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B. E. SARLES ET AL

2,158,949

FOLDING STEP

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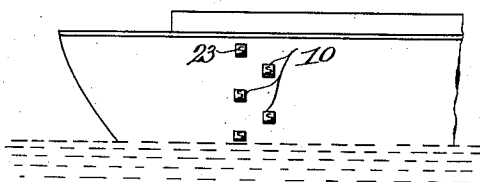


Fig. 5.

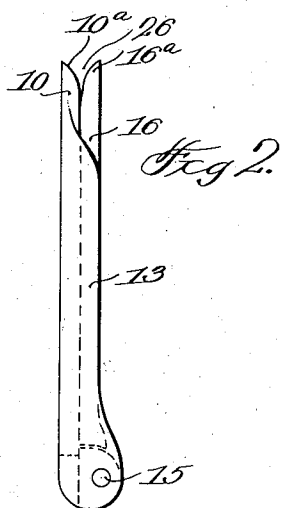


Fig. 2.

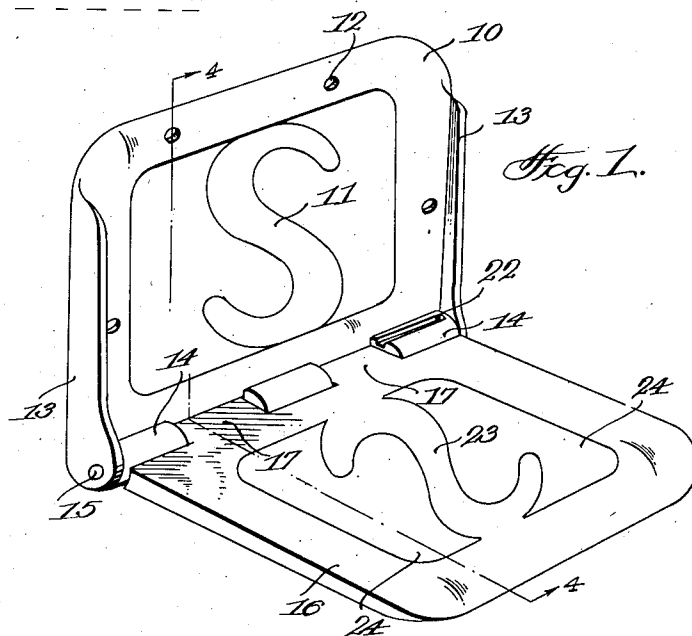


Fig. 1.

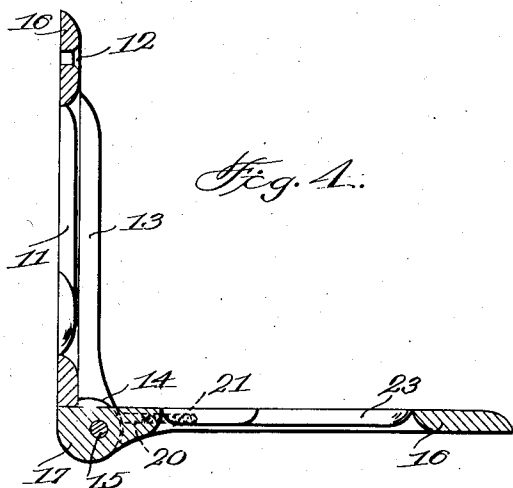


Fig. 4.

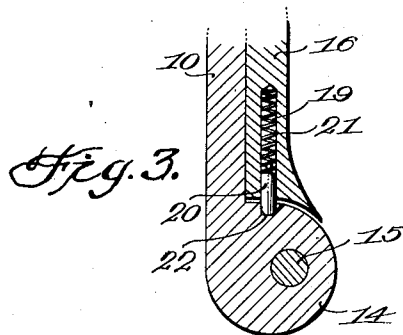


Fig. 3.

Inventors

Benjamin E. Sarles &

Benjamin R. Sarles

By *Korac C. Hand*

Attorney

UNITED STATES PATENT OFFICE

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FOLDING STEP

Benjamin E. Sarles and Benjamin R. Sarles,
Annapolis, Md.

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1 Claim. (Cl. 228—47)

This invention relates to folding steps and the principal object is to provide a step of this character which is adapted to be secured, in suitable numbers, to the freeboard portion of a boat so as to take the place of the usual boarding ladder. It is customary for a boarding ladder to be carried on a boat having such an amount of freeboard as to render it difficult to board from a dinghy. In the case of relatively small boats, it is frequently difficult if not impossible to find stowage space for the boarding ladder where it will be out of the way and yet readily accessible when needed. An object of the present invention is, therefore, to provide a substitute for the type of boarding ladder now in general use and which will occupy no space whatever that might be used for other purposes, also to provide such a substitute as will always be in position for use and which can be manufactured at low cost. A further object is to provide a structure wherein the steps will be normally attached to and folded flat against the side of the boat, when out of use, but which may be readily adjusted into position for use either from within the boat or from alongside. Other objects and advantages will be apparent from the following specification, when taken in connection with the following drawing, in which:

Figure 1 is a perspective view of a step according to the present invention when in position for use on the side of a boat,

Figure 2 is a side elevation thereof in folded position,

Figure 3 is a detail fragmentary view, partly in section, showing means for holding the steps in folded position, and

Figure 4 is a sectional view on the line 4—4 of Figure 1, and Figure 5 illustrates a portion of a boat with the steps applied thereto.

Referring to the drawing in which like numbers represent like parts in the several views, 10 designates a base plate in the form of a substantially rectangular frame having a brace member 11 extending thereacross and having suitable openings 12 therethrough to receive screws or other means of attachment to the side of a boat. It will be noted that the entire rear face of the base plate 10 is flat so as to rest snugly against the planking. Extending outwardly from the base 10 at both ends thereof and substantially at right angles thereto are flanges 13 which are gradually reduced in height towards their tops where they meet the surface of the base slightly below its upper edge.

At the lower edge of the base 10, between the flanges 13, are spaced rounded bosses 14 which are perforated transversely to receive a pintle 15. Hinged to the lower edge of the base 10 is a step

16 having spaced bosses 17 formed on one of its edges which bosses are disposed between the bosses 14 and are also perforated transversely to receive the pintle 15, the step 16 being thus pivotally connected to the base 10. As shown at 18 in Figure 4, the upper faces of the bosses 17 are flat and in prolongation of the tread face of the step 16 so as to engage the lower edge of the base plate 10 when the step is moved into position for use. The step is thus held in a substantially horizontal position.

Formed in one side of the step 16 is a recess 19 in which is positioned a latch member 20 in the form of a plunger, which is normally urged outwardly by a spring 21 and which is adapted to rest in a rounded recess 22 in the adjacent boss 14 when the step is in raised position as shown in Figure 3, and thus releasably hold the step in that position.

The step 16 is provided with a transverse brace 23 similar to the brace 11 at opposite sides of which are openings 24 to provide means whereby the step may be conveniently grasped in the case of necessity.

The upper edges of the base plate 10 and step 16 are beveled at 10a and 16a, respectively, to provide a space 26 therebetween when the step is in raised or folded position and out of use. Because of this space, the upper edge of the step may be readily grasped and lowered for use.

It will be noted that when the step is in raised position it will rest between the flanges 13. In this way, it is protected against damage from piling and other obstructions with which it may come into contact when the boat is in motion. Any shock thus resulting will be borne by the base plate 10 which is securely attached to the boat, as already explained.

As shown in Figure 5, the steps are to be applied to the side of the boat, above the water line, in staggered relation with suitable vertical spacing.

What is claimed is:

A device of the class described, comprising a base plate having its attaching face in a single plane and having a front face substantially parallel therewith, flanges at the ends of the front face, and a step pivoted to the base plate between the flanges and adapted to engage the base plate at times, the engaging faces of the step and base plate having marginal portions inclined in opposite directions to provide a finger hold between said portions when the step and base plate are in engagement.

BENJ. E. SARLES.
BENJ. R. SARLES.