Sept. 1, 1964 B. H. HANSEN 3,146,505

STAKLIP

Filed May 29, 1961 3 Sheets-Sheet 1

FIG. 1

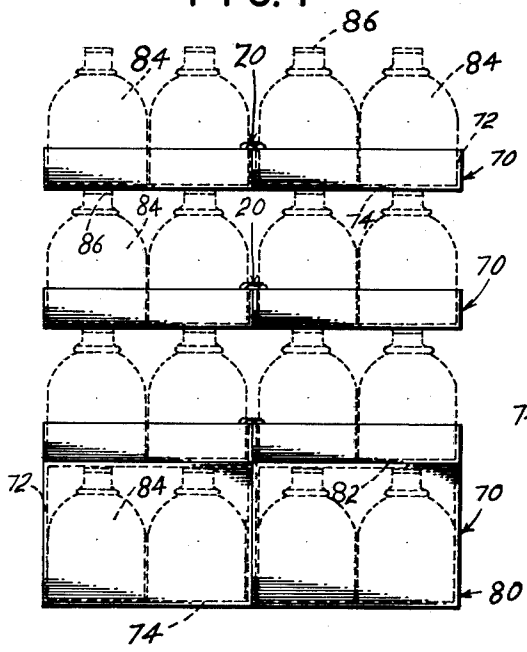


FIG. 2

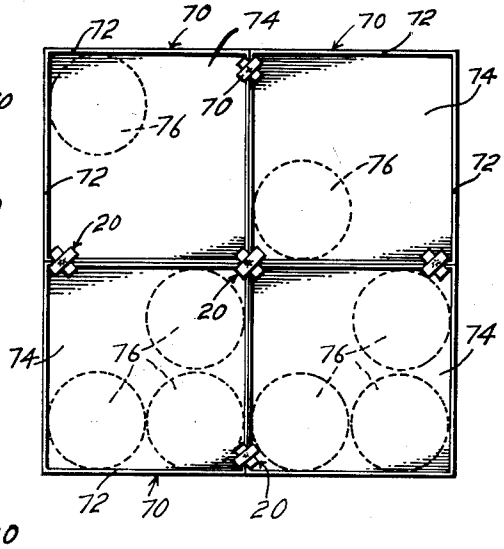
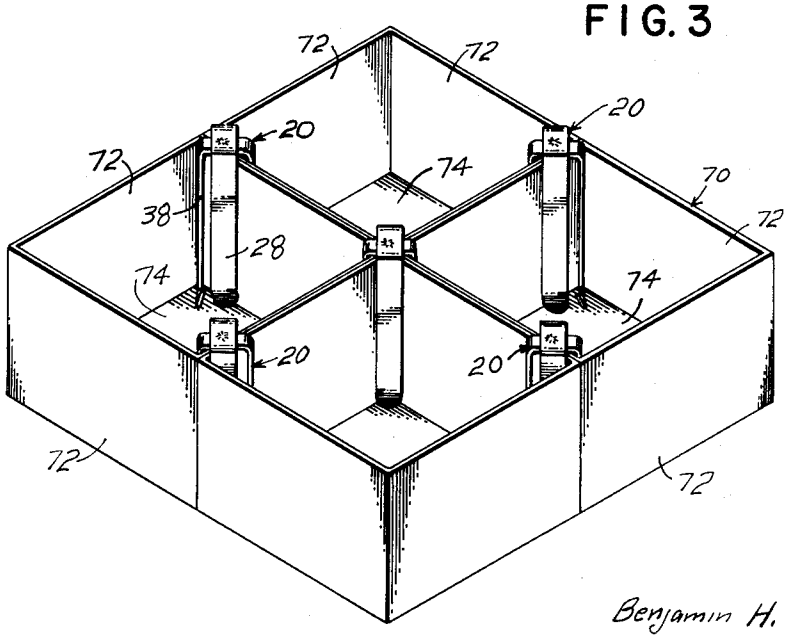


FIG. 3



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Sept. 1, 1964 B. H. HANSEN 3,146,505

STAKLIP

Filed May 29, 1961 3 Sheets-Sheet 2

FIG. 4

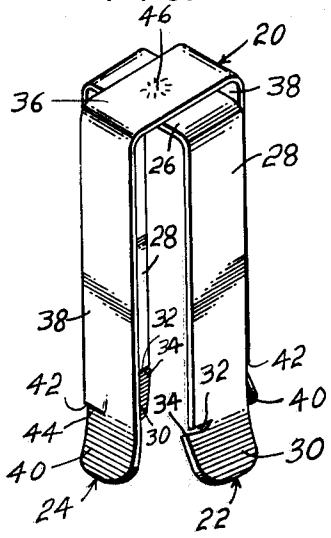


FIG. 5

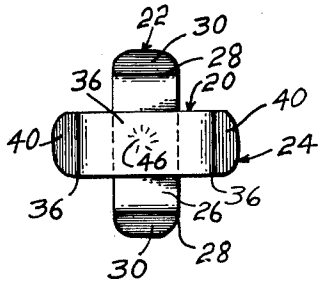


FIG. 6

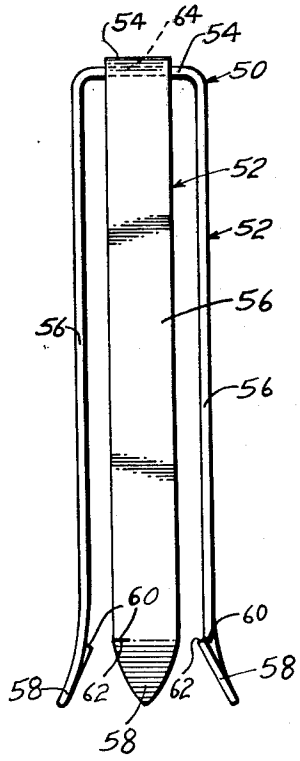
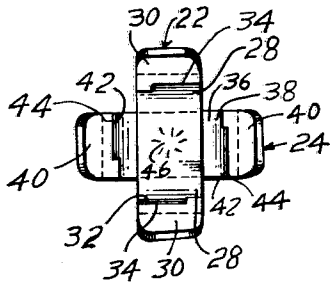


FIG. 7



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Sept. 1, 1964 B. H. HANSEN 3,146,505

STAKLIP

Filed May 29, 1961 3 Sheets-Sheet 3

FIG. 8

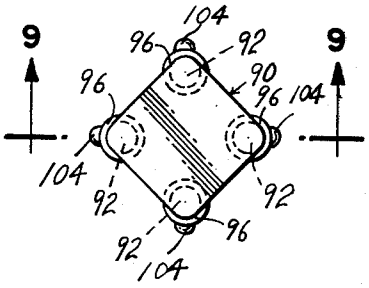


FIG. 9

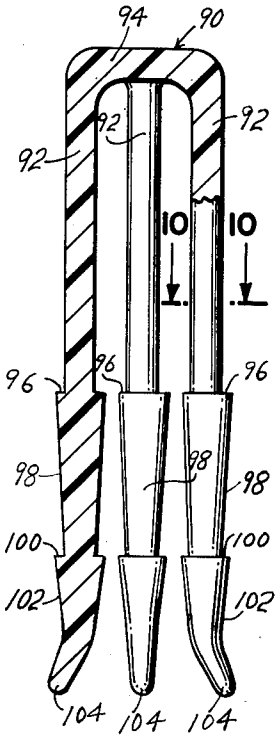


FIG. 10

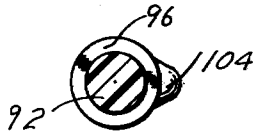
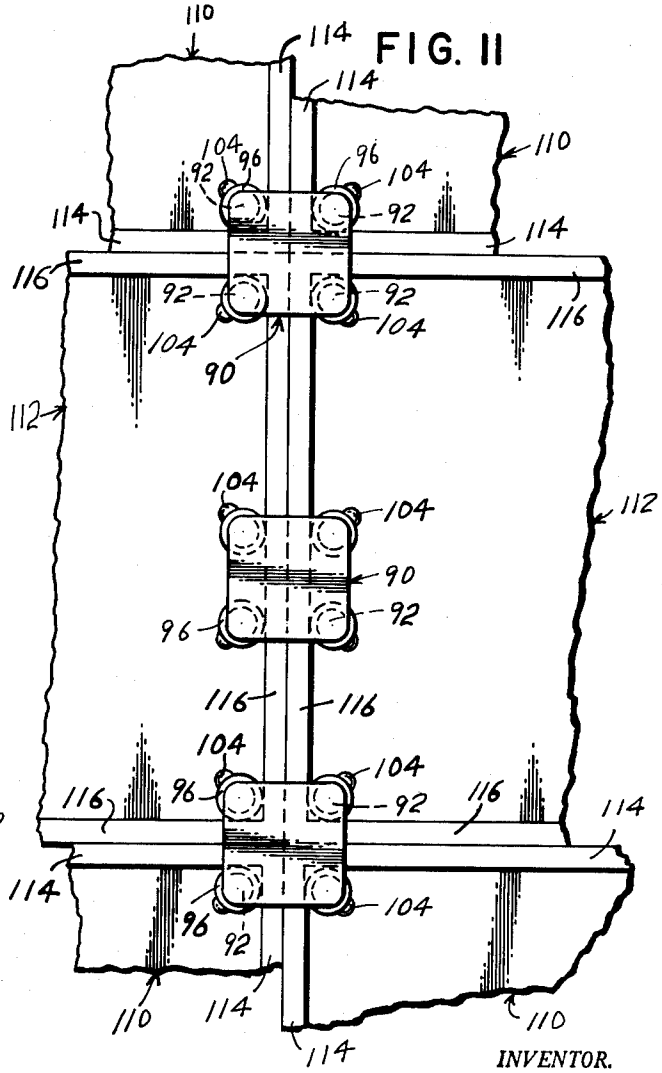


FIG. 11



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3,146,505

STAKLIP

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1 Claim. (Cl. 24—81)

This invention relates to an article of manufacture for holding together boxes and/or cartons, and also to the combination of said article of manufacture and said boxes and/or cartons in a display.

In present day supermarkets and large stores there are relatively large areas for displaying boxed goods. Namely, these goods may be in small boxes, or cartons, in bottles, or other similar articles. One of the ways of making a display for sale purposes, is to take a number of cartons of the goods to be displayed, cut off the upper part of the box, arrange the boxes side-by-side and then to make tiers of these cartons. In this way it is possible to have available for sale a relatively large number of items in a relatively small floor area. However, as these boxes are normally of corrugated cardboard or paper, they do not stand well by themselves and, also, they do not stand well in tiers as the sides of the cartons have been cut away. More particularly, the corrugated paper box may hold gallon, half-gallon, quart bottles of material such as bleach, viz., chlorinated water and a base, or may contain bottles of ammonia, vinegar, apple juice, cider, oil, starch, etc. If one of the boxes falls off the display and the bottles strike the floor there is a breaking of the bottles and also a release of the chemicals in the bottles. With such a happening it is possible for a person walking by the display to be injured from the broken glass, the slippery floor from the liquid, and/or the chemical itself. Because of the possibility of the corrugated boxes being knocked over, or tipped over by little children runing into them, or shoppers with grocery carts runing into the display, the operator of the store is reluctant to stack boxes and cartons in tiers. In this regard, the operator of the store is reluctant to stack boxes over two tiers high. And, in many instances the operator will not display goods in corrugated boxes, but instead will forego the display and place a few of the goods on the shelves for the sale.

With this in mind I have invented an article of manufacture which can be used to hold the corrugated boxes and cartons together. More particularly, the sides of the boxes are clamped to form a unitary structure so that there results one continuous unit comprising a number of separate boxes. Also, due to the rigidity of this integral unit it is possible to stack the boxes five or six tiers high. Naturally, it is readily seen that there is a great advantage in this because it is possible to have a much larger number of goods available for display and show purposes in a small area than previously available.

Accordingly, one ofthe objects and advantages of this invention is the provision of a device for holding together boxes so that the boxes can display goods; a further object is a device for holding boxes together in which device makes it safer to display dangerous materials such as ammonia, peroxide and chlorinated water in a supermarket; a still further object is to provide a device for holding more goods for displaying and selling purposes than previously available; a further advantage of this invention is such a device which makes it possible to use areas in a store or a supermarket which, prior to this invention, have not been safely and completely utilized; also, this invention may be used by somewhat inexperienced help with little instruction; and, a still further object is the provision of such device which is inexpensive to manufacture.

These and other objects and advantages will be more

particularly brought forth upon reference to the accompaning drawings, the detailed specification, and the claim.

In the drawings:

FIGURE 1 is a side elevational view illustrating a display composed of boxes tied together by the subject matter of this invention and which boxes are arranged in tiers;

FIGURE 2 is a plan view of four boxes in a tier and which four boxes are held together by the staklip or subject matter;

FIGURE 3 is a isometric view looking down on four boxes held together by the subject matter of this invention and which four boxes have a common corner and adjacent boxes having common sides and which boxes at the common corner are held together by the staklip and which common sides are held together by the staklip;

FIGURE 4 is an isometric view looking at the subject matter of this invention and which shows the same as comprising a base and four spaced-apart legs and four individual spaced-apart legs pointed in the same direction;

FIGURE 5 is a view looking at the base of the subject matter of this invention and shows the four spaced-apart legs and with their lower ends being splayed outwardly;

FIGURE 6 is a side elevational view of the staklip and which shows the legs as being somewhat longer than the staklip of FIGURE 4 and the ends of the legs being pointed;

FIGURE 7 is a view looking at the interior of the staklip and shows the four spaced-apart legs with their lower ends splayed outwardly and the legs being notched inwardly to provide a notch for catching a wall of a carton and the like;

FIGURE 8 is a plan view of another modification of the subject matter of this invention and illustrates the same with four spaced-apart legs, the lower ends splayed outwardly and a circular ridge to provide a catch for biting into the wall of a carton and the like;

FIGURE 9 is a side elevational view looking at the staklip and shows the legs, the circular notch or ridge for biting into the wall, and the outwardly splayed legs;

FIGURE 10, taken on line 10—10 of FIGURE 9, is a lateral cross-sectional view showing the circular construction of the leg and also the circular edge for catching the wall of a carton and the lower outwardly splayed end of the leg; and

FIGURE 11 is an illustration of boxes held together by this staklip and shows the staklip holding together four boxes at a common corner and also a staklip holding together the sides of two adjacent boxes.

Referring to the drawings, it is seen that the invention comprises an article of manufacture, staklip 20. This staklip 20 in effect comprises two U-members 22 and 24. Each of these members is substantially the same but will be separately described for purposes of this specification. U-member 22 comprises a base 26 and two legs 28. Each of the legs near its lower end flares slightly outwardly into a splayed end member 30. At approximately the lower end of the leg 28, where the leg splays outwardly there is a cut or break in the metal at 32. The splayed part of the leg 30, at this break in the metal, then projects inwardly at 34. The flared in portion 34 functions as a catch so as to catch against the side wall of the corrugated box.

The U-member 24 is similar to U-member 22 in that it comprises a base member 36 and two legs 38. The lower end of the legs 38 splay outwardly at 40. At approximately the position where the leg 30 splays outwardly at 40, there is a break in the metal at 42. The upper part of the splayed portion 40 is pushed inwardly at 42 to define a catch 44. The catch 44 bears against the inner wall of the corrugated box when staklip 20 is positioned on the box and bites into the same.

The two base members 26 and 36 are spot welded together at 46 to form an integral structure. It is to be noted that each of the legs 28, 38, 28 and 38 are at substantially right angles to each other or positioned at 90 degree intervals. Also, the legs are pointing in the same direction.

In FIGURE 6 there is illustrated a modification of the staklip. This is referred to by reference numeral 50 and comprises two substantially identical U-members 52. Each of these U-members 52 comprises a base 54 and two legs 56. The lower end of each leg 56 is splayed outwardly at 58. At approximately that part of the leg 56 which begins to bend outwardly there is a notch 60. The upper part of the splayed portion 58 is directed inwardly to define a catch 62. This catch 62 bears against the inner face of a wall of a box so as to secure staklip 50 with respect to the box. The end of the leg 56 is pointed at 63 so that the leg can be forced through the cover of a corrugated carton or box. The two members 52 are spot welded at 64 at their bases so as to make the staklip 50. It is seen that this staklip 50 comprises the four legs and which four legs are substantially at right angles to each other or are positioned at 90 degrees with respect to each other.

The materials of construction for illustrative purposes, of the staklip 20 may be numerous. For example, the staklip may be of flat metal or plastic or wood or even molded paper under certain circumstances. The thickness of the material and the width of the legs varies. The length of the legs 28 and 38 may be approximately two inches and the distance or the space between the inner faces of the legs 28 or the inner faces of the leg 38 may be three-fourths of an inch or may be an inch. The width of the legs 28 and the legs 38 may be one-fourth of an inch or three-eights of an inch, or even in certain circumstances an inch. The thickness of the legs 28 and 38 may be one-sixteenth of an inch or one-eighth of an inch or three-thirty seconds of an inch depending upon the use. The break 32 may vary depending upon the width of the legs 28 and 38 but it can be assumed that the length of this notch 32 can be approximately one-half or slightly less than one-half one width of the legs 28 and 38. Also, the catches 34 and 44 may be approximately one-eighth of an inch in depth. Naturally, the staklip 50 will have slightly different dimensions as it is somewhat longer than the staklip 20. More particularly, the legs 56 may be approximately five inches in length, the distance between the inner faces of the legs 56 may be three-fourths of an inch or an inch or one and one-fourth inches depending on the purpose to which it is being placed. The splayed portion may be approximately one-half inch to three-quarters of an inch in length. The notch 60 may be approximately one-half the width of the leg 56 or slightly less than one-half the width of the leg 56. The notch 62 may be approximately one-eighth of an inch in depth. Also, the width of the leg 56 may be one-fourth of an inch up to three-fourths of an inch. However, in most instances it probably will vary from about one-fourth of an inch to one-half of an inch and the width can be approximately one-eighth of an inch to one-sixteenth of an inch in thickness. The end of the leg 56 tapers to a point.

In most instances staklips 20 and 50 will be of metal or of plastic. If the plastic, instead of being spot welded together, the two members can be adhered together by a resin.

Referring to FIGURES 1, 2 and 3 there is illustrated the use of staklip 20 for holding together boxes in display. These boxes are referred to by reference numeral 70 and comprise four sides 72 and a base 74. In FIGURE 3 there is illustrated four of these boxes. These boxes each have four sides and a base. These four boxes are arranged with the common corner and with two adjacent boxes having common sides. It is seen that the four boxes are held together at a common corner by one of the staklips 20. This staklip has one of its legs 28 or 38 in each of the boxes. In other words, these boxes are tied together at their inner corners by one of the staklips. The common sides of two adjacent boxes are positioned by another staklip 20. One set of legs 28 and 38 are in one of the boxes and another set of legs 28 and 38 are in another one of the boxes. In this manner by the use of five staklips 20, viz., one at the four inner corners of each box and another one holding together the adjacent sides of the boxes, there is produced a unitary structure comprising the four boxes.

In FIGURE 2 there is illustrated an arrangement of four boxes tied into a unitary structure by the staklip 20 and, which boxes contain jars 76.

In FIGURE 1 there is illustrated a display 80 comprising four tiers of boxes. The lower box 70 has not had its top part 82 and its cover removed, i.e., the carton 70 is intact. In other words the sides have not been cut away as in the upper tiers. The lower box provides a better support for the upper tiers when it is left intact. However, it is to be remembered that the lower boxes 70 of the tiers are not necessarily tied together and there is a possibility of them being knocked over. It is seen that the boxes in the upper tier have had their sides 72 cut away so that approximately one-fourth or one-third of the side remains. As is seen in the drawing these boxes are tied together by staklips 20. With these staklips it is possible to arrange many more bottles in a given space or in a given area that has been previously possible. More particularly, in previous displays it has not been possible to arrange three or four or five tiers of boxes or cartons. This was especially so with a type of illustrated jars 84. If the boxes in a tier were not tied together then they would tend to slip and move on the small cap 86 of the jars 84. The jars 84 may be considered to be a bleaching agent such as clorinated water or liquid starch or vinegar or other liquid. In previous displays the tiers would have been limited to probably two tiers, i.e., a base tier of an unopened box and an upper tier of an opened box. With the use of the staklip it is possible to have three or four or five tiers as all the boxes are tied into a unitary structure. The small area of the cap 86 is of no concern as the boxes are resting on many of these lower caps 86 and which caps are spread uniformily underneath. In this manner there is provided a firm support for the unitary structure of the boxes in a tier.

In FIGURE 8, 9, 10 and 11 there is illustrated a staklip 90 having four spaced-apart legs 92. Each of these legs is at substantially right angles to each other so that each one is in a quadrant by itself. The upper part of the legs combine into a base portion 94. This base portion is integral with the legs 92 or it may be considered that the legs and the base portion are all one continuous unit.

The legs 92 at approximately two-thirds the distance from the base 94 expand outwardly to form a first circular ledge 96. The outer brim of the circular ledge 96 is of a larger diameter than the diameter of the circular leg 92. The leg 92 upon leaving the circular ledge 96 tapers inwardly at 98 and then expands outwardly again to form a second circular ledge 100.

This leg, once again, upon leaving the circular ledge 100 tapers inwardly at 102 and then the tip of the leg splays outwardly at 104.

The purpose of the splayed portions 104 is to make it easier to force the staklip 90 over the edges of the boxes. The purpose of circular ledges 96 and 100 is to act as a catch so that the edges of these circular ledges bite into the walls of the boxes and thereby more firmly position the staklip 90.

In FIGURE 11 there is illustrated a plan view of six boxes held together by the staklip 90 for display purposes. These boxes will be referred to as four end boxes 110 and two center boxes 112 meet at the corners. More particularly, the boxes 110 comprise walls 114 and the boxes 112

comprise walls 116. The walls 114 and the walls 116 meet at these four corners.

The staklip 90 is pressed down so that there is a leg 92 in each of the two boxes 110 and each of the two boxes 112. Another way of expressing this is that one of the legs 92 is in one corner of each one of the boxes 110; another leg 92 is in another corner of the box 110; the third leg 92 is in one corner of the box 112; and, a fourth leg 92 is in another corner of the other box 112. The base 94 passes over the upper edges of the sides 114 and 116 and also passes over the corner of where the four boxes 110 and 112 contact each other.

It is seen that the ledges 96 bite into the walls 114 and 116. Also, it is seen that the spacing between the inner faces of the legs 92 and also the tapered sections 98 and 102 is such that there is just barely sufficient clearance for the legs to pass over the adjacent walls 114 and 116. The splayed portion 104 assists in positioning the staklip 90 over these walls.

With respect to boxes 112 it is seen that a staklip is positioned approximately midway along the walls 116. The staklip 90 has two legs 92 in one box 112 and two legs 92 in the other box 112. By means of this centrally positioned staklip it is possible to hold the walls closely together. Again, the distance between the legs 92 is just slightly greater than the thickness of the walls 116 so that the legs pass over the wall. Also, it is seen that the circular ledges 96 bite slightly into the wall 116 so as to more firmly position the staklip.

The staklip 90 may be of cast metal and the like or may be of a plastic or may be of molded paper products or molded cellulose. One of the easiest ways of making the staklip 90 is by means of casting a plastic in a mold. Many of the new plastics lend themselves readily for use in the manufacture of the staklip.

Although it is not essential to state the dimensions I have found that if the legs of this clip are of a length of two to three inches that the clip is satisfactory for most display purposes. Also, a distance of approximately three-fourths of an inch between the inner faces of the two opposed legs 92, viz., the two opposed legs 92 being at approximately 180 degree angles with each other, is

sufficient for most purposes. Also, the legs 92 may be of approximately one-fourth of an inch in diameter. The circular ridges 96 and 100 may be of approximately one-eighth of an inch larger diameter than that part of the leg with which they immediately join. Also, the circular ridges 96 and 100 should face the base 94 of the staklip. The reason for this is that the circular notches will more firmly bite into the walls of the boxes, if they are so positioned as to oppose the pulling of the staklip from the wall.

A modification may be where one staklip is adapted to receive another staklip. As a result there may be constructed a pole having branching legs for projecting into boxes and cartons and the like. In this way the cartons in a display are tied together both vertically and horizontally.

Having presented my invention, what I claim is:

As an article of manufacture, a holding device comprising a molded integral base and four individual spaced-apart legs, said legs being equally spaced around the periphery of said base and depending therefrom, said legs being of a circular configuration, the lower third of each of said legs having a plurality of circular enlargements providing a plurality of circular ledges, said ledges are directed toward the base so as to provide a catch for biting into a wall or the like, and each of said legs are splayed outwardly near its lower end and below the ledges.

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