Feb. 9, 1937. C. L. CRUVER 2,070,002

WINDOW BADGE

Filed Nov. 14, 1935

Fig. 1.

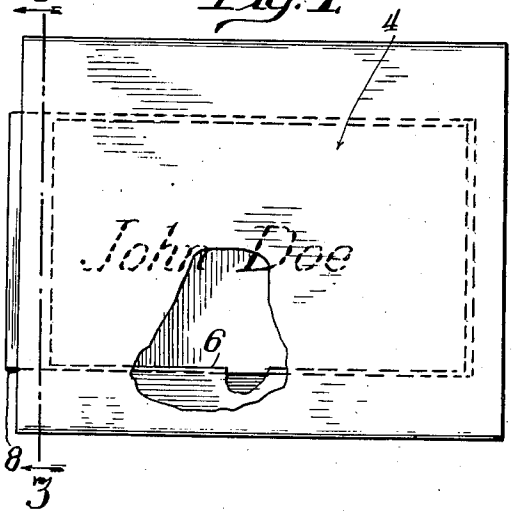


Fig. 2.

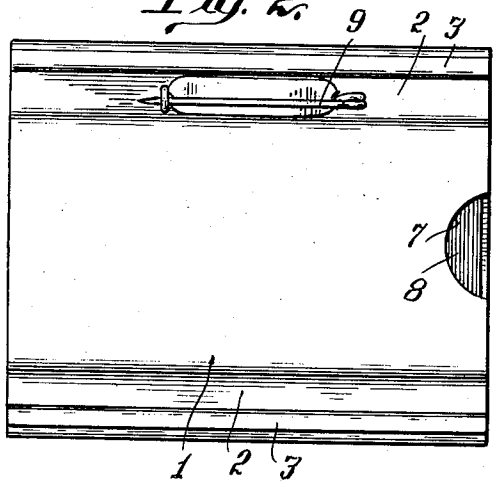


Fig. 4.

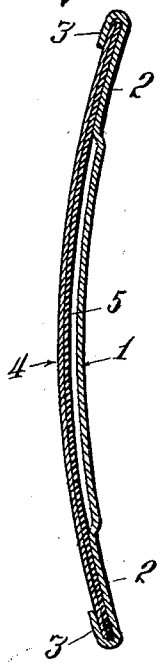


Fig. 5.

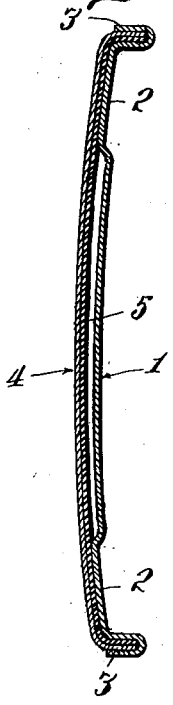
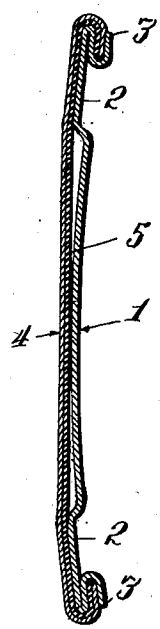


Fig. 3.



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Patented Feb. 9, 1937 2,070,002

UNITED STATES PATENT OFFICE

2,070,002

WINDOW BADGE

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Application November 14, 1935, Serial No. 49,667

5 Claims. (Cl. 40—1.5)

The invention has for its object to provide a type of device known as a "window badge" composed in part of a sheet metal member and in part of a composite non-metallic, flexible member which is mounted upon and maintained taut by the said metal member and maintains the latter flexed from its initial form for cooperation with the said non-metallic, flexible member to engage a card or other similar article between opposed faces of said sheet metal member and said non-metallic flexible member.

A further object of the invention is to provide a method of manufacturing the said window badge, whereby the novel results above mentioned and more particularly described hereinafter are obtained.

In the accompanying drawing illustrating a suitable embodiment of the invention, and also illustrating the steps of the method of producing the same,

Fig. 1 is a front elevation of a window badge constructed in accordance with the invention.

Fig. 2 is a rear elevation of the same.

Fig. 3 is a vertical, transverse, sectional view of the same taken on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view similar to Fig. 3, illustrating the first step of method of assembling the article.

Fig. 5 is a view similar to Figs. 3 and 4, illustrating the second step in the method of assembling the article, the third step of said method being illustrated in Fig. 3.

The window badge comprises a sheet metal member consisting of a middle or body portion (1) and side flanges (2) which may be said to extend substantially parallel with the body portion (2) but are offset from the latter a distance substantially equal to the thickness of the sheet metal of which the said member is composed.

The outer edge portion (3) of the flanges (2) are folded over to extend substantially parallel with said flanges (2) and in spaced relation to the same to provide recesses in which the side edge portions of a composite non-metallic flexible member (4) are engaged.

Said member (4) consists of a sheet of a suitable transparent, flexible material and a sheet (5) of paper provided, in the instance illustrated, with a central, rectangular opening (6). The said sheet (5) is suitably secured over its entire surface to the transparent sheet of the member (4), as by application of an adhesive or by effecting a softening of the transparent sheet by means of heat or the application of a solvent therefor and maintains the same pressed against the sheet (5) until the transparent sheet has cooled or become set. Thus, a rectangular member (4) is provided, which presents a window portion coincident with the area of the said opening (6).

By reference to Fig. 3 it will be noted that the non-metallic, flexible member (4) consisting of the sheet of transparent material and the sheet (5) of paper, is stretched over and bridges the space between the side flanges (2) and that the portion thereof which is opposed to the middle portion (1) of the sheet metal member contains the window portion and is spaced from the said middle portion (1) of the sheet metal member. Also, that the latter is very slightly bowed and presents its convex face opposed to the flexible wall (4). The space between the middle portion (1) of the sheet metal member and the opposed portion of the flexible wall (4) is open at both sides of the window badge and is adapted to receive a card which becomes engaged between the middle portion of the body portion (1) of the sheet metal member and the opposed flexible portion of the wall (4), the latter being slightly bulged outwardly by the card and cooperating with the bowed portion of the body portion (1) to maintain the card firmly engaged in said space and against slipping out of the open sides of said space.

However, the said card receiving space may be made of depth less than the thickness of a card to be received therein and the body portion (1) of the sheet metal member maintained plane and parallel normally with the opposed portion of the flexible wall as will be understood readily by those skilled in the art without special illustration.

In the manufacture of the device, the entire member consisting of the metal portion (1) and side flange (2) having the overturned edge portion (3), may be bowed substantially as shown in Fig. 4. The degree of bowing illustrated in Fig. 4 is somewhat exaggerated for purposes of illustration.

The first operation following the blanking and forming of the sheet metal member, to produce the same as shown in Fig. 4, is to dispose the non-metallic flexible member over the sheet metal member with its side edge portions disposed in the recesses formed by the edge portions (3) and the body portions of the flanges (2). Then said edge portions (3) are pressed into firm contact with the side edge portions of the flexible sheet (4) to clamp the same against disengagement

from the sheet metal member, the side edges of both members being flush with each other.

The next operation consists in folding the side edge portions of the flanges (2), including the side edge portions (3) of the latter, over to the position shown in Fig. 5. In this operation the flexible member is caused to become taut to such an extent as to decrease the normal bowing of the sheet metal member from that substantially shown in Fig. 4 to that which is shown substantially in Fig. 5. To complete the device, the final operation is to bring the side edge portions (3) of the flanges (2) into the position shown in Fig. 3. This operation increases the tension of the flexible member (4) to such an extent as to bring the flanges (2) into the position shown in Fig. 3, while the middle portion (1) of the sheet metal member is brought into its final very slightly arcuate or plane form as hereinabove described.

A recess (7) is cut into one side edge of the middle portion (1) of the sheet metal member, as shown in Fig. 2 for purposes of effecting a digital engagement of an inserted card (8) to effect removal of the latter.

The completed structure is produced at very low cost of material and labor and is particularly efficient in effecting a yielding but firm engagement of a card or other insert into the open space opposed to the window opening (6) of the paper member and provides a very neat and very light device.

As shown in Fig. 2, the sheet metal member has mounted thereon a securing pin (9), of safety pin type, which may be soldered or otherwise secured thereto.

I claim as my invention:

1. A badge comprising a resilient bowed sheet metal member equipped along two parallel edges with flanges folded over upon the concave face of said member and folded upon themselves and providing flat longitudinal recesses open along the side edges of said member, a non-metallic flexible transparent member disposed over the convex face of said first-named member and secured along two parallel side edge portions within said recess of said flanges, said member being flexed to reduce its normal curvature as said sheet is secured to said flanges, whereby as said member springs back toward normal curvature, said non-metallic member is maintained taut, there being a free space between opposed faces of said members open at its ends and adapted to receive and retain a card.

2. A badge comprising a resilient rectangular sheet metal plate equipped along two parallel edges with flanges folded over upon one face of said plate and folded back between their edges to provide outwardly open side recesses, and a sheet of flexible substantially transparent material permanently engaged along its side edges in said recesses and overlying the face of the plate opposite to that upon which said flanges are folded, there being a shallow longitudinal recess in said plate presenting side walls parallel with said flanges and extending from end to end of said plate, thereby providing end openings through which a card may be introduced to be disposed between the bottom of said recess and said overlying portion of said sheet.

3. A window badge comprising a substantially flat resilient sheet metal plate equipped along two parallel edges with V-shaped flanges folded over upon one face of said plate and presenting outwardly open longitudinal recesses, the mouths of said recesses being bordered along one side by a convex edge, a sheet of transparent flexible material overlying the other face of said plate and having side edge portions thereof extending over said convex edges and permanently engaged in said recesses, the middle portion of said plate being offset from said sheet and providing a card receiving space open at its ends.

4. A window badge comprising a slightly bowed rectangular plate of resilient sheet metal, the middle portion of said plate being offset from the body thereof and providing a card receiving space in the convex face of the plate extending longitudinally from end to end thereof, said plate equipped along its parallel longitudinal edges with V-shaped flanges folded over upon the concave face of the plate and presenting two outwardly open longitudinal recesses, the mouth of each of which is bordered at one side by a convex edge, and a sheet of flexible transparent material overlying the convex face of said plate and said card receiving recess therein and having its side edge portions extended over said convex edges and permanently engaged in said recesses, said plate being normally bowed to a smaller radius than in the completed structure and maintaining said sheet taut by its tendency to spring back to normal contour.

5. The herein described method of assembling a badge structure which consists in first providing a rectangular sheet metal member equipped along two opposed side edges thereof with overturned flanges and having its middle portion bulged to present a substantially convex arcuate face opposed to the inner faces of said flanges, then disposing a rectangular sheet of nonmetallic flexible inelastic material over the bulged face of said member with two side edges thereof disposed for engagement with said flanges, then bending said flanges to firmly engage said side edge portions of said sheet and thereafter folding over upon the other face of said member side edge portions thereof including said flanges to provide substantially Z-shaped formations along said side portions of said member thereby placing said sheet under tension sufficient to cause the said side edge portions of said member to be drawn toward each other and the bulge of the middle portion of said member to be reduced.

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