metal strip by means of suitable dies and is shaped to form a lengthwise groove 11 along the inner edges of the frame sides for the attachment of the screen fabric 12 in the groove 11, a resilient split tube 13 being preferably used for holding said screen fabric within said groove.

The top rail of the upper screen 14 and the bottom rail of the lower screen 15 preferably have the grooves 16 and 17 lengthwise therein to receive by endwise insertion the flexible looped dust strip 18 in said grooves, the flexible material being preferably a fabric like felt, the edges of which are held by the folded sheet metal strip 19.

The meeting joint 22 between the rails 23 and 24 of the upper screen 14 and the lower screen 15 preferably is closed by means of the curvingly bent sheet metal dust strip 20, which has the angularly bent edge 21 for insertion in the groove 11 in the top rail 24 of the lower screen 15 to be held by the split tube 13 along with the screen fabric 12 in said groove 11. The dust strip 20 is so shaped that it presses over against the lower rail 23 of the upper screen frame 14 and thence back toward the top of said top rail of the lower screen frame 15, thereby providing a double closure as it were of the joint 22 between the top rail 24 and the bottom rail 23 throughout its length.

The upper and lower screens 14 and 15 are slidably mounted on the double guide strip 25 on ways 33 and 34 at each side of the window frame 26, and the outer edge 27 of the lateral frame side 28 of each of the upper and lower screens is grooved to slidably fit upon the guideways 25. The opposite lateral screen edge 29 is channeled and the spring 30 is mounted therein and shaped with a grooved outer bowing portion 31 to fit upon the curved surface of the guide strip 25. A set screw 32 is provided in the frame side to hold each spring 30 firmly to

a closely adjusted position as shown in Fig. 2, yet permitting the withdrawal of the screen from the window frame by the withdrawal of the set screw 32, as shown in Fig. 3.

The guideways 33 and 34 on the guide strip 25 are spaced apart so that the sliding screens may pass alongside one another without contacting, and the weather strips 35 and 36 are attached to the guide strips 25 between the sliding ways 33 and 34. Said guide strips 35 and 36 are bent in opposite directions toward the screen 14 or 15 alongside which it is attached, and the rubbing or contacting edge 37 of the guide strip is preferably given a return bend so that it will slide easily upon the lateral frame side without cutting or marring the same. The base 38 is turned at right angles and given a double return bend of a width sufficient to preferably fill the space between the guideways 33 and 34 and fit closely within the channel 39 between the guideways 33 and 34, and is attached therein by means of small tacks or screws, which construction firmly holds and supports the projecting edge portion 37.

The described dust stripping closes all the joints around and between the upper and lower window screens and the window casing with the exception that opposite the meeting rails 23 and 24 at their outer ends and their joining with the lateral rail sides 28, an unclosed opening remains in the channel 29 for about the width of the joint 22, which opening is preferably closed by means of a strip of felt 40 of sufficient length for said closure. Said felt is preferred because of its resilience, though other materials might be used.

The springs 30 press the screen frames firmly against the guideways 33 and 34 in the grooves 27, thereby preventing any dust or dirt from entering at the sliding joint between these two parts. A spring bolt or latch 41 is preferably provided in the lower screen frame 15 as shown in Figs. 1 and 3 to support and lock said screen 15 in the lower position, slight spaced openings being provided in the guideways for said bolt 41, the inner end of the bolt having a hole therein for the insertion of a hook 42 for withdrawing the bolt 41.

It is apparent that with the screen frames pressed tightly against the guideways 33 and 34 in the groove 27 and the felt plug 40 in the groove 39 in the guide strip 25 in combination with a dust stripping 18 for the top rail of the upper screen and bottom rail of the lower screen in combination with the sheet metal dust strip 20 between the meeting rails 23 and 24 of the screen frames and the oppositely inclined sheet metal dust strips 35 and 36 for the channeled sides of the screen frame, all

openings between the window frame 26 and the screen frames as well as between the meeting rails of said screen frames are closed, thereby shutting out all dust and dirt as desired. The end of the felt dust stripping 18 for the top rail of the upper screen and the lower rail of the lower screen should interlap with the lower ends of the sheet metal dust strips 35 and 36 so as to close the corner joint completely on the channel side of the upper and lower window screens 14 and 15.

It is obvious also that the set screws 32 may be set so firmly against the springs 30 and the sliding ways 33 or 34 as to firmly hold the upper screen 14 or the lower screen 15 against movement, that is, so that it cannot be moved up or down or removed without loosening said set screws, thereby preventing the sliding or removal of the screen by those ignorant of the purpose of the screens.

What is claimed as new is:

1. The combination with a fine mesh screen, of a dust strip for the top rail of the upper screen and for the bottom rail of the lower screen and for the joint between the meeting rails of said upper and lower screens, and dust strips on the guide strips for said upper and lower screens lapping onto said screens and onto said top and bottom rail dust strips at their end portions to close the openings around said end portions and around said screens and in the groove on said guide strip.
2. The combination with a fine mesh screen, of a looped felt dust strip for the upper edge of the top rail of the upper screen and for the lower edge of the bottom rail of the lower screen, a spring sheet metal dust strip attached to one of the meeting rails and closing the joint between said meeting rails of said upper and lower screens, a sheet metal dust strip attached in the guide strips for each of said screens slidably bearing against the side of said screens and against the ends of said felt dust strips on the top and bottom rails of said screens to close the top and bottom corner joints for said screen.
3. A sheet metal dust strip comprising a strip of spring sheet metal folded upon itself to form a base the width of the groove between the guide ways on a double guide strip, said folded portion of said dust strip extending out at substantially right angles, the contacting edge portion of said strip given a return bend, said dust strip attachable by tacks or screws in said groove in said double guide strip and shaped to press against the side of the screen frame or sash.
4. The combination with a screen frame of a dust strip for the joint between the meeting rails of screen frames or sash, said screen frames or sash comprising sheet metal

trips formed with a groove alongside the same, and a resilient tubular strip for attaching the screen fabric in said frame side, said dust strip being shaped angularly to fit within said groove and be held in place by said resilient tubular strip; said sheet metal dust strip curvingly inclined against the opposite meeting rail and back against the side of the rail to which it is attached

to thereby close the joint between said meeting rails throughout the length of the same. In testimony whereof I have affixed my signature in the presence of two witnesses.

HENRY E. HOLBROOK.

Witnesses:

CORINNE V. SWANSON,
A. W. KETTLE.