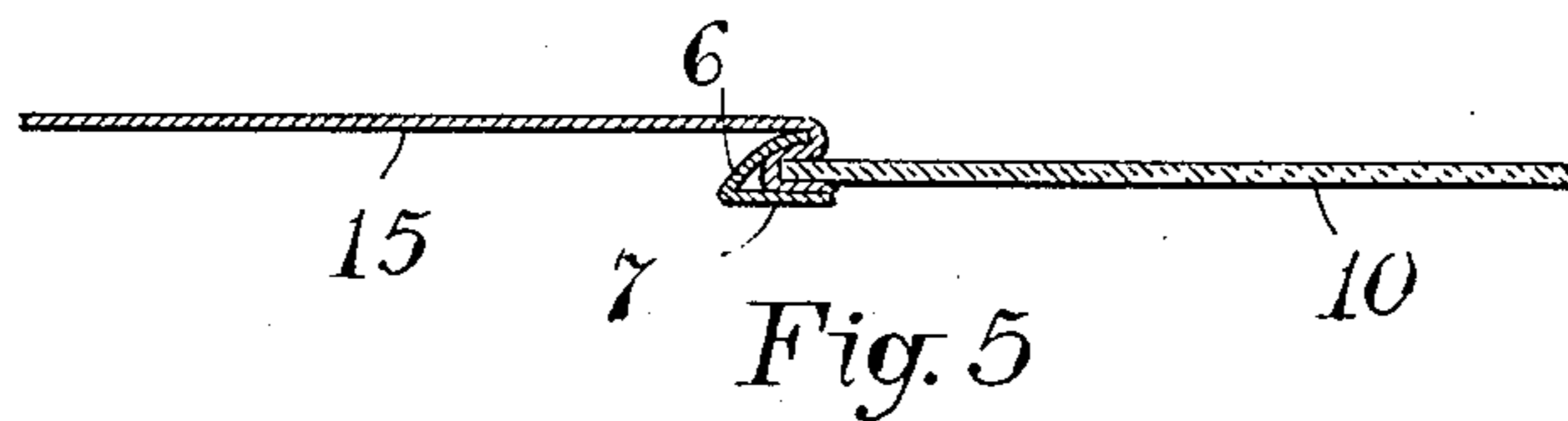
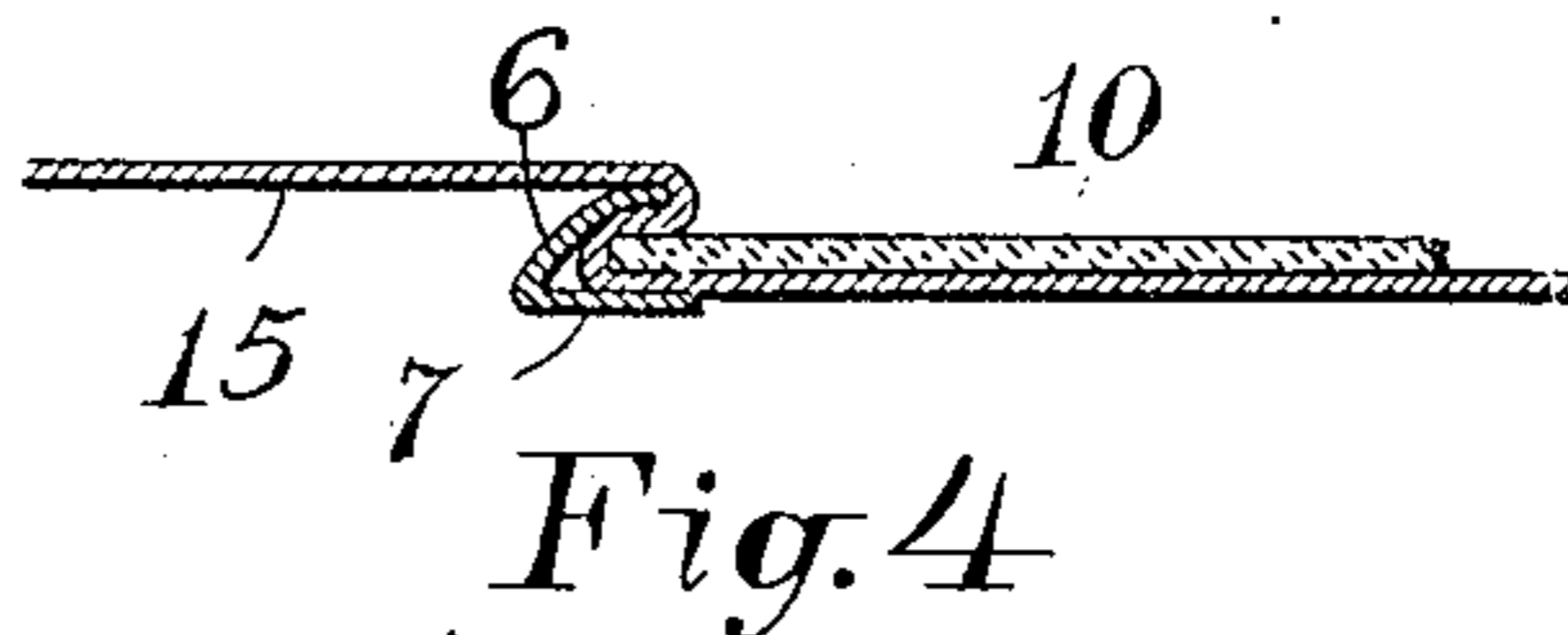
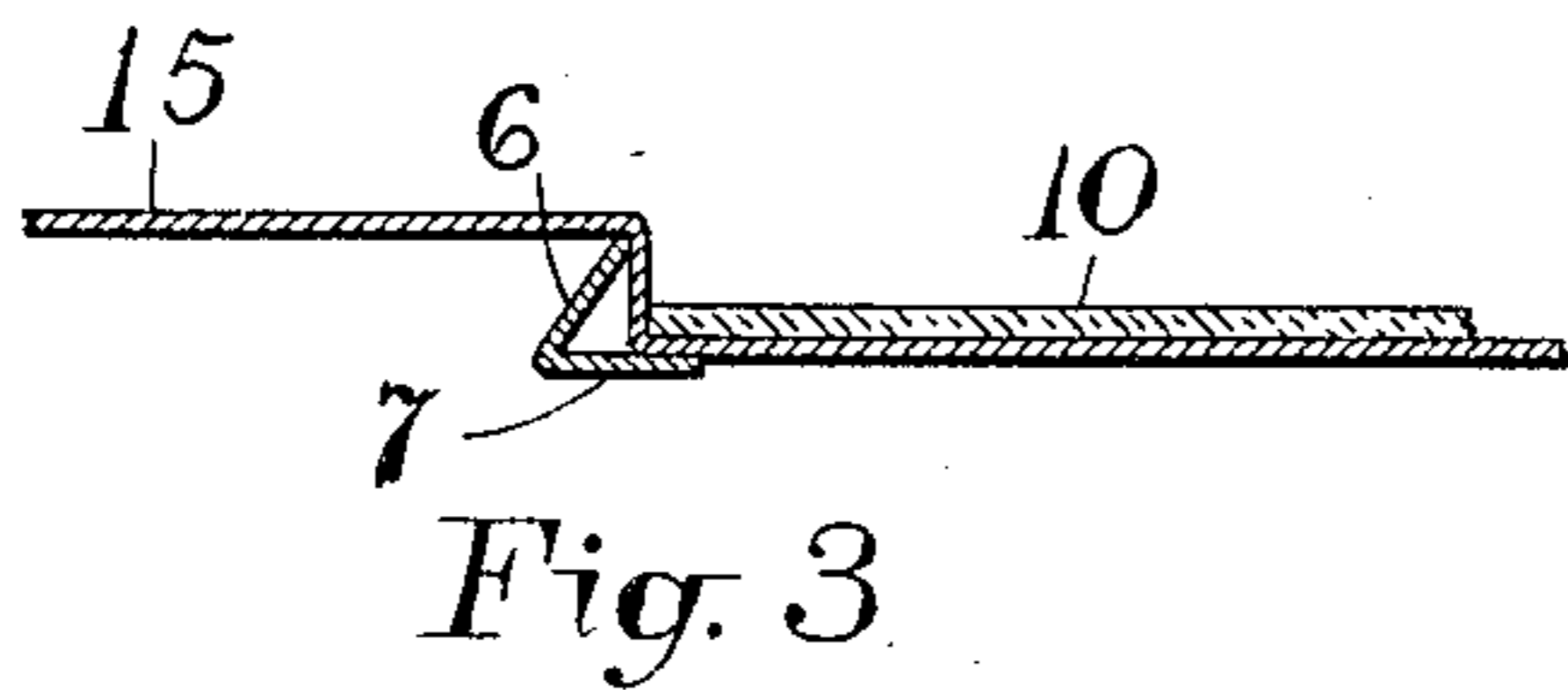
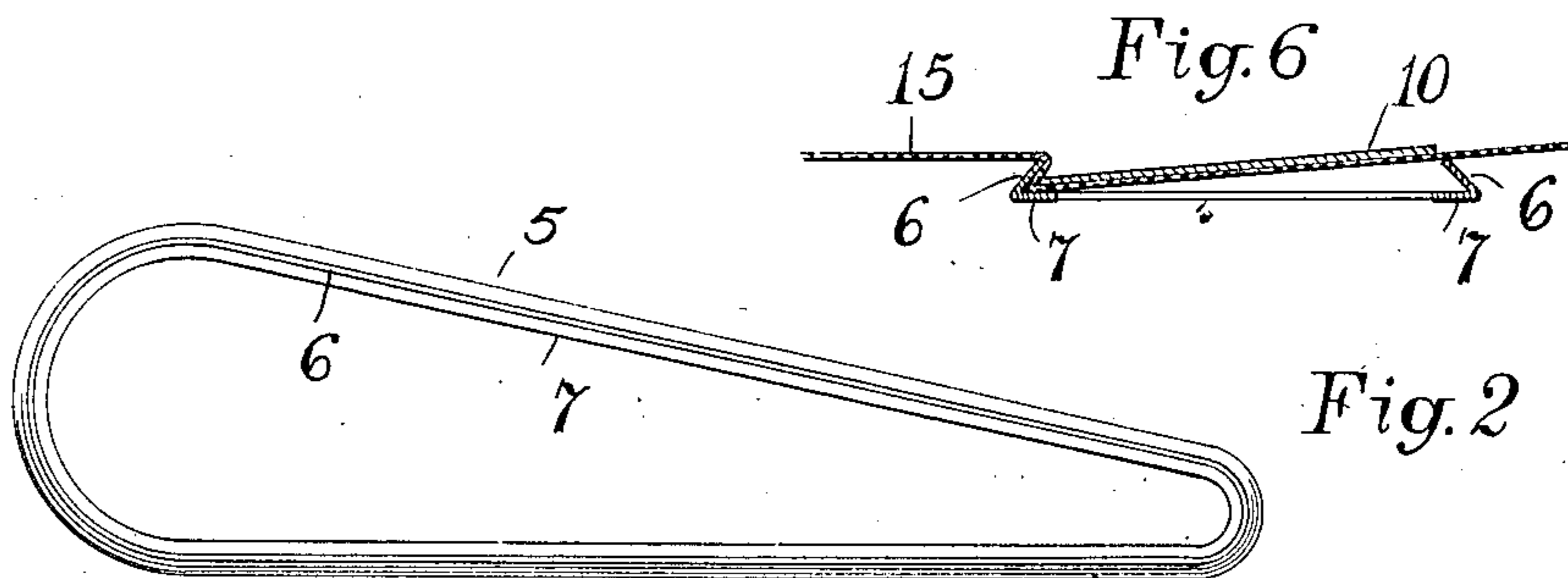
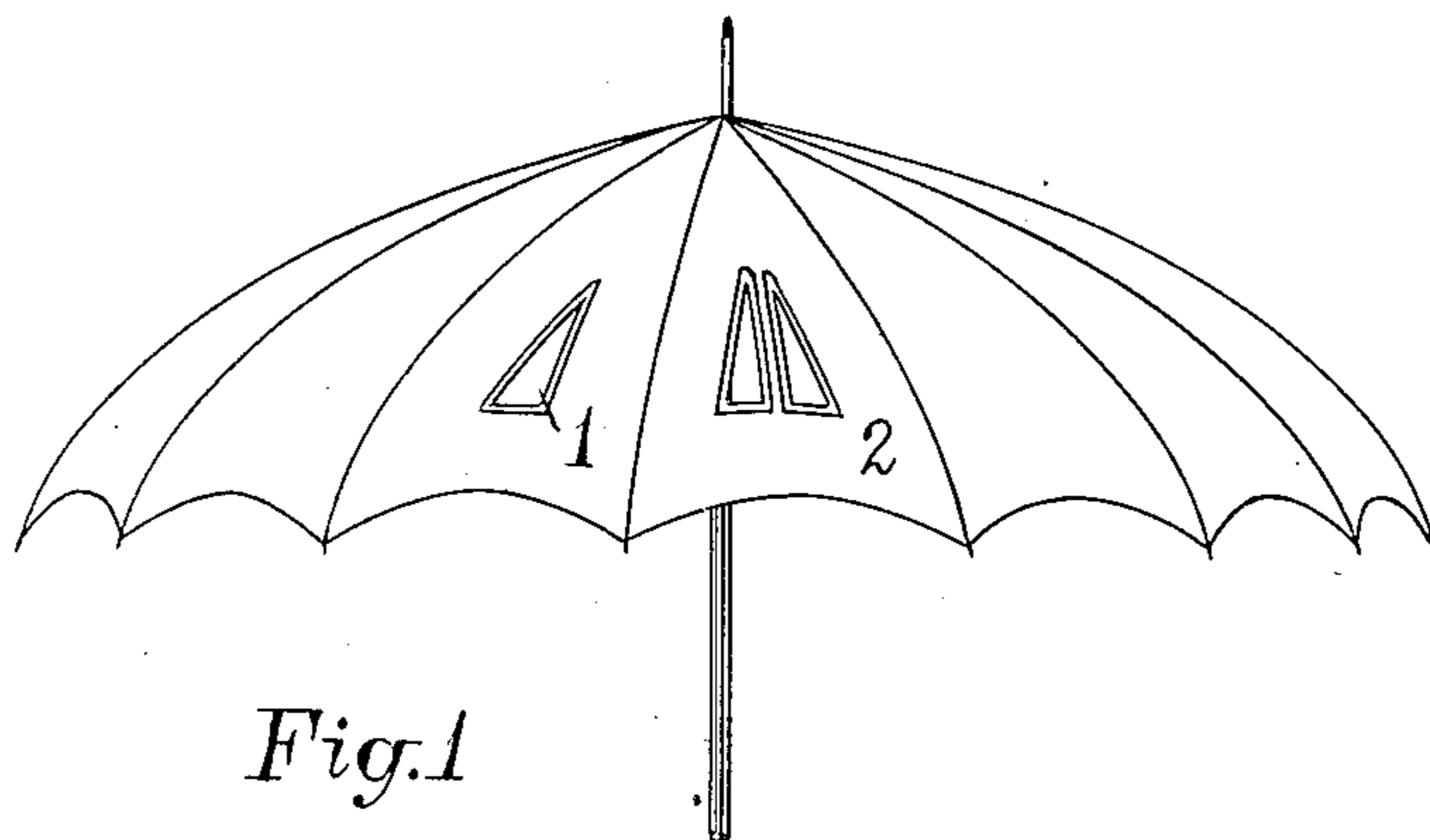


J. W. CLAPP.
 MEANS FOR ATTACHING PLATES TO FABRICS.
 APPLICATION FILED FEB. 27, 1907.

919,695.

Patented Apr. 27, 1909.



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UNITED STATES PATENT OFFICE.

JOHN WILLARD CLAPP, OF AVON, MASSACHUSETTS.

MEANS FOR ATTACHING PLATES TO FABRICS.

No. 919,695.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, JOHN WILLARD CLAPP, a citizen of the United States, and a resident of Avon, in the county of Norfolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Means for Attaching Plates to Fabrics, of which the following is a full, clear, and exact description.

10 While this invention relates to a new and convenient means for attaching any kind of thin plates to fabrics, it is especially designed for securing sheets of glass, mica, celluloid or other transparent material, to umbrellas, 15 curtains, capes etc. for the purpose of supplying an inexpensive window thereto.

Referring to the drawings forming part of this specification, Figure 1 is a view of an umbrella showing my invention applied 20 thereto. Fig. 2 is a view nearly full size, showing the preferable shape of frame used for attaching transparent material to an umbrella or the like. Fig. 3 is a sectional enlarged view showing a plate in the process of 25 being attached to a fabric. Fig. 4 is a similar view but showing the plate fully attached. Fig. 5 is a view similar to the last but showing the fabric cut away from within the frame to form a window through the same. 30 Fig. 6 is a sectional view showing preferable manner of inserting the plate in place.

As is easily demonstrated, a person who is trying to shelter himself beneath an umbrella from a driving storm, is liable at any 35 moment to collide with some pedestrian, or, if endeavoring to cross a street, with some car or other vehicle. To remedy this defect, I have devised the inexpensive and easily applied window forming the subject 40 matter of this application.

The shape of window best adapted for umbrellas, both to enable the latter to be properly rolled up, and to cause the minimum of wrinkling therein when the umbrella is extended, is the acutely triangular 45 one shown in Figs. 1 and 2. If a larger window is desired than the single narrow frame 1 shown in Figs. 1 and 2, two thereof can be arranged side by side, as shown at 2 in Fig. 1. By having the separating space 50 between them quite narrow, they become practically a single window.

The frame 5, which is preferably acutely triangular in outline, is composed of sheet 55 metal doubled upon itself transversely, but with one part, as 7, wider than the other; this

narrower part or flange 6 not being parallel with the other, but rising at an angle of approximately forty-five degrees therewith, and with the plane of the frame. This frame 60 having been laid upon a suitable supporting surface, such as a table, with the flange 6 uppermost, the fabric 15 in which the window is desired, is spread smoothly over the frame, and then the properly shaped plate 10 65 of celluloid or other material is pressed down upon the fabric between the flanges of the three parts of the frame, as indicated in Fig. 3. Said flanges are now hammered or otherwise forced over and down toward the wider 70 part of the frame, thereby pinching the folds of the fabric thus made, and the edges of the plate, tightly between the two parts or flanges of the frame, as shown in Fig. 4. By means of a knife-point or fine scissors, the 75 fabric extended between the three sides of the frame is cut away, and the window completed. As is clearly evident, it requires but a few seconds to form a window in this manner, whether in an umbrella, a curtain, the 80 cape of a water-proof to hang over the wearer's face, and other fabric-screens. In the same manner, name plates, price-cards, whether of metal or paper, and other plates and sheets can be easily attached to fabrics 85 and the like.

Although I have described the two flanges 6 and 7 of each member of the frame as being of unequal width, I do not restrict myself thereto, as the only necessary point is that 90 the flange 7 shall project farther horizontally than the flange 6 does before it has been pinched down upon the plate 10 and the fabric-folds.

As shown in Fig. 2, the frame 5 is preferably 95 formed with curved, or semi-circular, ends; the radius of curvature at the base being longer than that at the apex of the frame, in order to give the same the triangular general shape above described. Not only 100 is this form of frame more inexpensively manufactured than one with three straight sides soldered together at the angles, but I find that the fabric does not wrinkle or pucker as it is liable to do when the frame 105 is made with sharp corners. Less metal is required for the curved ends as compared with the angular ones, and consequently a slightly lighter frame is produced.

As previously described, the plates 10 are 110 pressed directly down between the upstanding flanges 6, so that they come between

the opposite upstanding flanges simultaneously. I find it a better plan to enter the plate-edge at one side of a plate 10 before the opposite edge is put into engagement with its flange 6. The advantage of this is that the plate can be introduced with a snugger fit than in the other way.

What I claim as my invention and for which I desire Letters Patent, is as follows, 10 to wit;—

The combination with a fabric and a transparent plate, of a sheet metal frame consisting of a peripherally unbroken body lying in the plane of the frame as a whole, 15 and having a flange bent over inwardly from

the outer periphery of the said body; the edges of said plate being clamped between said body and flange, and the edges of an opening through said fabric being clamped between the plate and said body and also 20 between said plate and said flange, and the fabric extending outwardly away from the frame but in the same general plane.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 25 21st day of February, 1907.

JOHN WILLARD CLAPP.

Witnesses:

JOSEPH R. POWERS,
GUST. E. DAHLEN.