April 1, 1941. F. A. SCHUTT 2,236,922

PIVOTED HANDLE

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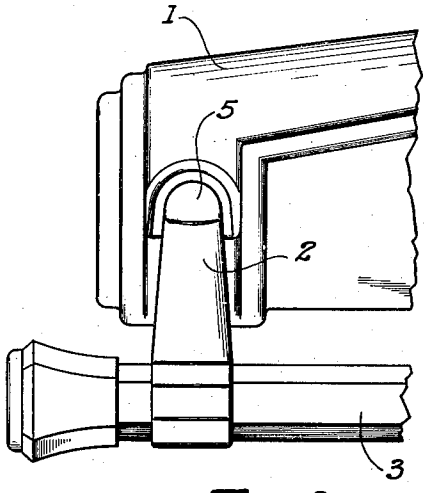


FIG. 1.

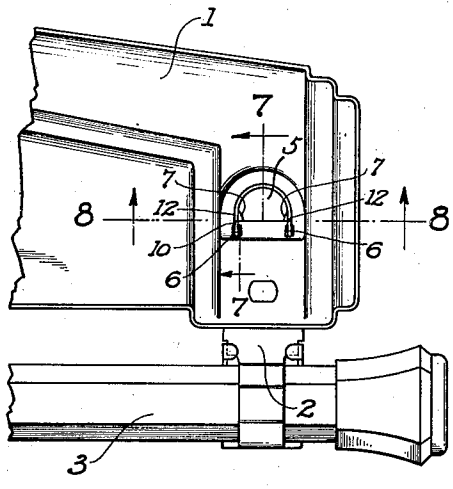


FIG. 2.

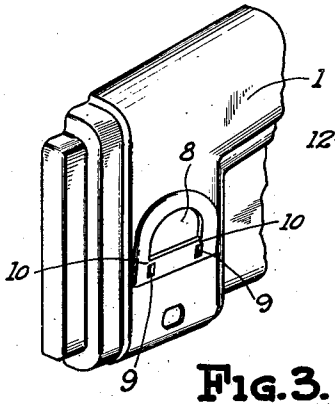


FIG. 3.

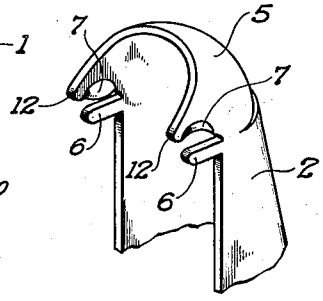


FIG. 4.

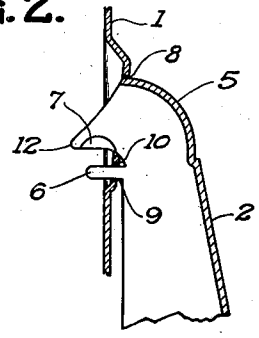


FIG. 5.

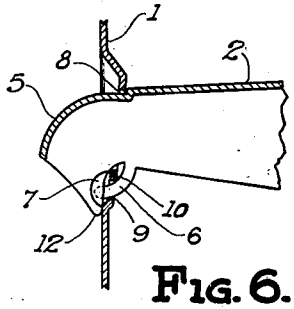


FIG. 6.

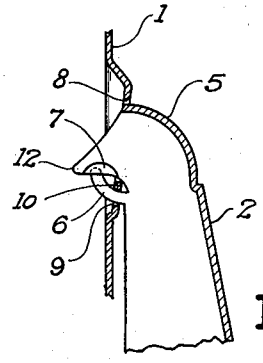


FIG. 7.

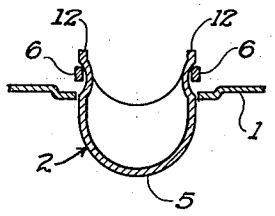


FIG. 8.

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PIVOTED HANDLE

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Application August 5, 1939, Serial No. 288,639

3 Claims. (Cl. 16—112)

This invention relates, generally, to pivoted handles, and more particularly to those of the class used on mortuary receptacles—either burial vaults or caskets, and its main purpose is to improve the pivotal connection between the handle arm and mounting plate.

Handles of the kind to which the invention pertains are constructed of sheet metal, and the pivotal connection between the handle arm and mounting plate is made complete (without additional means or the use of any tool) when such arm, in a downward position, is interengaged with the cooperating parts of the mounting plate and initially swung upwardly in the same way as in the lifting of an object to which the handle is attached.

In addition to the usual aims contemplated in connection with articles of this kind, namely: attractiveness of appearance; simplicity of construction; cheapness, and convenience of assembly, my invention has as its specific object to provide a handle of the class aforesaid that is especially strong at the connection between the handle supporting arm and mounting plate, and is quiet of action so that when the handle is released there will be no striking of metal against metal, a feature highly desirable in casket handles, as will be readily appreciated.

The objects and advantages above enumerated are attained in the embodiment of the invention illustrated in the accompanying drawing wherein Fig. 1 is a fragmentary elevational view of a handle incorporating my improvements; Fig. 2 is a view showing the reverse side of the parts disclosed in Fig. 1; Figs. 3 and 4 are fragmentary perspective views of the mounting plate and handle supporting arm, respectively; Fig. 5 is a central vertical section through the upper portion of the arm and through the adjacent part of the mounting plate showing the arm inserted within the opening of the plate but before the arm has been swung upwardly to permanently connect it to the plate; Fig. 6 is a similar view showing the arm swung upwardly to the position it assumes when the handle is used for supporting or carrying an object to which it is attached, this view showing the manner in which the fingers of the arm are bent to permanently connect the arm to the mounting plate; Fig. 7 shows the normal relaxed position of the arm and is a section on the line 7—7 of Fig. 2, and Fig. 8 is a sectional detail on the line 8—8 of Fig. 2.

In the drawing, 1 designates the mounting plate, 2 an arm that is pivotally connected to said plate, and 3 the handle bar that is suitably fastened to the free end of the arm, only fragments of the plate and bar being shown. It will be understood, of course, that, in the style of handle disclosed, two arms connect the handle bar to the mounting plate, the latter being sufficiently long to permit a practical spacing apart of the arms, approximately six inches from center to center, for example. Inasmuch as my invention resides in the connection between the arm and supporting plate, it is deemed unnecessary to show a complete handle; and here it might be well to explain that a very common alternative of the style of handle shown in the drawing is one in which an individual mounting plate or so-called "lug" is associated with each arm.

The mounting plate 1 and arm 2 are desirably formed from sheet metal, the portion of the arm adjacent the mounting plate being of channel formation and having its upper end extended laterally in the direction of its open side to form an elbow 5. Fingers 6 project from the inner side of the arm in spaced relation to the lower edges of the elbow, and the sides of the elbow adjacent said edges are formed with inward depressions 7, the depressions being of a depth substantially equal to the thickness of the metal from which the arm is formed. Attention is directed to the shape of the inner ends of the notches between the lower edges of the elbow and the fingers 6, it being observed that each edge of the elbow sweeps downwardly along a curve of substantial radius to where it joins at practically an acute angle the top edge of the finger. The purpose of so forming the notches will become apparent later on.

A generally semicircular opening 8 and two apertures 9, the latter being shown as rectangular and of an area slightly greater than the cross sectional area of the fingers 6, are formed, preferably by punching, in the mounting plate 1 for the reception, respectively, of the elbow 5 and the fingers 6 of the arm 2. It will be noted that the outer sides of the apertures 9 are in substantially the vertical planes of the sides of the opening 8 so that when the elbow 5 of the arm 2 is projected through the opening 8, and the fingers 6 through the apertures 9, the latter will be practically concealed by the arm when the same hangs down.

With the parts interengaged as described, when the arm is first swung upwardly to the position shown in Fig. 6, the lower edges of the fingers will engage the bottom walls of the apertures 9 and will be bent edgewise and have their ends

projected into the depressions 7 in overlapping relation to the adjacent edges of the elbow 5, as illustrated in Figs. 2, 6, 7 and 8. The fingers 6 are thus wrapped about the pivotal portions 10 that are between the lower edge of the opening 8 and the top sides of the apertures 9. During this action the upper edge of each finger is given a shape substantially like but reverse to that of the opposed edge of the elbow 5, thereby to produce a sort of elliptical bearing aperture within which the pivotal portion 10 is confined. Due to this shape of bearing aperture, when the handle is released it will gradually come to a stop in spaced relation to the lower portion of the mounting plate and positively prevent contact of the arm with the plate, and the parts will gently assume this position because of the cam action of the opposed edges of the bearing aperture upon the pivotal portion 10.

The upward swinging movement of the arm is limited by the engagement of the terminal portions 12 of the sides of the elbow 5 with the inner side of the mounting plate below the apertures 9, and by the engagement of the arm 1 in the region of the elbow 5 with the top wall of the opening 8. It is obvious that, when the handle is in use, a very considerable load is placed upon the sides of the elbow 5, and by depressing the material of said sides of the elbow to provide clearance for the ends of the fingers 8 (instead of notching the sides of the elbow, as has been done) the maximum strength of the parts is preserved. Also, by providing clearance for the ends of the fingers 6 within the normal plane of said fingers, so that the fingers may overlap the sides of the elbow 5 without being diverted from their original plane, better action of the pivotal connection between the arm and mounting plate is assured.

Having thus described my invention, what I claim is:

1. In a handle, the combination of an arm which, adjacent its upper end, is of channel formation and is extended laterally in the direction of its open side to form an elbow, the arm having fingers projecting from its edge below and in spaced relation to the lower edges of the elbow, and a mounting plate having an opening into which the elbow is inserted and on whose lower edge the elbow fulcrums when the outer end of the arm is swung upwardly, said plate having also an aperture below said opening in which each of said fingers is inserted, each finger engaging the lower side of said aperture and being deformed thereby when the outer end of the arm is first swung upwardly so as to thus pivotally connect the arm to the plate, portions of the sides of the elbow adjacent their lower edges being laterally offset to provide depressions, with the fingers overlapping the offset portions of the sides of the elbow without being diverted from their original plane.

2. In a handle, the combination of an arm which, adjacent its upper end, is of channel formation and is extended laterally in the direction of its open side to form an elbow, the arm having fingers projecting from its edge below and in spaced relation to the lower edges of the elbow, the latter edges sweeping downwardly along a curve of considerable radius to their points of junction with the opposed edges of the fingers, and a mounting plate having an opening into which the elbow is inserted and on whose lower edge the elbow fulcrums when the outer end of the arm is swung upwardly, said plate having also an aperture below said opening through which each of said fingers is projected and whose shape is the same as, and whose area is very slightly greater than, the cross sectional shape and area, respectively, of the finger, each finger engaging the lower side of said aperture and being deformed thereby when the outer end of the arm is first swung upwardly so as to thus pivotally connect the arm to the plate, portions of the sides of the elbow adjacent their lower edges being laterally offset to provide depressions, with the fingers overlapping the offset portions of the sides of the elbow without being diverted from their original plane.

3. In a handle, the combination of an arm which, adjacent its upper end, is of channel formation and is extended laterally in the direction of its open side to form an elbow, the arm having fingers projecting from its edge below and in spaced relation to the lower edges of the elbow, and a mounting plate having an opening into which the elbow is inserted and on whose lower edge the elbow fulcrums when the outer end of the arm is swung upwardly, said plate having also an aperture below said opening through which each of said fingers is projected, each finger engaging the lower side of said aperture and being deformed thereby when the outer end of the arm is first swung upwardly so as to thus pivotally connect the arm to the plate, portions of the sides of the elbow adjacent their underneath edges being laterally offset to provide depressions, with the fingers overlapping the offset portions of the sides of the elbow without being diverted from their original plane.

FREDERICK A. SCHUTT.