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SUPPORT FOR BRUSHES AND LIKE ARTICLES

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Fig. 1

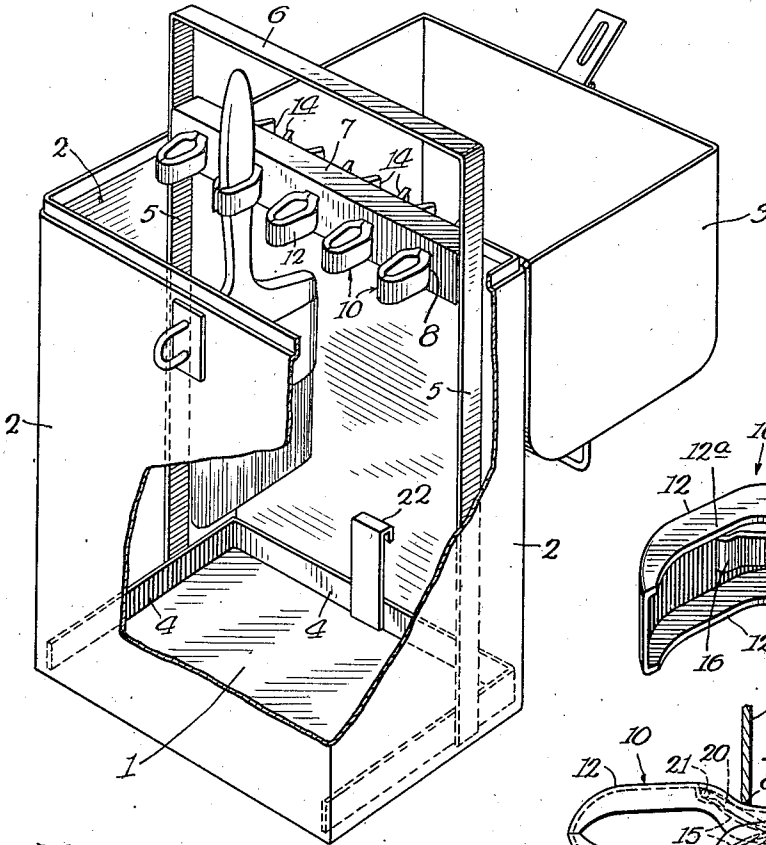


Fig. 2

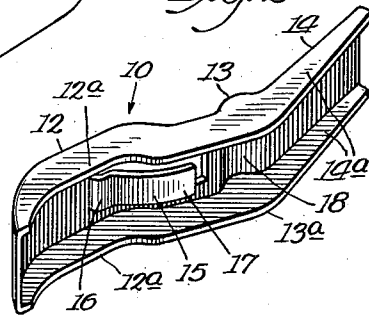


Fig. 3

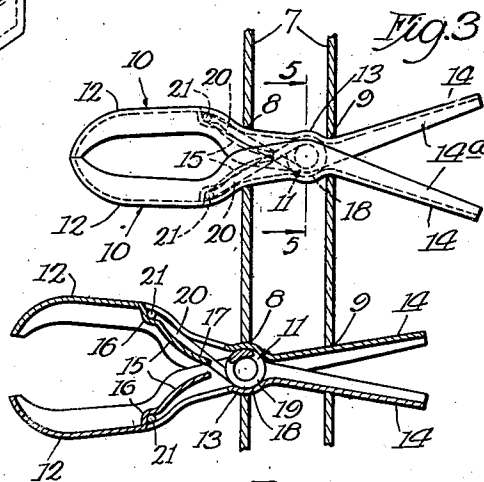


Fig. 4

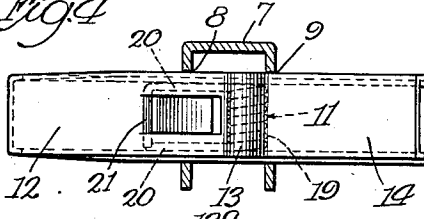
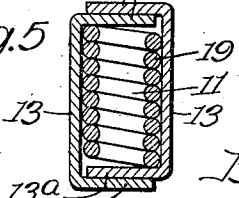


Fig. 5



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UNITED STATES PATENT OFFICE

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SUPPORT FOR BRUSHES AND LIKE ARTICLES

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3 Claims. (Cl. 211—60)

My invention has for its object the provision of a supporting frame and a set of spring clips supported by said frame and arranged to severally engage the handles of brushes or like articles which it may be desirable to support in such manner and provide for ready engagement and disengagement of a particular one of them. The specific embodiment of my invention which is illustrated in the drawing and will hereinafter be particularly described is a paint brush receptacle adapted to receive a number of paint brushes which it may be desired to protect against caking or drying out of the paint between the bristles of the brush over night, or between periods of painting, by submerging them in water or turpentine, or other liquid having a preservative or conditioning action. Containers of this general description are well known, and my present invention relates more particularly to the specific construction and arrangement of the supporting frame members and the special construction of the clip members associated therewith which are novel and useful in efficiently attaining the objects in view in the particular structure described. It will nevertheless be understood that my invention, and certain features of construction and arrangement of parts thereof, may be used for other and different objects and purposes than as a paint brush container or a portion thereof, and that I contemplate such other uses as within the true scope of my invention, as, for instance, use of the supporting frame as a counter-display stand for exhibiting brushes or other articles capable of being supported by the clips, or the use of the form of clip member particularly devised for use in connection with the supporting frame as a clip for holding papers together, or for other purposes for which such a clip may be used.

With the foregoing explanation, it will be understood that my invention resides in the form, arrangement and construction of the various mechanical parts and members hereinafter described, arranged to cooperate with each other as set forth, and adapted thereby to serve the purposes particularly mentioned, as well as when used to accomplish similar purposes in analogous structures, the essential elements of my invention being more particularly pointed out in the appended claims.

In the drawing, which illustrates a particular embodiment of my invention in a preferred form, Figure 1 is a perspective view of the casing of a paint brush container, partly broken away to show in elevation a supporting frame equipped

with a set of clips suitably formed to cooperate with the orificed cross-member of the frame; Fig. 2 is a perspective of one of the gripping members of a clip, detached; Fig. 3 is a fragmentary, horizontal section through the two webs of the orificed crossbar member of the frame, showing one spring clip in closed, rearward position and another such clip in forward, released position; Fig. 4 is a side view of a clip seated in aligned orifices of the crossbar, the bar being shown in section; and Fig. 5 is a horizontal fragmentary section in a plane indicated by the dotted line 5—5 of Fig. 3, looking in the direction of the arrow.

Like reference characters indicate like parts in all the figures of the drawing.

Describing more particularly the specific construction of the embodiment of my invention illustrated, the container is in the present instance, though not necessarily, rectangular in shape, and is formed with a liquid-tight container body having a bottom 1 and side walls 2, and a hinged cover 3 or top member, and may be equipped, as shown, with a handle and closure means.

The supporting frame is constructed of sheet metal strips connected together by spot welding or rivets and includes a base strip 4 fitting somewhat loosely within the confines of the container sides 2, and a vertical bracket having side members 5—5 connected at their bottom to said base strip and connected at their top by a cross-strip 6 which may be formed integral with the side members 5, and which serves as a convenient handle for lifting the frame out of the container, and replacing it. In the present instance the side members and cross-strip extend above the sides of the container, and are contained within the cover 3 of the container when it is closed.

The side members 5 of the frame are connected below the cross-strip 6 by a crossbar bracket structure 7 which, in the present instance, though not necessarily, is an integral member, U-shaped in cross section and the spaced side flanges or webs of which are formed with aligned front orifices 8 and rear orifices 9 to receive the spring clips later to be described. It may here be stated that the arrangement and proportions of the parts is such that the bristles of brushes supported in the clips will extend downwardly and be submerged in the liquid standing in the container, while the handles of the brushes will extend upwardly and lie within the confines of the cover when closed.

The clips which are mounted in the aligned orifices of the crossbar 7 consist each of two

gripping members 10 which, in the present instance, are precise facsimiles of each other, and a spring 11, which serves to space and pivotally connect the gripping members and also to stress the jaws to closed position. As shown in Figs. 2, 3 and 4, the gripping members are each formed with a forward jaw portion 12 and an intermediate pivotal portion 13 and a rear handle portion 14, all said portions being in the present instance provided on both sides with a continuous flange, the portions of the flanges opposite the portions 12, 13 and 14 of the gripping member being marked, respectively, 12^a, 13^a and 14^a. It will be noted that the jaw portion 12 and the flanges 12^a which form a part of one clip member are bowed outwardly away from such parts of the other member in an assembled clip, and the edges of the flanges 12^a are of such contour as to form efficient gripping faces on opposite sides of an interposed paint brush handle of ordinary size and shape.

Obviously, if the sections 12, 13 and 14 were formed of the same width, with the flanges 12^a, 13^a and 14^a in longitudinal alignment in the same plane, the meeting edges of a pair of clip members, assembled with their flanges in overlapping contact on opposite sides, would not oppose each other in precise alignment, but would be offset from each other a distance the thickness of the flanges. In order to provide for true alignment of the clip members at the forward ends thereof, the forward section 12 of the clip members is tapered inwardly on one side towards the center line of the clip from rear to front, the other side being in longitudinal alignment with corresponding sides of the intermediate and rear portion of the clip member, so that when a pair of clip members are assembled as shown in Fig. 4, the forward ends of the jaw portion 12 and flange portion 12^a contiguous thereto will precisely oppose each other. The clip may be otherwise formed to bring about exact alignment of their meeting ends as by merely offsetting laterally the forward sections 12 and flanges 12^a of the two members,—of uniform width with the other sections,—one-half the thickness of the flanges, towards the center line of the clip.

From a point near the rear side of the jaw portion 12 of each gripping member is struck out a rearwardly extending tongue 15 which at its base is formed with a transverse bend or spring-end-retaining recess 16, the free rear end 17 of the tongue terminating near the rear of the intermediate portion 13 of the gripping member, and being bent inwardly so that when the two gripping members of a clip are assembled the two tongues will meet at an acute angle centrally between the members.

The intermediate portion 13 of each gripping member, adjacent the inner end of the handle portion 14, is formed with a cross-bend or bearing recess 18 extending between the flanges 13^a, the recess being cylindrically curved and of such dimensions that in an assembled clip the coiled portion 19 of the spring 11 will lie between and space apart the proximate flanges 13^a of the two gripping members, and also will serve as a pivot member or fulcrum upon which the members may rock. If preferred, the coil may be so formed as to exert by axial expansion a slight stress tending to yieldingly hold the inner flanges 13^a of the gripping members against the outer ones at opposite sides of the clip. In any event the coil of the spring serves to prevent relative lateral displacement of the clip members.

At opposite ends of the coil 19 the spring is formed with straight portions 20, terminating in right-angled bends 21, adapted to severally engage the transverse bends 16 of the tongues 15 of the gripping members when the coil 19 is seated in the opposed bearing recesses 18 of the intermediate portions of the gripping members, and stress the jaws toward each other.

It may here be mentioned that in the assembled clip the handle portions are divergent rearwardly of their point of contact in the rear opening 9 of the bracket structure when the clip is in closed position, and that forwardly of the bearing recesses of the intermediate portions, such portions have divergent outer faces to their points of contact with the side faces of the front openings 8 of the cross-bracket.

The method of assembling the parts of the clip may now be described. The bends 21 of the spring 19, it will be understood, in the untensioned spring extend from the portions 20 parallel and near together. A pair of the gripping members being assembled with their jaws meeting and their flange portions 13^a and 14^a overlapping and touching each other, and the free ends of the tongues 15 meeting at an acute angle centrally between the members, the spring is inserted and forced to assembled position from the rear, the bends 21 of the spring riding on the outer faces of the tongues until they arrive at their seats in the transverse bends or recesses 16 at the base thereof, and the coil of the spring being yieldingly forced past the rear edges of the bearing recesses 18 until it seats in such recesses. The tension of the spring will then serve to maintain the parts in assembled relation, and permit a tensioned opening of the jaws of the clip by squeezing the handle portions thereof together. Throughout this opening and closing movement of the jaws the flanges 13^a and 14^a of the gripping members serve to guide their movements, and the coil 19 of the spring prevents disengagement of the parts laterally.

The spring clips, constructed as above described, are assembled in the orifices of the cross-bar 7, by springing the handle portions of the clips together sufficiently to be inserted from the front through the front orifices 8 and rear orifices 9. It may be noted that when the clips are in closed or clamping position, the outer faces of the clip members are in contact with the edges of the orifices, and are thereby held against opening movement.

When the divergent handle portions of the clip are squeezed together, to overcome the tension of the spring and positively rock the members of the clip on the coil of the spring as a pivot, the reaction between the divergent outer faces of the intermediate portions 13 of the clip and the adjacent edges of the forward opening 8 of the bracket will tend to cam the clip forwardly,—assisted to some extent, it may be, by forward manual pressure on the handle portions,—and the clip will thus be shifted forwardly and the jaws opened.

If the clip be thus manipulated to move the clip forwardly to nearly or quite the full extent of movement permitted it, and the pressure upon the handle portions then released, the angle between the outer faces of the handle portions and the edges of the rear openings 9 will be so obtuse that the spring tension will not result in any camming action tending to shift the clip rearwardly, and the clip will stand in forward position with the jaws open. A brush may then be

inserted (or replaced) in the clip simply by inserting the handle between the open jaws and shifting it rearwardly, the handle portions becoming increasingly divergent until during the latter part of the closing movement of the jaws, the spring exerts a camming reaction between the outer faces of the handle portions and the edges of the rear orifice tending to automatically assist complete closing of the jaws.

The clip may, however, be moved forwardly in the openings in the bracket only sufficiently to partially open the jaws, and in such case, after the handles have been released, the stress of the spring will tend to close the jaws and spread the handles, and the camming action thus exerted through the handles will act to shift the clip rearwardly and automatically close the jaws.

To permit the supporting frame to be supported at an elevated position in the container, which may be convenient at times for ease in inspection or adjusting the brushes to proper position or for other reasons, as for convenience in removing brushes for use, I have provided a supporting hook 22 secured to the rear member of the base strip 4 of the frame and arranged to hook over the upper edge of the rear wall of the container.

I claim:

1. A support for brushes or other articles comprising a frame including a horizontal cross bracket structure including vertically disposed parallel front and rear webs formed with aligned front and rear openings, and a set of spring clips seated in said openings, said clips comprising a pair of pivotally-connected spring-tensioned gripping members each formed with opposed jaw portions and intermediate portions providing a pivotal connection and divergent handle portions, said handle portions extending rearwardly of said pivotal connection through said rear opening and said intermediate portions being severally formed with divergent outer faces extending forwardly of said pivotal connection through said front opening, said divergent faces of said intermediate portion tending to cam said clip forwardly when said handle portions are positively squeezed together and the outer faces of said handle portions tending to cam said clip rearwardly by tension of the spring.

2. A support for brushes or other articles comprising a frame including a horizontal cross bracket structure including vertically disposed parallel front and rear webs formed with aligned front and rear openings, and a set of spring clips seated in said openings, said clips comprising a pair of pivotally-connected spring-tensioned gripping members each formed with opposed jaw portions and intermediate portions providing a pivotal connection and divergent handle portions, said handle portions extending rearwardly of said pivotal connection through said rear opening and said intermediate portions being severally formed with divergent outer faces extending forwardly of said pivotal connection through said front opening, the side edges of said front and rear openings cooperating respectively with the divergent handle portions and the divergent outer faces of said intermediate portions of the particular clip to guide said clip and permit a forward opening of the clip and a rearward closing movement thereof.

3. A support for brushes or other articles comprising a frame including a horizontal cross bracket structure including vertically disposed parallel front and rear webs formed with aligned front and rear openings, and a set of spring clips seated in said openings, said clips comprising a pair of pivotally-connected spring-tensioned gripping members each formed with opposed jaw portions and intermediate portions providing a pivotal connection and divergent handle portions, said handle portions extending rearwardly of said pivotal connection through said rear opening and said intermediate portions being severally formed with divergent outer faces extending forwardly of said pivotal connection through said front opening, the upper and lower faces of said gripping members making sliding engagement with the upper and lower edges of said aligned openings and the side edges of said opening cooperating with the outer divergent faces of said intermediate portions and handle portions, respectively, to block pivotal movement of such portions when the gripping members are in closed rearward position, and permit pivotal movement of such parts when said gripping members are moved to forward position.

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