Oct. 11, 1949. H. M. HALVERSON 2,484,453

SUPPORT

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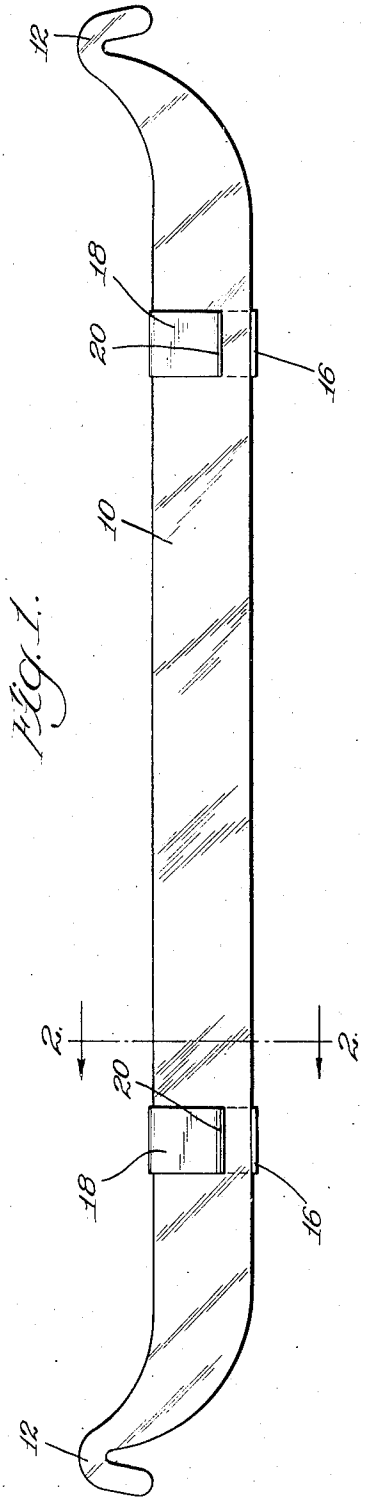


Fig. 1.

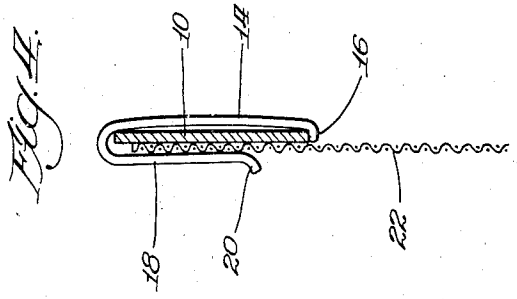


Fig. 4.

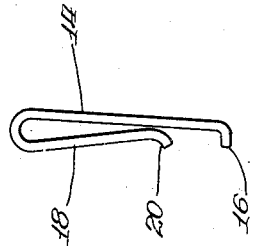


Fig. 3.

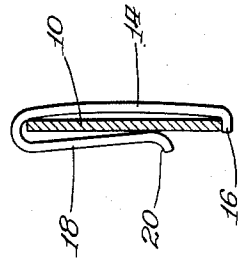


Fig. 2.

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SUPPORT

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5 Claims. (Cl. 129—16.7)

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My invention relates to supports and includes among its objects and advantages extreme cheapness, durability and simplicity in the type of support used for holding sheets of material suspended from their upper edges. It finds its principal immediate fields of use in file cabinets for filing stencils, X-ray films and thin metal plates of zinc or the like such as are used in offset printing, but it is applicable in connection with any piece of sheet material that needs to be hung by one edge.

In the accompanying drawings,

Figure 1 is a side elevation of a complete hanger according to the invention, provided with two clips;

Figure 2 is a section on line 2—2 of Figure 1, showing the clip in elevation;

Figure 3 is an elevation of the same clip removed from the beam; and

Figure 4 is a section similar to Figure 2 with a piece of material gripped by the clip.

In the embodiment of the invention selected for illustration the hanger 10 has conventional downwardly directed hooks 12 at its opposite ends by means of which it may be supported on a pair of parallel rails in a filing cabinet. As this type of filing cabinet is old and well known in the art, this disclosure has not been encumbered with the details thereof.

Each clip comprises a back reach 14 adapted to lie parallel to and substantially in contact with one face of the beam 10; a bottom hook 16 adapted to overlie the lower edge of the beam and lock the clip against accidental upward withdrawal; and a shorter front reach 18 extending down over the opposite face of the beam 10 a little more than half way. The lower end of the front reach 18 is curved back away from the beam as indicated at 20. The curve at 20 defines an entrance lip to guide the user in positioning the undistorted clip illustrated in Figure 3 on the beam in the position of Figure 2 by pushing the clip down over the upper edge of the beam. The same lip guides the user in sliding the edge of the supported piece of material 22 up into the position of Figure 4.

Throughout its operative length, the beam 10 is preferably of uniform height so that the lip 16 is fully effective. However, if a portion of the beam is of materially less height than the back reach 14 the clip is not rendered inoperative so long as the beam, when in contact with the hook 16, extends up a substantial distance above the lower end of the front reach 18.

With the parts assembled as in Figure 4, it is

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substantially impossible for the user to separate the clip from the beam by lifting up the clip. This difficulty contributes to induce the user to follow the accepted practice of removing the material 22 by pulling downward on the material or up on the beam without attempting to manipulate the clips. An important incidental advantage is that neither the beam 10 nor the material 22 need have any aperture or irregularity of shape co-operating with the clip, so that the clips can be placed anywhere along the length of the beam and function with equal effectiveness. Thus it becomes unnecessary to have any correlation between the shape of the edge of the material clipped and the improved support disclosed. In fact, if the user happens to pick up a piece of material with a corner torn off or a central portion of the upper edge torn, he can instantly shift the clips to a position where they will grip the material that is left.

Others may readily adapt the invention for use under various conditions of service by employing one or more of the novel features disclosed, or equivalents thereof. In one common and commercially successful form the beam 10 is about nine inches long and three-fourths of an inch high and has a thickness of 0.021 inch, and is made of aluminum-painted steel. In the same commercial embodiment the clip is of resilient bronze sheet metal about 0.018 inch thick and is ½ inch long longitudinally of the beam.

At present advised with respect to the apparent scope of my invention, I desire to claim the following subject matter:

1. In a support of the class described, in combination: a beam of light weight metal having a main reach of constant rectangular cross section with a vertical dimension much greater than its horizontal dimension; said beam having at each end a portion curved upwardly and terminating in a downwardly opening hook; the bight of said hook being substantially above the center of gravity of said beam, whereby supporting said beam by said hooks causes said beam to lie in a vertical plane; and a plurality of clips longitudinally adjustable on said beam; each clip comprising a back reach of a length equal to the vertical dimension of said beam; a hook at the bottom of said back reach extending under the lower edge of said beam far enough to lock the clip against removal by upward movement; a bight continuing the upper end of said back reach across the upper edge of said beam; a front reach continuing said bight down the face of said beam opposite said back reach; said front reach terminating along a

substantially horizontal line about midway the height of said beam; the lower end of said front reach being curved back away from said beam to define a tapered opening shaped to receive the edge of a piece of material to be held by said clip, said bight having a horizontal extent materially greater than the thickness of said beam and substantially equal to the beam thickness plus the thickness of the thickest piece of material to be supported by said clip; said clip, when removed from said beam and in undistorted condition, having the lower end of its front reach closer to its back reach than the thickness of said beam; said clip being of resilient material, whereby distortion of said clip to place it on said beam causes permanent frictional gripping engagement to hold said locking hook in operative position.

2. In a support of the class described, in combination: a beam of metal having a main reach of constant rectangular cross section with a vertical dimension much greater than its horizontal dimension; said beam having at each end a portion curved upwardly and terminating in a downwardly opening hook; the bight of said hook being substantially above the center of gravity of said beam, whereby supporting said beam by said hooks causes said beam to lie in a vertical plane; and a plurality of clips longitudinally adjustable on said beam; each clip comprising a back reach of a length equal to the vertical dimension of said beam; a hook at the bottom of said back reach extending under the lower edge of said beam far enough to lock the clip against removal by upward movement; a bight continuing the upper end of said back reach across the upper edge of said beam, a front reach continuing said bight down the face of said beam opposite said back reach; said front reach terminating along a substantially horizontal line about midway the height of said beam; the lower end of said front reach being curved back away from said beam to define a tapered opening shaped to receive the edge of a piece of material to be held by said clip, said bight having a horizontal extent materially greater than the thickness of said beam; said clip, when removed from said beam and in undistorted condition, having the lower end of its front reach closer to its back reach than the thickness of said beam; said bight being of resilient material, whereby distortion of said clip to place it on said beam causes permanent frictional gripping engagement to hold said locking book in operative position.

3. In a support of the class described, in combination: a beam of light weight metal having a main reach of constant rectangular cross section with a vertical dimension; said beam having at each end a portion curved upwardly and terminating in a downwardly opening hook; the bight of said hook being substantially above the center of gravity of said beam, whereby supporting said beam by said hooks causes said beam to lie in a vertical plane; and a plurality of resilient clips longitudinally adjustable on said beam; each clip comprising a back reach of a length equal to the vertical dimension of said beam; a hook at the bottom of said back reach extending under the lower edge of said beam far enough to lock the clip against removal by upward movement; a bight continuing the upper end of said back reach across the upper edge of said beam; a front reach continuing said bight down the face of said beam opposite said back reach; said front reach terminating along a substantially horizontal line about midway the height of said beam; the lower end of said front reach being curved back away from said beam to define a tapered opening shaped to receive the edge of a piece of material to be held by said clip.

4. In a support of the class described, in combination: a beam having a main reach of rectangular cross section with a vertical dimension much greater than its horizontal dimension; and a plurality of resilient clips longitudinally adjustable on said beam; each clip comprising a back reach; a hook at one end of said back reach extending around said beam to lock the clip against removal; a bight continuing the other end of said back reach extending across said beam; a front reach continuing said bight only partly over the front face of said beam opposite said back reach; the end of said front reach being curved back away from said beam to define a tapered opening shaped to receive the edge of a piece of material to be held by said clip.

5. In a support of the class described, in combination: a beam having a main reach; and a plurality of resilient clips longitudinally adjustable on said beam; each clip comprising a portion partly encircling and gripping said beam; and an end reach extending only partly over one face of said beam and resiliently pressed against said face; the end of said end reach being curved back away from said beam to define a tapered opening adapted to receive the edge of a piece of material to be held by said clip.

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