

Nov. 26, 1935.

A. E. VOGT

2,021,972

WINDOW SASH GUIDE

Filed Feb. 12, 1934

2 Sheets-Sheet 1

Fig. 1

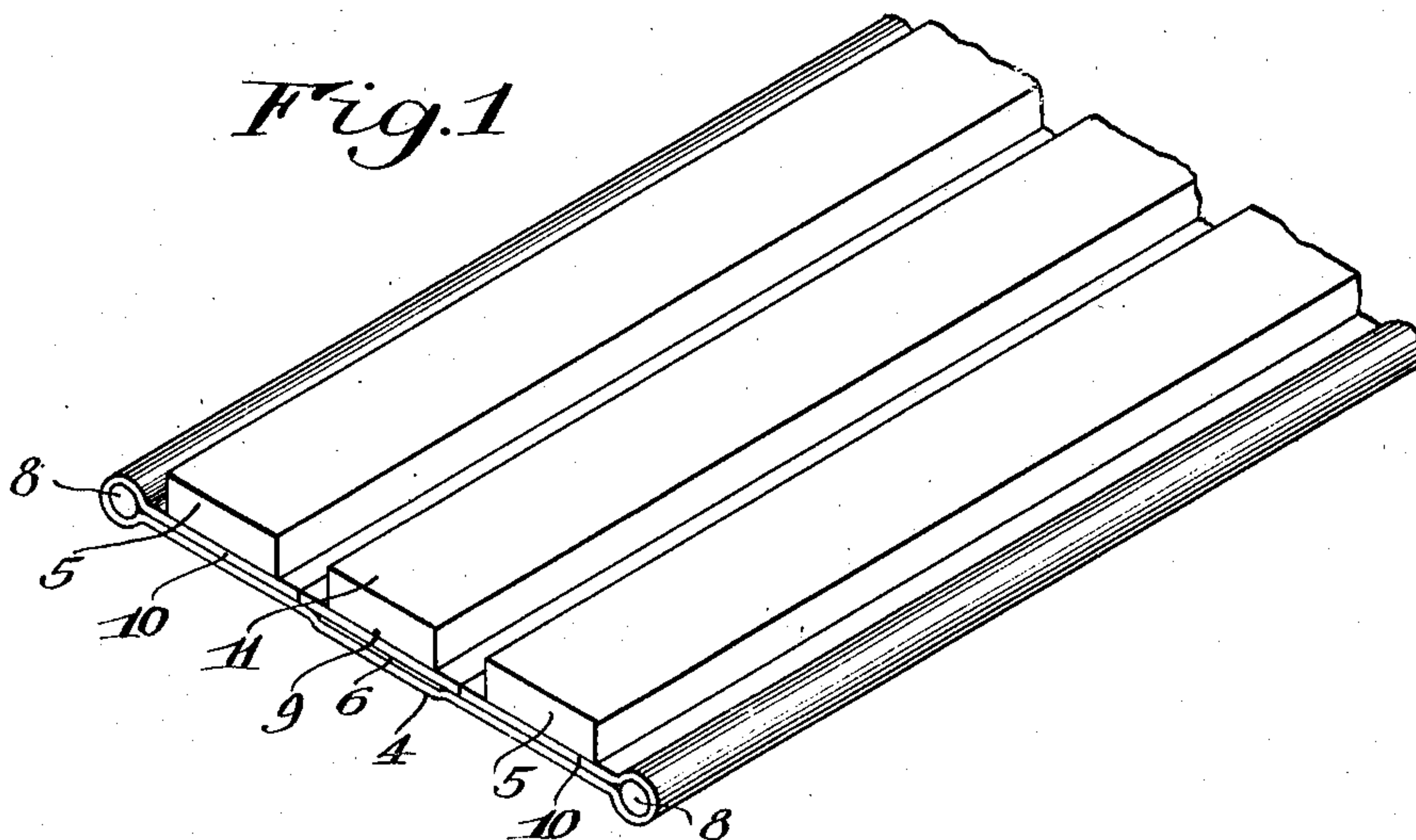


Fig. 2

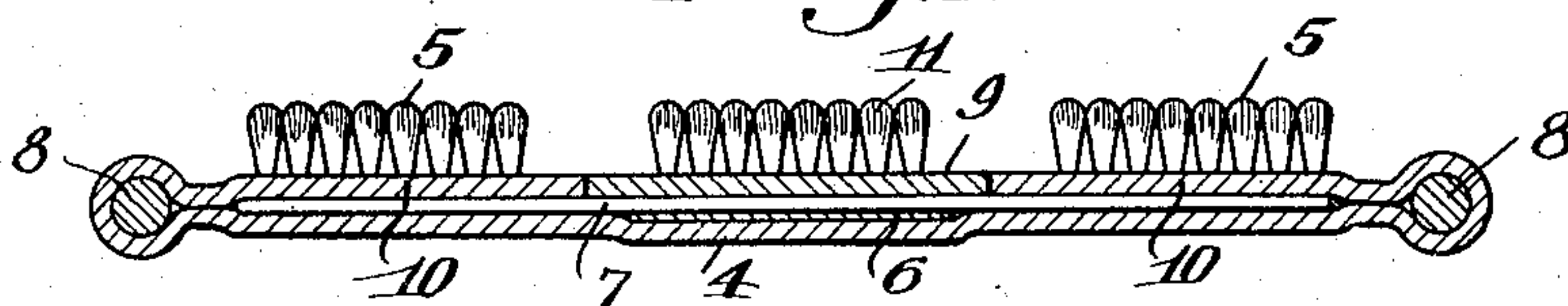


Fig. 3

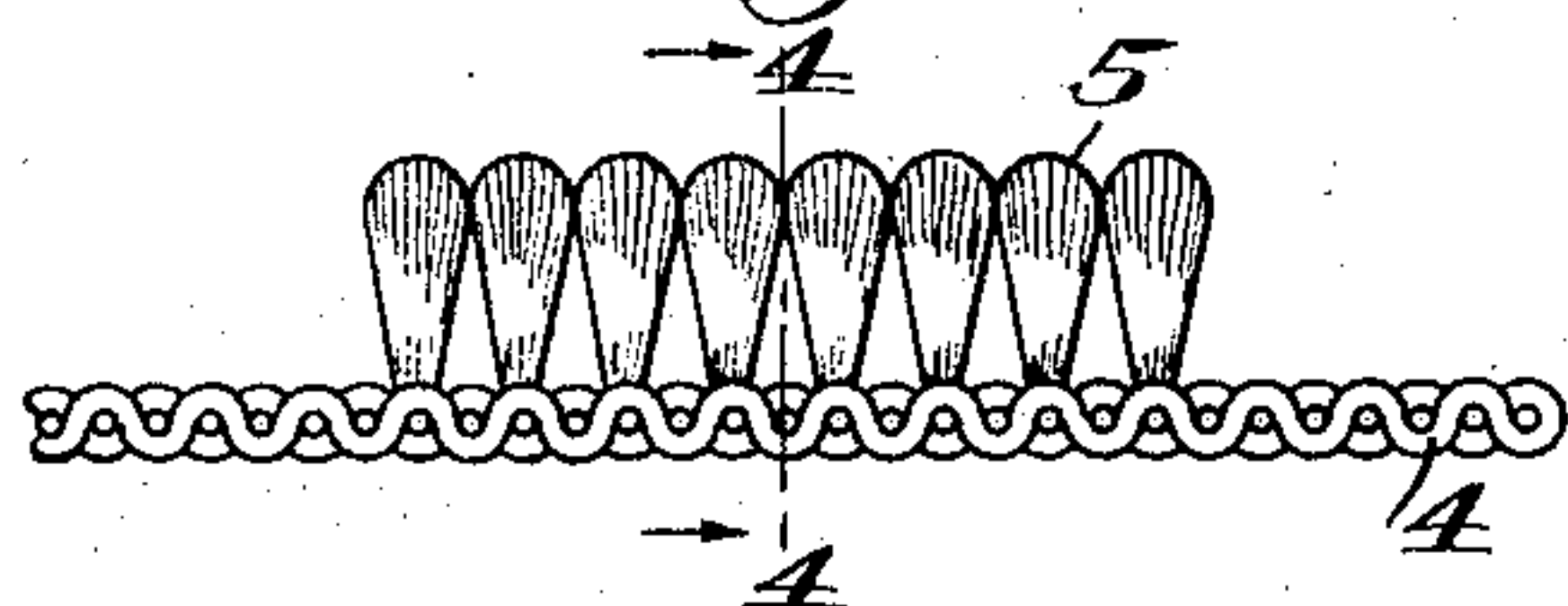
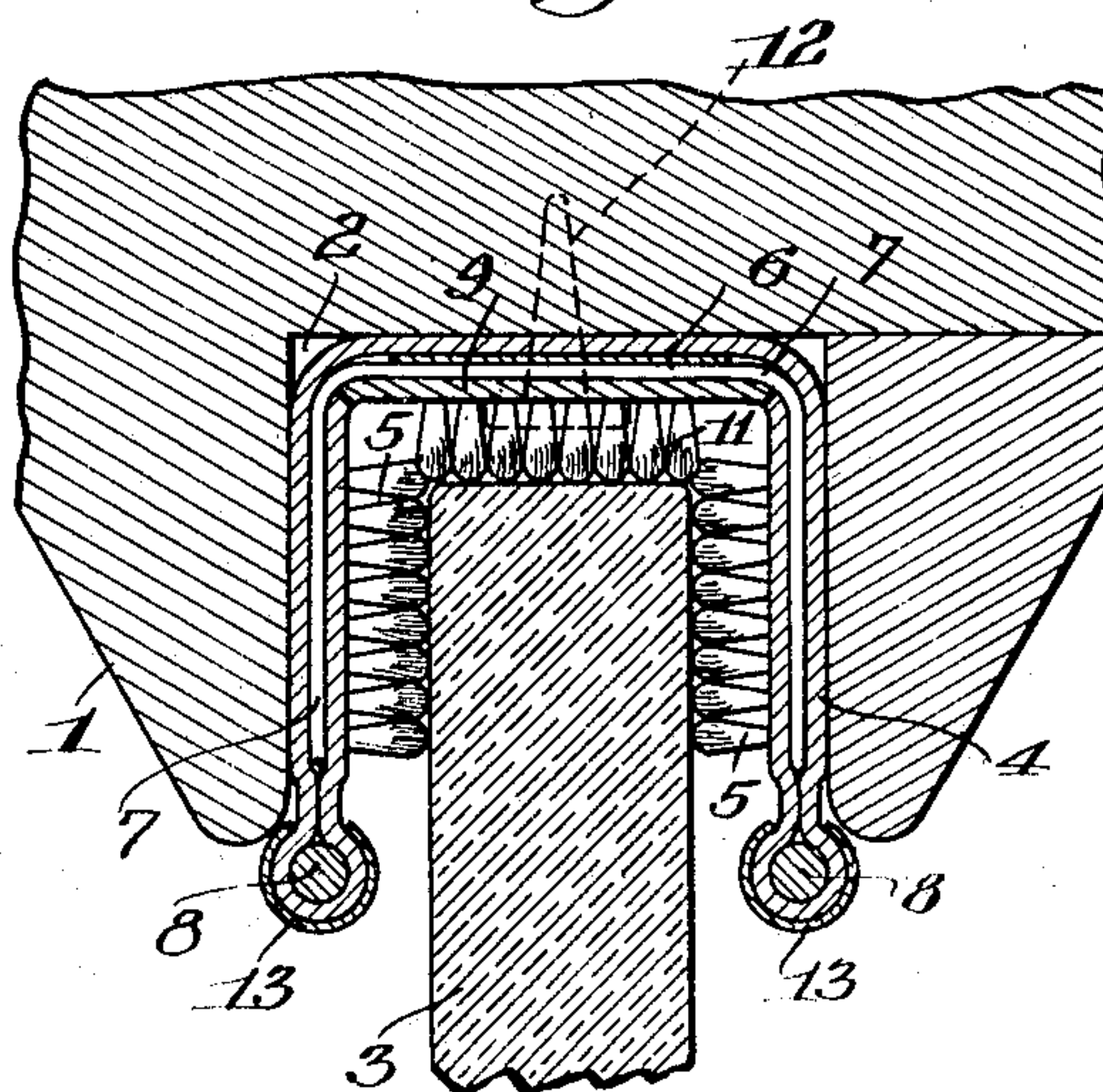


Fig. 4



Fig. 5



INVENTOR
Albert E. Vogt
BY *Russell H. Hight*
his ATTORNEY

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A. E. VOGT

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Fig. 6

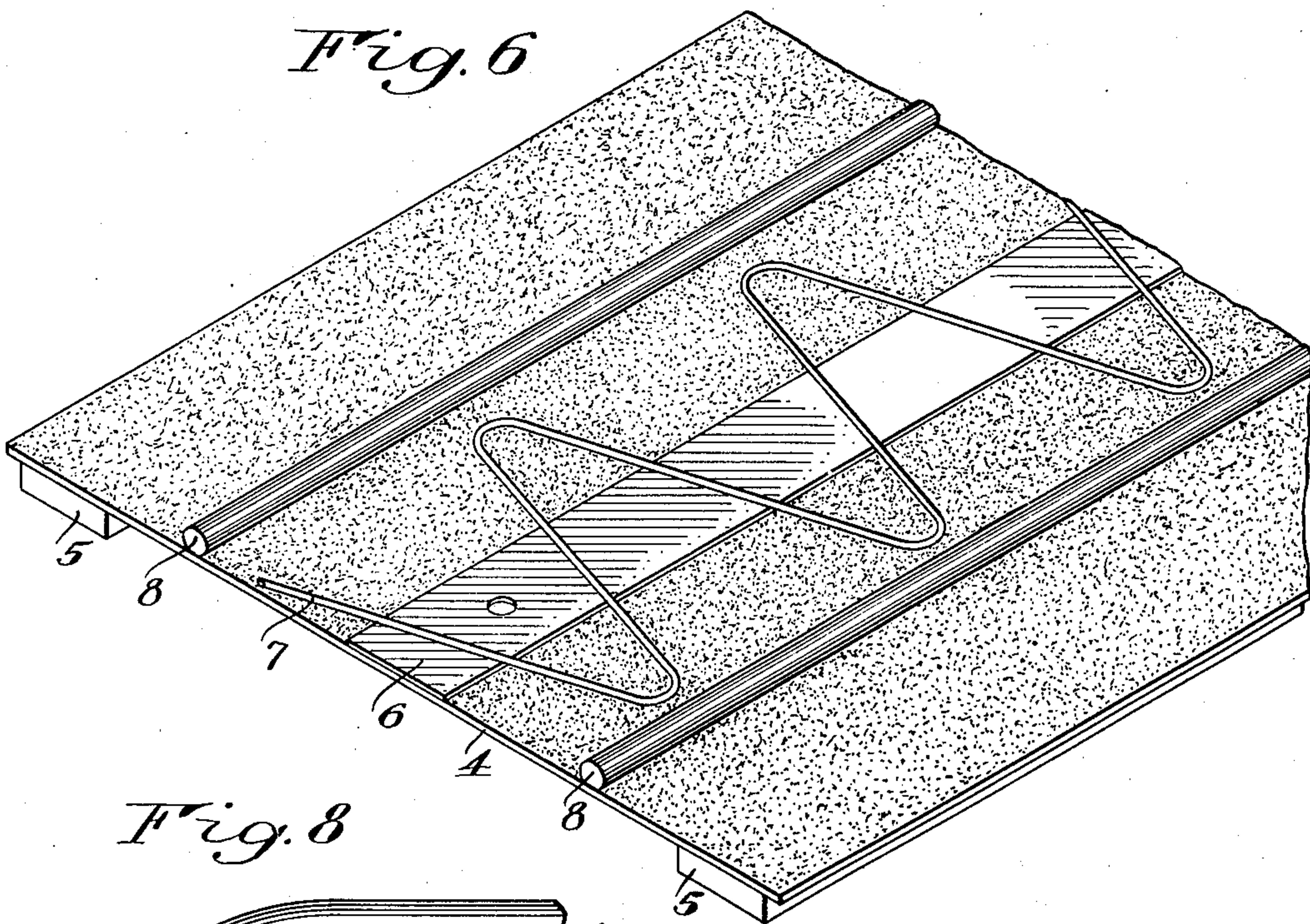


Fig. 8

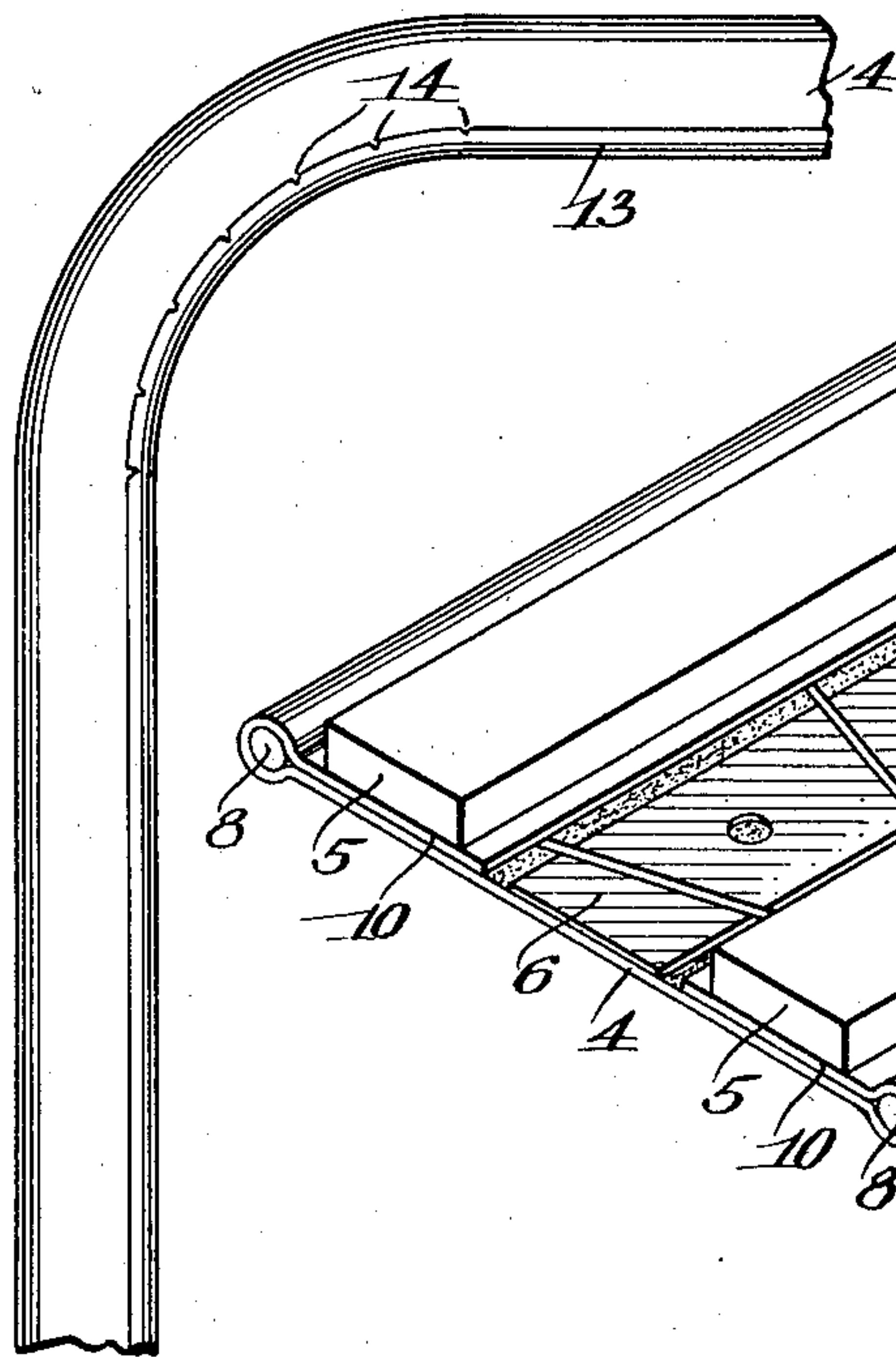
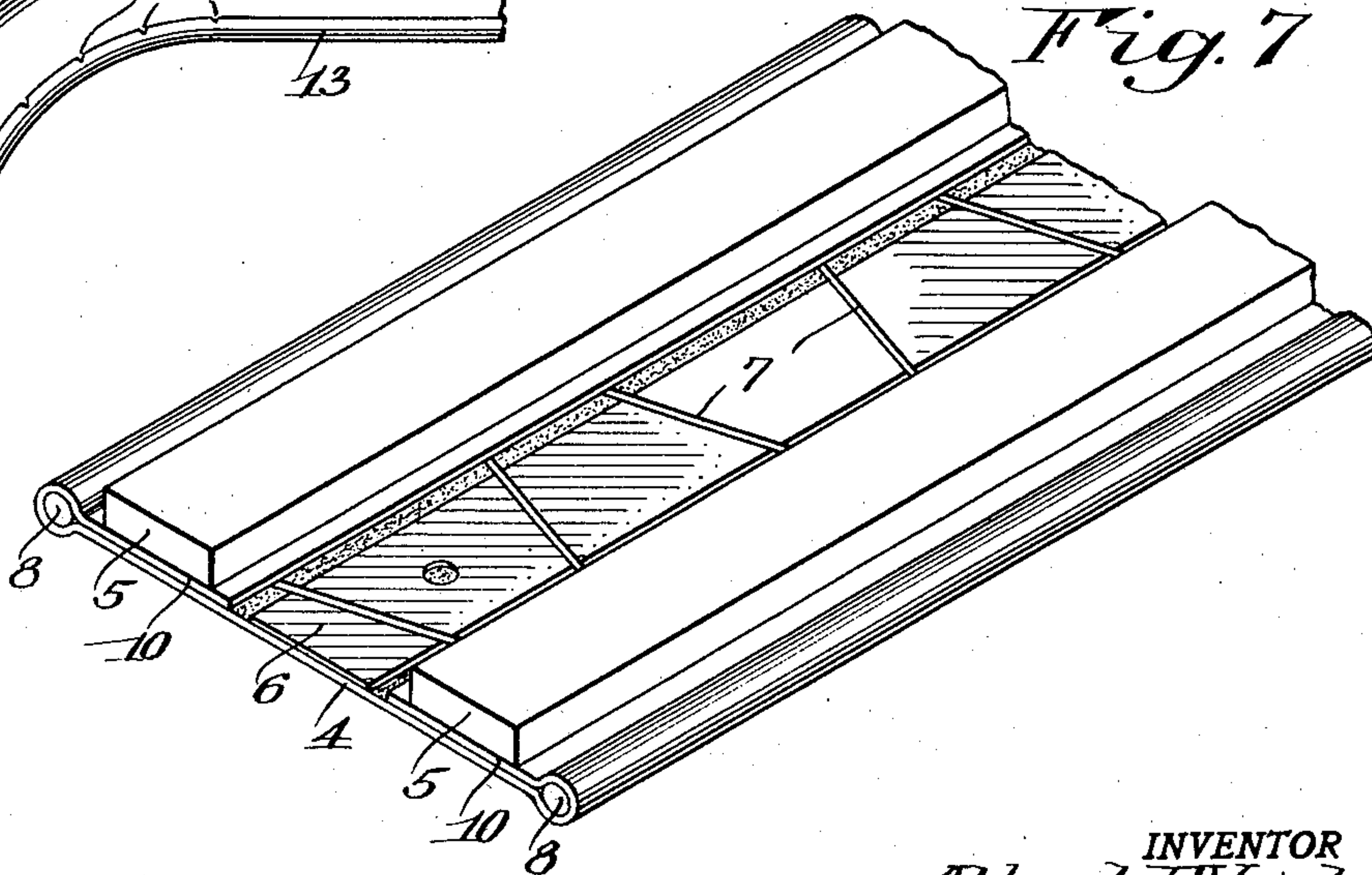


Fig. 7



INVENTOR
BY *Albert E. Vogt*
Charles H. Hight
his ATTORNEY

UNITED STATES PATENT OFFICE

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WINDOW SASH GUIDE

Albert E. Vogt, Rochester, N. Y., assignor to Vogt Manufacturing Corporation, Rochester, N. Y., a corporation of New York

Application February 12, 1934, Serial No. 710,851

3 Claims. (Cl. 296—44.5)

My present invention relates to window frames and the mounting of sashes therein and more particularly to such window frames as are used in automobiles where a usually unframed plate glass constitutes the window and slides in guides in the frame, and the invention has for its object to provide a simple and efficient textile lining for the window guide which will reduce friction and render it quiet in its movements but which will be capable of being manufactured at a low cost. The improvements are directed in part toward increasing the wearing qualities of the lining and promoting the ease with which it may be applied to the guide. To these and other ends, the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of this specification.

In the drawings:

Fig. 1 is a perspective view of a fragment of a fabricated guide lining in the flat state made in accordance with and illustrating one embodiment of my invention;

Fig. 2 is a transverse section therethrough;

Fig. 3 is a fragmentary enlargement of the section of Fig. 2 to illustrate the weave;

Fig. 4 is a section on the line 4—4 of Fig. 3;

Fig. 5 is a transverse section through a fragment of a window and window frame having my guide lining applied thereto, the plane of the section being the same as in Fig. 2 and all of these figures being greatly enlarged;

Fig. 6 is a perspective view corresponding to Fig. 1 illustrative of the manner in which the lining strip is assembled;

Fig. 7 is another similar view of the assembly illustrating a further step, and

Fig. 8 is a side elevation of a section of lining conformed to the curvature of a window frame.

Similar reference numerals throughout the several views indicate the same parts.

Referring first to Fig. 5, 1 indicates the window frame, 2 the guiding groove therein and 3 the sash or window glass running slidably in the guide. The problem is to line this guide with a soft and friction-reducing and sound-absorbing material, preferably assembled or fabricated as a unit exteriorly and then slipped into the guide and fastened in some way. In the practice of my invention, I provide a strip of textile material comprising a relatively coarse body fabric 4, what we will call the back or reverse side of which is shown uppermost in Fig. 6. On its face or under side in that figure, it is provided near its lateral

edges with two longitudinally extending mats or cushions 5 which project from the surface and the nature of which will be later described, such cushions being illustrated in Figs. 1, 6 and 7 in a conventional manner. In the assembly and as shown in Fig. 6, there is laid centrally and longitudinally of the body fabric a metal stiffening strip 6 and on top of that a zig-zag or transversely looped pliable stiffening wire 7 with straight wires 8 at each side thereof. The free edges carrying the cushions 5 are then folded over toward the center on the axis of the wires 8 so that they cover the loops of wire 7, as shown in Fig. 7. The folded and contacting parts are all cemented tightly together with a tenacious cement in these positions.

The structure is completed by finally applying another strip of fabric 9 to the center of the strip between the folded edges 10 of the body 1 and cementing it down securely to constitute a continuation of such portions 10 and completely concealing and embedding the stiffening elements 6 and 7. This strip 9 is also provided with a cushioning mat 11.

My lining is now complete except for forming it to fit the guide channel of the frame, which is done by running it through mill rolls that bend it into the U-shape form shown in Fig. 5. In other words, it is bent angularly along the seams between the portions 5 and 9 and toward them and pushed into the channel 2, as shown in the said figure, so that the portions 10 become the side walls and the portion 9 the bottom wall with suitable securing devices 12 extending through the latter, including the stiffening plate 6. The wire 7 supports these side walls as well as the bottom wall and holds the lining snugly in place. It is further pointed out that the back or outside of the formed lining is unbrokenly smooth and continuous without seams or doubled portions so that it fits the guide 2 accurately and slips easily into place therein. The window glass or sash 3 is held between the cushions 5 which support its opposite sides for smooth running while its edges engage the cushion 11 at the bottom of the guide. The wires 8 reenforce the slightly projecting edges of the lining, the bend of the fabric about them being further reenforced and being given a finish by split metal tubes 13 that encase them.

With all of the pliable strengthening and stiffening devices described, the formed fabric lining may be easily bent to conform to the rounded corners of a window frame, as shown in Fig. 8, though it is desirable to notch the tubular finish-

ing elements 13, as indicated at 14, to facilitate the give of the metal on this larger radius.

All of the cushions 5 and 11 may be of the same nature and structure, in some instances, but, in other instances, it may be desirable to provide a cushion 11 of another character as the coaction at the running edge of the window 3 is different and presents a different mechanical relationship from that existing between the cushions 5 and the two flat sides of the glass. This consideration is another reason for folding the edges 10 of the body 4 inwardly and providing the separate strip between them on the bottom of the guide to carry this third cushion 11.

In the present showing, however, all of the cushions are alike and made in a particular manner. Referring more particularly to Figs. 2 to 5, a soft tough fibrous worsted strand 15 is interwoven in multiplicity into the fabric body 4 and picked on the loom to form multiple series of closely crowded projecting loops 16. These loops expand or loosen at their outer ends in an agreeable manner though they are pinched tight where they are anchored in the weave of the fabric itself, which is difficult to show in the drawing but has been attempted, particularly, in Figs. 3 and 4.

The result, at any rate, is a mat-like surface projecting from the body fabric 4 to constitute cushions 5 that are tough, resist wear, reduce friction, and are not distorted or affected by rain or dampness. They support the window with sufficient resilience to effect the objects and actions hitherto pointed out as desirable and yet withal they support it in a firm and definite manner.

I claim as my invention:

1. A textile guide for the sash channels of window frames embodying a fabric body having strands interwoven therewith in rows along its two edges to form a pair of cushions for contact

with the window in combination with means for stiffening the fabric and maintaining it in channel form, the body portion constituting a backing on the outer side of the channel and the edges being folded in to constitute the inner side walls having the cushions disposed to contact opposite sides of the window.

2. In a textile guide for the sash channels of window frames, the combination with a fabric body having a multiplicity of closely arranged projecting looped strands interwoven therewith in rows along its two edges to form a pair of mat-like cushions for contact with the window, and means for stiffening the fabric and maintaining it in channel form, the body portion constituting a backing on the outer side of the channel and the edges being folded in to constitute the inner side walls having the cushions disposed to contact opposite sides of the window, of a second separate fabric body strip secured to the first on the inner bottom of the channel between the said edges and provided with a third cushion for contact with the edge of the window.

3. In a textile guide for the sash channels of window frames, the combination with a fabric body having a pair of cushions along its lateral edges, and means for stiffening the fabric and maintaining it in channel form, the body portion constituting a backing on the outer side of the channel and the edges being folded in to constitute the inner side walls having the cushions disposed to contact opposite sides of the window, of a second separate fabric body strip secured to the first on the inner bottom of the channel between the said edges and provided with a third cushion for contact with the edge of the window, the stiffening device being disposed between the folded edges and between the backing and the second body strip.

ALBERT E. VOGT.