Feb. 5, 1929. 1,700,977

H. E. BUTLER

PAPER CLIP

Filed May 31, 1927

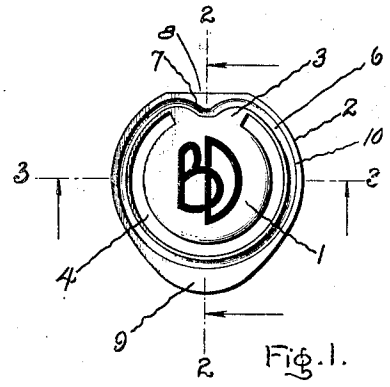


Fig. 1.

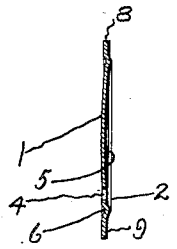


Fig. 2.



Fig. 3.

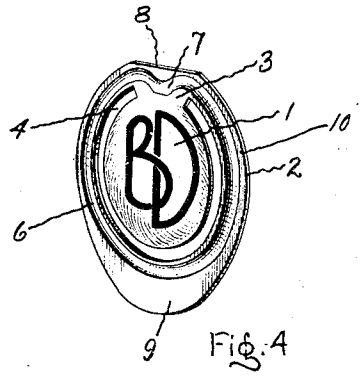


Fig. 4

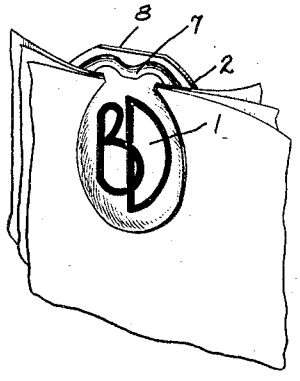


Fig. 5.

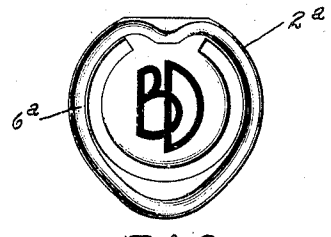


Fig. 6.

Inventor:
Henry E Butler,
by Alfred V. Bobst.
His Attorney.

Patented Feb. 5, 1929. 1,700,977

UNITED STATES PATENT OFFICE.

HENRY E. BUTLER, OF SCOTIA, NEW YORK, ASSIGNOR OF ONE-HALF TO DUDLEY M. DIGGS, OF SCHENECTADY, NEW YORK.

PAPER CLIP.

Application filed May 31, 1927. Serial No. 195,196.

The invention relates to paper clips or fasteners and especially to paper clips or fasteners of the type well adapted to embody a monogram, trademark, emblem and the like as a part of their structure whereby in addition to serving their usual function as a means for fastening together papers, they serve also as an advertising medium.

The object of my invention is to provide an improved paper clip or fastener of the above referred to type, and for a consideration of what I believe to be novel and my invention, attention is directed to the following specification and the claims appended thereto.

In the drawing, Fig. 1 is a face view of a paper clip or fastener embodying my invention; Fig. 2 is a sectional view taken on line 2—2, Fig. 1; Fig. 3 is a sectional view taken on line 3—3, Fig. 1 and showing the clip attaching together a number of papers; Fig. 4 is a perspective view of the clip or fastener, Fig. 5 is a perspective view showing the clip fastening together several papers, and Fig. 6 is a face view of a modification. In the drawing, the views are drawn on an enlarged scale.

Referring to the drawing, Figs. 1 to 5, the paper clip or fastener comprises a central portion 1 and a surrounding outer portion 2, the two portions being united by a hinge portion 3. Portions 1 and 2 are separated or spaced to provide an arcuate slot 4 to receive the papers to be clipped together, the papers being held between the central portion 1 and the outer portion 2 as is shown in Fig. 5.

The central portion 1 is cupped somewhat as is indicated at 5 and the surrounding portion 2 is provided with a continuous groove 6 which extends across the hinge portion 3, the groove dipping or projecting inwardly at the hinge as is indicated at 7 so that it extends to some extent longitudinally of the hinge. The upper edge of the clip is made straight or flat as is indicated at 8 and the lower edge is provided with a rounded, downwardly projecting lip 9.

In the construction shown in Figs. 1 to 5, groove 6 is of a width somewhat less than the width of the sides of outer portion 2 whereby there is provided a narrow side flange as is indicated at 10. If desired, groove 6 may be made slightly wider so as to eliminate this side flange and also it may be made to follow the outer edge rather than the inner edge of lip 9. This arrangement is shown in Fig. 6 wherein 6^a indicates the groove in the outer portion 2^a. Otherwise the arrangement may be the same as that illustrated in Figs. 1 to 5.

In the use of the clip, it may be easily and conveniently placed on the papers to be fastened together by placing projecting lip 9 on the back of the papers, holding the papers against it with the thumb and a finger of one hand, then springing the central portion forward and pressing the clip down over the edge of the papers. In pressing the clip into position, flat portion 8 is convenient in providing a surface to which the pressure may be applied. Thus it will be seen that the clip may be easily and quickly applied to the papers to be fastened together.

A paper clip embodying my invention and as illustrated and described above has a number of important advantages which will be pointed out now in detail.

In the first instance, for a paper clip or fastener to be commercially practical, it must not only be easy and handy to use and capable of holding papers in a satisfactory manner, but also it must be capable of being manufactured at a low cost. This means that it must be capable of being made from the least possible amount of material and with a minimum labor cost.

By reason of my construction wherein I make the central portion 1 cupped and provide a groove 6 in the outer portion 2, the groove extending across and providing a part which extends longitudinally of the hinge portion 3, I am enabled to make the clip or fastener from relatively thin, cheap metal. (For example, I have found commercial sheet steel 0.016 inch thick satisfactory.) This is because the cupping of portion 1 and the grooving of portion 2 serves to strengthen the two portions and because the groove in the hinge 3 serves to strengthen and stiffen the hinge portion and impart to

it sufficient springiness and elasticity to enable it to hold portions 1 and 2 firmly in engagement with the papers.

In this connection, it will be appreciated that considerable strain is concentrated on the hinge portion of the clip and if the clip is to be made from relatively thin material, it is of importance that additional strength and elasticity be imparted to it, and I consider the grooving of the hinge to strengthen it and increase its springiness and elasticity as being an important feature of my invention.

Since the clip is formed from thin, flat material, it can be manufactured by stamping with dies, which means that the labor cost is low.

The cupping of portion 1 and the grooving of portion 2 has the further advantage that it provides edges which bite into the papers, increasing the friction and thereby holding the papers more securely. Furthermore, when the clip in manufacture is cut and stamped on a commercial machine, the edges are rough thereby further increasing the friction between the clip and the papers whereby there is provided a better holding clip. Also, the cupping of the central portion 1 and the grooving of the outer portion 2 has the advantage that, since the edges bite into the paper, the clip will not pick up loose papers or offer any obstruction to other papers sliding over it. This is a matter of considerable practical importance for often with the usual type of paper clip, loose papers will accidentally slip under the clip resulting in the misplacing or loss of papers and sometimes in great inconvenience.

Because of the construction of the clip, a relatively large number of papers may be clipped together without difficulty and firmly held, and when the clip is in position it will not slide horizontally across the papers nor will it permit the papers to turn or become disarranged. In this connection it will be noted that the upper terminals of slot 4 stand in a line parallel with surface 8 so that when positioned the clip will be square with the papers and will hold the papers square and even. Also, the monogram or the like will be then square with the papers. Also, since the inner portion which fits over the front of the papers is of comparatively short length, in turning the sheets, the writing near the top of the paper is visible without moving the clip.

The clip being thin and flat, has the advantage that it takes up but little space and does not interfere with mail stamping machines. And since the top is flat the clip projects but a slight amount beyond the edge of the papers, a thing particularly desirable when the clipped together papers are to be folded and placed in an envelope.

My improved clip is particularly well adapted to embody as a part of its structure a monogram, trademark, emblem, slogan and the like placed on the central portion 1. And in this connection, the cupping of the central portion 1 has particular utility, in that it helps to bring out the monogram, trademark, emblem or the like more forcibly than would a flat surface due to the effect produced by the light falling on the cup shaped or curved outer surface. The trademark, monogram or emblem may be stamped, lithographed, embossed or otherwise placed on inner portion 1 and the clip as a whole may be given a coating to pretect it from rusting. In the present instance, central portion 1 is shown as having the monogram "BD" on its surface.

It will be noted that the outer portion 2 is a continuous piece which surrounds the inner portion 1 and is joined to it by the integral reinforced hinge 3. This arrangement is important from a structural standpoint in that by having the outer portion 2 a containuous piece the strain on the clip when the two portions are separated is divided between the two sides of the outer portion equally and is distributed across the hinge. This avoids concentrating strains at the points where the two portions join with each other which are the weakest points. Also, by having the outer portion a continuous piece it will be seen that when the two portions are being separated the strain is always divided equally between the two sides of the clip since both sides are always moved together.

The continuous groove in the outer member while performing its function as a strengthening means serves also to give a symmetrical, pleasing appearance to the clip as a whole whereby the clip is rendered attractive in design.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A paper clip or fastener formed from thin sheet material and comprising an inner portion which is cup-shaped and a continuous outer portion which surrounds the inner portion in spaced relation thereto to provide a continuous arcuate slot, said two portions being united by an integral hinge and said hinge and surrounding portion being provided with a strengthening groove, the groove in said surrounding portion facing in a direction opposite to that in which the cup in the central portion faces.

2. A paper clip adapted to embody advertising indicia as a part of its structure, said clip comprising a central cupped inner portion which carries the indicia on its convex surface and a continuous outer portion which surrounds the inner portion in spaced relation thereto to provide a continuous arcuate slot, said two portions being joined at one point by an integral hinge portion and said structure being strengthened by a groove

which extends around the outer member and projects inwardly at the hinge member.

3. A paper clip or fastener formed from thin sheet material and comprising an inner portion and a continuous outer portion which surrounds the inner portion in spaced relation thereto to provide a continuous arcuate slot, said two portions being united by an integral hinge which lies in the plane of the outer portion, and said surrounding portion being provided with a strengthening groove which projects inwardly at the hinge to increase the resiliency of the hinge.

In witness whereof, I have hereunto set my hand this 26 day of May, 1927.

HENRY E. BUTLER.