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THE JOINT EXAMINATION BOARD

PAPER P6

INFRINGEMENT AND VALIDITY OF UNITED KINGDOM PATENTS

23rd April, 1993

10.00 a.m. - 2.00 p.m.

Please read the following instructions carefully. This is a FOUR HOUR Paper.

1. Write on one side of the paper only using BLACK ink. You must write your examination number and the designation of the Paper in the top right hand corner of the sheet. You must not state your name anywhere in the answers.

2. NO printed matter or other written material may be taken into the examination room.

3. Answers MUST be legible. If the examiners cannot read a candidate's answers no marks will be awarded.

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1993 "INFRINGEMENT AND VALIDITY OF United Kingdom PATENTS"

Your client, Company B, writes (in 1993) as follows:-

For the last 10 years we have been manufacturing a sheet metal paper clip. As you will see from the accompanying sample and from Drawing D, it comprises a rectangular metal blank 1 stamped to have a central rectangular tongue 2 which attaches, at 3, to a perimeter frame 4. The tongue 2 is then bent upwardly through the perimeter frame 4 so that the attachment portion 3 is below the plane of the perimeter frame and the free end 5 of the tongue is above the plane of the perimeter frame.

In use, the tongue 2 is forced downwardly through the perimeter frame 4 and the clip 1 is then pressed over a sheaf of papers 6, with the reverse bent tongue 2 resiliently trapping the papers against the back of the perimeter frame. Advertising matter can be printed on the front of the clip frame.

Our Managing Director, on a recent visit to Germany, was surprised and very upset to discover a paper clip almost identical to our clip; except it had a couple of spikes pointing downwards from the tongue. The Managing Director learnt that these paper clips were manufactured by a German company; A GmbH.

This German clip is better than our own clip because the spikes improve the grip on the paper.

Is there any reason why we cannot make and sell the German clip in this country? It would be very simple to modify our stamping tools.

You reply as follows:-

A search of patents in the name of A GmbH. has found one relevant United Kingdom Patent, Patent A, copy

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specification enclosed. This patent is some 4 years old and is in force. No other patent in the name of A GmbH. could be found.

We have not studied this patent in any detail, but note that no citations were made during its prosecution.

Your Client has just sent the following response:-

Since your letter, A GmbH. have launched their paper clip in this country and our sales have plummeted. To counter this we have designed a new paper clip; described in Document B, copy herewith.

This new paper clip has several advantages over A's clip in that, in use, the directly opposed pairs of spikes are driven by spring pressure between the tongue and the frame to firmly grip all the papers in a sheaf and, when not in use, all the spikes are guarded.

Does this new clip design infringe Patent A? We would add that we are very surprised that A GmbH. obtained their patent; given our old clip design and that conventional, bent wire, paper clips have paper engaging edges provided by each end of the wire which serve to increase the grip of the clip on either side of the papers held by the clip (see Drawing D).

Is there any action we can take against A GmbH.?

Investigation of A GmbH's parent German patent revealed one reference, a 22 year old French Patent C.

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Please give notes upon which you would base a reply to your client; your notes should include a consideration of how A GmbH might improve its position against your client.

Ignore all question of copyright or design registration or right

Documents supplied:-

Patent Specification A, for a paper clip;

Document B, describing the client's new paper clip;

A translation of part of French Patent C, for a trim clip;

Drawing D of your client's old clip and a conventional bent wire paper clip;

A sample of your client's old clip; and,

A sample of a conventional bent wire paper clip.

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PAPER CLIPS

This invention relates to paper clips and it particularly relates to such clips made from sheet metal.

Conventional sheet metal paper clips, which are usually formed by stamping, rely on the friction between the metal surface of the clip and the paper. Usually, the clip's metal surface is of large area and quite smooth; resulting in a poor grip.

It is an object of the present invention to provide a sheet metal paper clip which has an improved grip.

According to the present invention, a sheet metal paper clip has paper engaging barbs upstanding from a surface of the clip.

Also according to the present invention, a sheet metal paper clip comprises a central tongue integral with a perimeter frame and barbs depending from the central tongue.

In a preferred embodiment of the present invention, each barb is reverse directed towards the junction between the tongue and the frame to thereby improve the grip on sheaves of paper.

The above and other features of the present invention are illustrated, by way of example, in the Drawings, wherein:-

Fig.1 is a plan of a stamped, sheet metal paper clip; and,

Fig.2 is a perspective illustration of the clip of Fig.1.

As shown, a rectangular metal blank 10 is stamped to have a central rectangular tongue 12 which attaches, by a junction 14, to a perimeter frame 16; which stiffens the clip. The inner profile 18 of the perimeter frame generally complements the outer profile of the central tongue. A slot 20 is cut in each side 22 of the tongue 12 and is angled away from the junction 14. All the above shaping can be performed by a simple stamping operation, which can also shape the outer frame profile 24.

The tongue portions adjacent the angled slots 20 are bent downwardly to form triangular barbs 26 (see Fig. 2); the angle

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of slots 20 ensure that the barbs 26 are reversely directed, back towards the junction 14 between the tongue 12 and the perimeter frame 16 (i.e. away from the free, forward end 28 of the tongue.)

The tongue 12 is then bent upwardly so that it is above the plane of the perimeter frame 16 (see Fig. 2).

In use, a clip is pressed over a sheaf of papers with the free, forward end 28 of the tongue riding up over the top sheet of paper and, when the clip has been fully pressed home, the barbs are driven by spring pressure between the tongue and the frame to firmly grip the papers. Grip on the sheets could be improved by providing further barbs.

CLAIMS:

1. A sheet metal paper clip having paper engaging barbs upstanding from a surface of the clip.

2. A sheet metal paper clip as claimed in claim 1 and having a central tongue integral with a perimeter frame and barbs depending from the central tongue.

3. A sheet metal paper clip as claimed in claim 1 or claim 2, wherein each barb is reverse directed towards the junction between the tongue and the frame to thereby improve the grip on sheaves of paper.

4. A sheet metal clip substantially as described with reference to or as shown by the Drawings.

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PATENT A

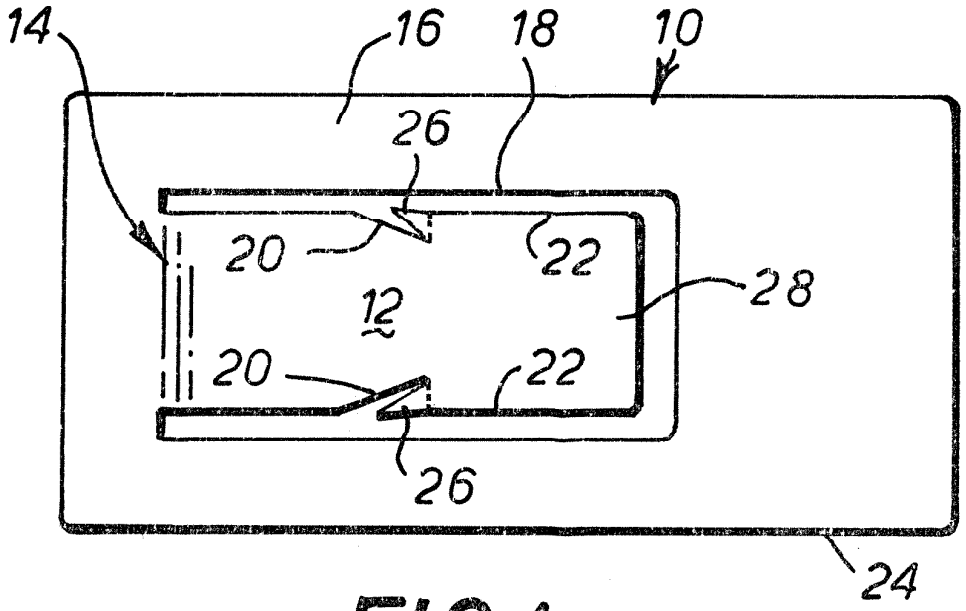

FIG.1

FIG.2

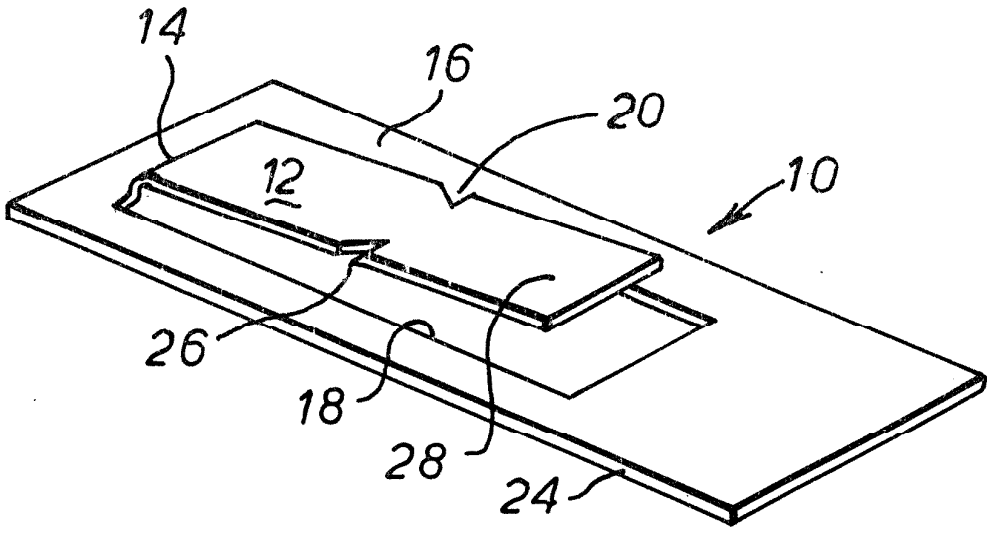

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Fig.1 of the drawings is a plan of a stamped metal sheet, to form a paper clip;
Fig.2 is an under-plan of a finished sheet metal paper clip; and,
Fig.3 is a perspective illustration of the finished paper clip of Fig. 2.

As shown by Figs 1 and 2, a rectangular blank 10 of half hard type 304 stainless steel is stamped to have a central tongue 12, having a spatulate end part 14 and a waisted part 16 which attaches, by a junction 18, to a perimeter frame 20. The inner profile 22 of the perimeter frame generally complements the outer profile of the central tongue. A slot 24 is cut in each side 26 of the tongue spatulate portion 14 and is angled away from the junction 18. The perimeter frame has an ear 28 in each side 30 which projects towards the tongue waist 16. A slot 32 is cut in each ear 28 and is also angled away from the junction 18. In an alternative, unillustrated form of clip the front end of the perimeter frame may be omitted.

The width w of the tongue spatulate end 14 is wider than the internal gap g between the frame ears 28. All the above shaping can be performed by a simple stamping operation, which can also shape the outer frame profile 34.

The tongue portions adjacent the angled slots 24 are bent downwardly to form triangular spikes 36 (see Fig 3) and the frame portions adjacent the angle slots 32 are bent upwardly, again to form triangular spikes 38; in either case, the angle of slots 24 and 32 ensure that the spikes 36 and 38 are reversely directed, back towards the junction 18 between the tongue 12 and the perimeter frame 20 (i.e. away from the free, forward end 14 of the tongue).

The tongue 12 is then bent upwardly so that the waisted

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portion 16 arches above the plane of the perimeter frame 20 and the spatulate portion 14 then curves back towards and finally away from the plane of the frame at its free end (see Fig.3). This switchback bending of the tongue 12 has the effect of shortening its length so that each tongue spike 36 is close to and opposes a frame spike 38. When not in use, tongue spikes 36 contact frame ears 28 and tongue waisted portion 16 arches over frame spikes 38.

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DOCUMENT B

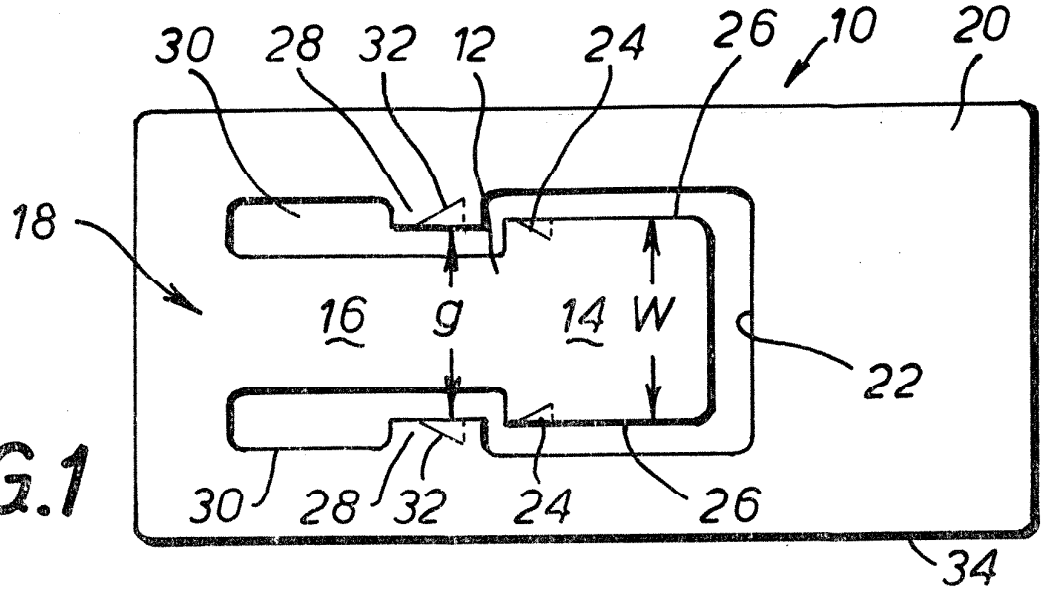

FIG.1

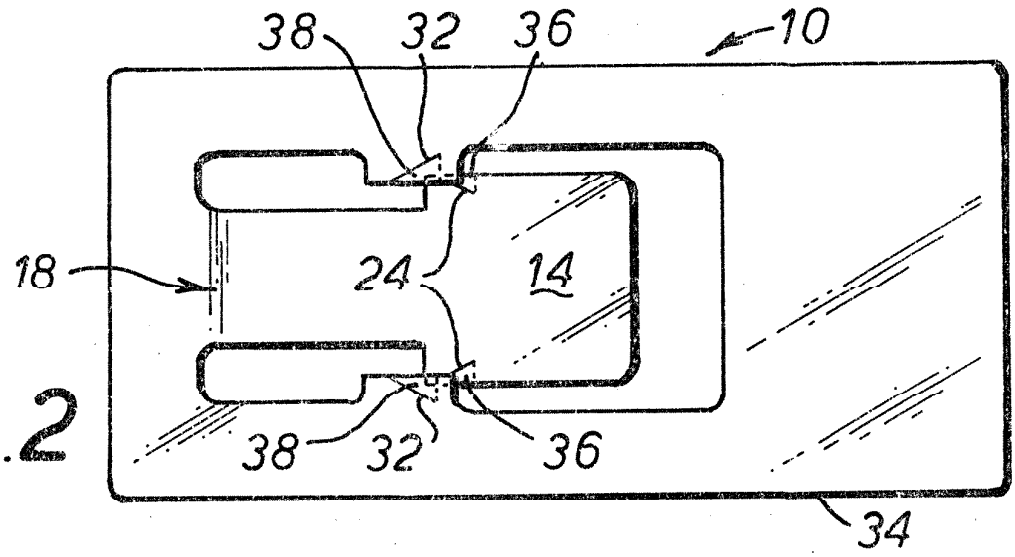

FIG.2

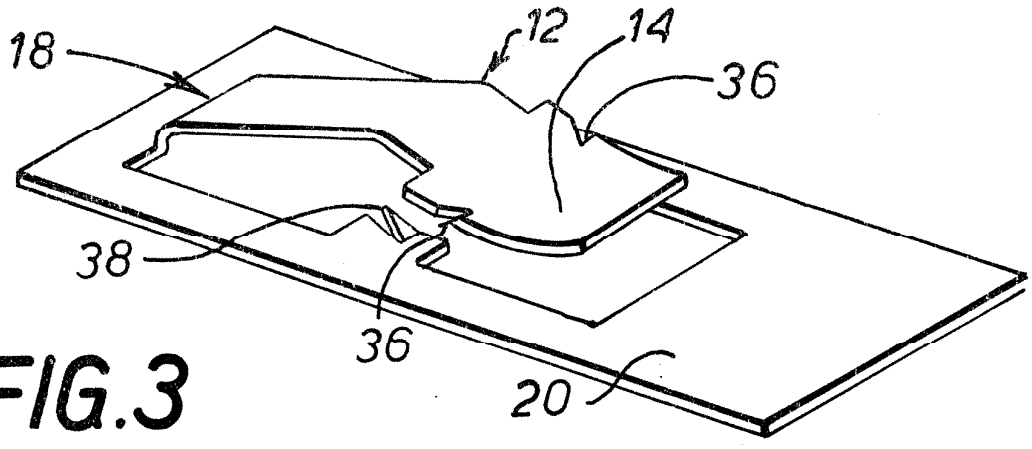

FIG.3

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SPRING CLIP

This invention relates in general to spring clips and has specific reference to a clip capable of assembling a sheet metal flange of an automotive body element and an automotive trim element bearing a channel adapted to receive said flange; the trim element may be a peripheral protective or decorative element of plastics material.

The automotive trim spring clip according to this invention comprises on the one hand a resilient strip so bent as to provide a bearing portion capable of retaining the clip in the channel of an automotive trim element and on the other hand a locking portion capable of urging the trim element against the body element by causing said flange to snappily clear the locking position of the clip and be eventually retained by the lower edge of this locking portion. This resilient strip advantageously consists of a curved steel spring blade.

The objects and advantages of this invention will become apparent from the following description of a preferred embodiment given by way of illustration, not of limitation, with reference to the accompanying drawing, in which:

Figure 1 is a perspective view of the automotive trim spring clip according to the present invention; and,

Figure 2 is a fragmentary perspective view of an automotive trim element assembled with a body element.

The body element A has substantially the cross-sectional shape of an inverted U with unequal side arms, the smaller arm 5 having formed at its free end an inturned collar, ledge or flange 6.

The plastic trim element B has a substantially S-shaped cross-sectional configuration comprising an internal depending channel having an inner wing 7 connected to the visible

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section element proper B, a flat bottom 8 and an internal wing 9 having a free upper edge.

The trim clip C consisting of a bent spring blade comprises a curved bearing portion or strip 1 and a retaining or locking portion consisting in fact of a central blade 2 formed with retaining teeth 2a and a pair of lateral tongues 3.

When assembling the elements A, B and C, in a first step the wing 9 of trim element B is introduced into the retaining and bearing portion (2,3) of trim clip C so that the teeth 2a of the central blade 2 penetrates somewhat into the inner surface of trim wing 9, and at the same time the lateral tongues bear resiliently against the outer surface of wing 9. Then, the body element A is pressed into the channel 7, 8, and 9 of the trim element B. During this movement, the inner flange 6 depresses the resilient strip 1 until the flange snappily clears the lower end of said strip 1 and bears against the bottom 8 of channel 7, 8, 9.

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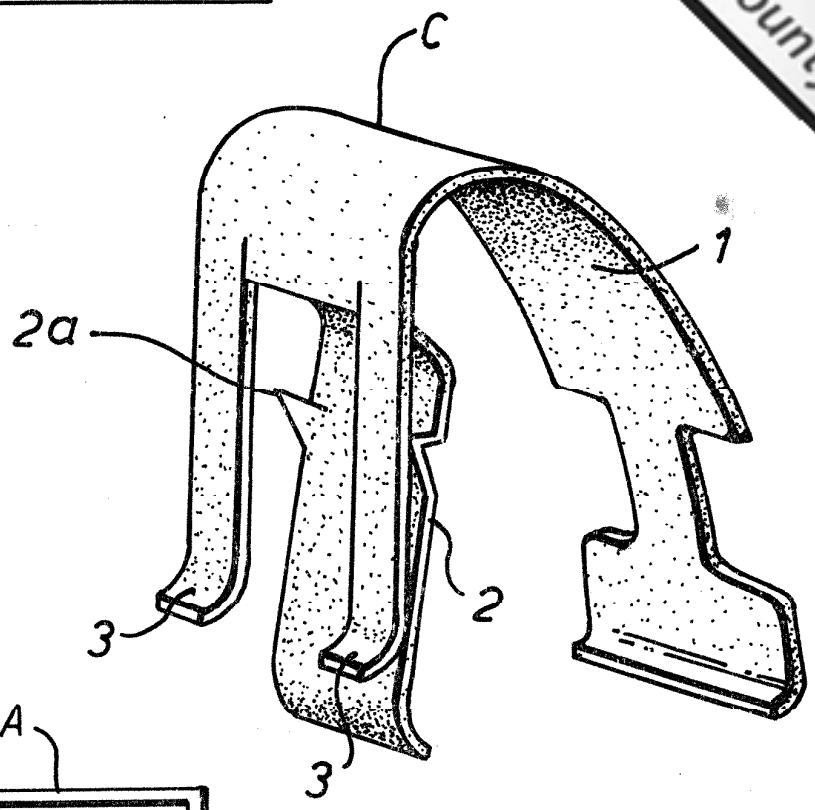
PATENT C

FIG.1



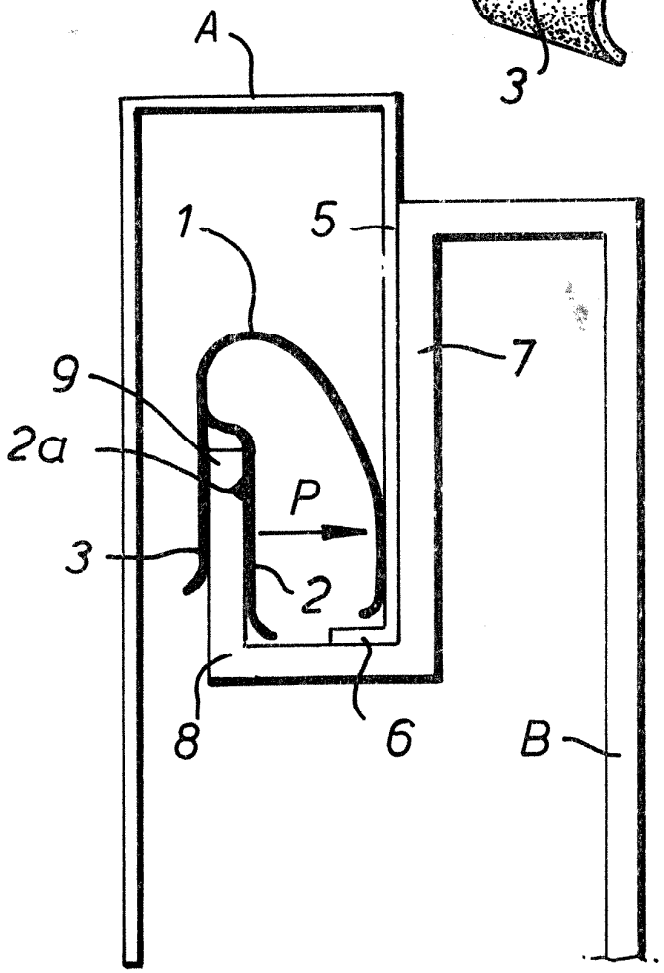


FIG.2

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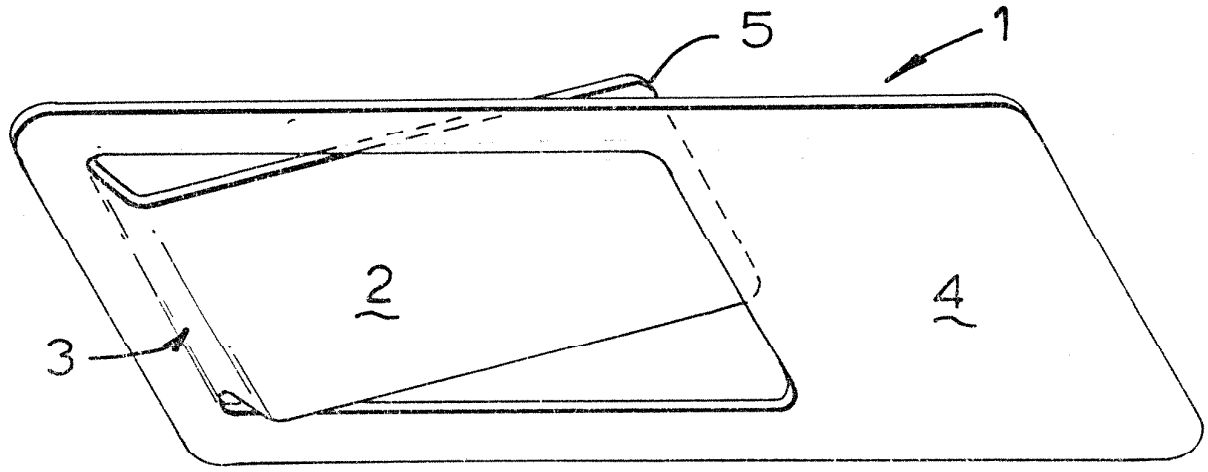
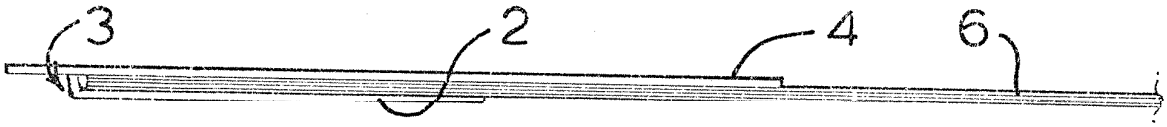
DRAWING D

CLIENTS OLD CLIP

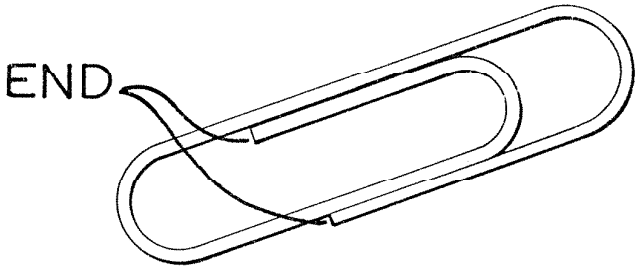


PERSPECTIVE UNDERVIEW

SIDE ELEVATION IN USE



CONVENTIONAL BENT WIRE PAPER CLIP



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