No. 830,097. PATENTED SEPT. 4, 1906.

H. A. McLEAN.

STONE BOAT.

APPLICATION FILED DEC. 1, 1905.

Fig. 1.

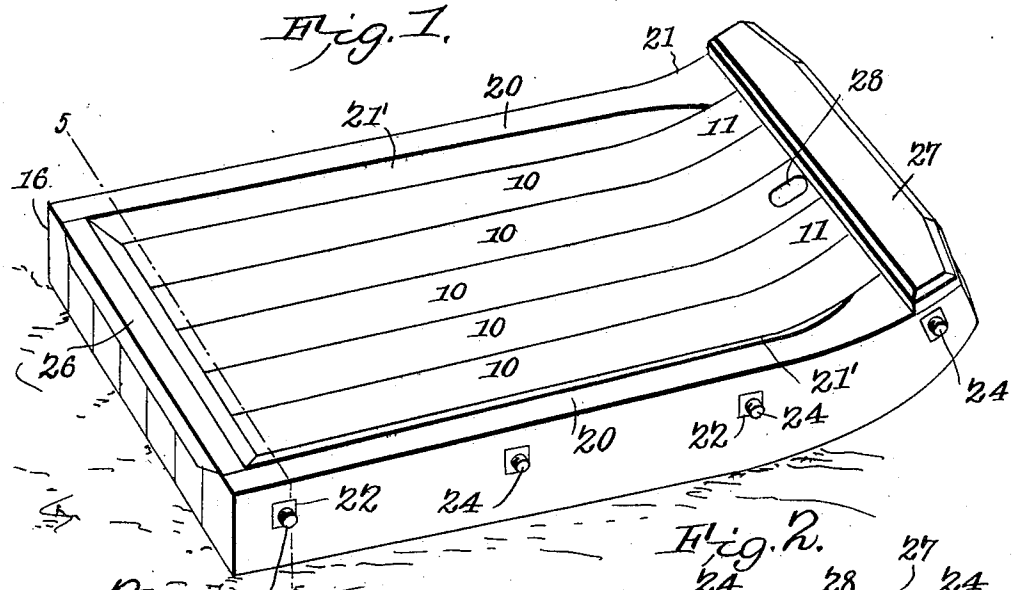


Fig. 2.

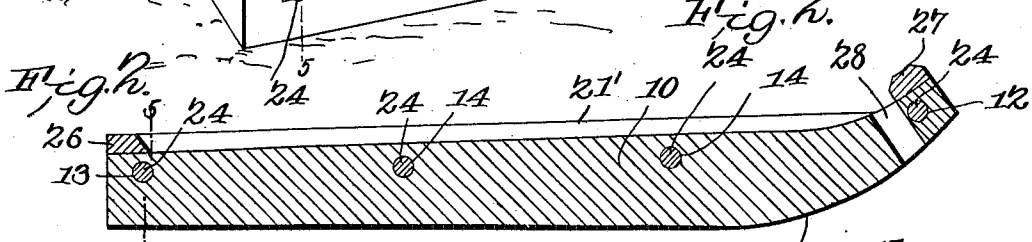


Fig. 3.

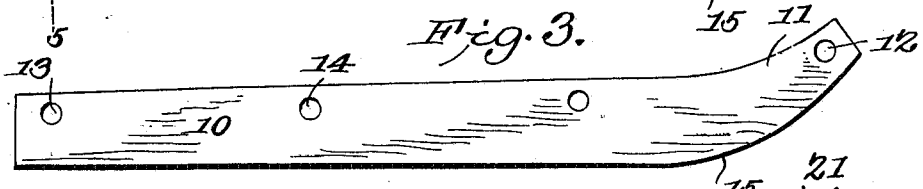


Fig. 4.

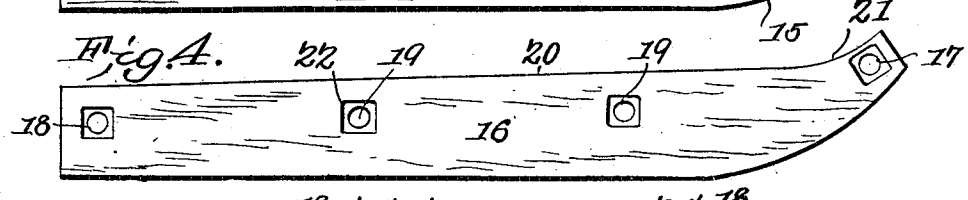
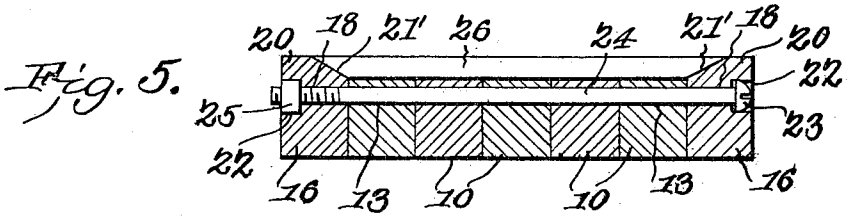


Fig. 5.



WITNESSES:

E. J. Stewart

L. L. Morrill

Henry A. McLean,
INVENTOR.

By Cushman & Co.
ATTORNEYS

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY A. McLEAN, OF JAMAICA, VERMONT.

STONE-BOAT.

No. 830,097. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed December 1, 1905. Serial No. 289,889.

To all whom it may concern:

Be it known that I, HENRY A. McLEAN, a citizen of the United States, residing at Jamaica, in the county of Windham and State of Vermont, have invented a new and useful Stone-Boat, of which the following is a specification.

This invention relates to stone-boats, and has for an object to provide a device of the class embodying new and improved features of durability, convenience, simplicity, and utility.

It is well known that the greatest wear on a stone-boat comes at the forward end or at the curve or bend if the forward end is curved or bent upward.

It is an object of this invention to provide a stone-boat presenting a thickened wear-surface at and adjacent the curve and to form the front end and body integral, so that the usual wear will not cause the front end to part from the rear end or body.

It is further well known that in the course of use stone-boats are subjected to dampness and strain, which causes artificially-bent bottoms to become straightened and useless. To overcome this defect, stone-boats have sometimes been hewed from single pieces of timber; but such method of manufacture is slow and expensive and usually results in a heavy and illy-made boat. It is an object of this invention to provide a stone-boat built up of a plurality of longitudinally-disposed strips, each sawed with an upwardly-disposed curve, being thickest at the curve, and bound together side by side to form the boat and with the side pieces thicker than and extending above the other strips to form side rails.

It is a further object of this invention to provide a stone-boat built up of a plurality of longitudinally-disposed strips bound together by rods, so that compensation may be made for contraction, expansion, and similar effects.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a perspective view of the improved stone-boat. Fig. 2 is a longitudinal sectional view of Fig. 1. Fig. 3 is a view in side elevation of one of the intermediate strips of the boat. Fig. 4 is a view in side elevation of one of the outside strips which provides a side rail. Fig. 5 is a transverse sectional view taken on line 5 5 of Figs. 1 and 2.

Like characters of reference indicate corresponding parts in all of the figures of the drawings.

In its preferred embodiment the improved stone-boat forming the subject-matter of this application comprises a plurality of similar strips 10, each curved upwardly at its forward end, as at 11, and provided with a bolt-opening 12, there being a similar opening 13 at the rear end of the strip and any desired number of openings 14 spaced along its length and adjacent its upper surface. At the curve the strip is thickened, as at 15, to provide for excessive wear, the thickness diminishing upon each side to make the boat as light as compatible with the necessary strength and rigidity.

Upon each side of the boat is disposed a strip 16, having its lower side conforming to the lower sides of the strips 10, and the openings 17, 18, and 19, respectively, registering with the openings 12, 13, and 14. The upper side of the strip 16 extends laterally, as at 20, with the forward curve 21 of shorter radius than the forward curve of the strips 10 and having the inner top edges preferably beveled, as at 21′. The openings of the side pieces are provided with recesses, as 22, to accommodate upon one side the heads 23 of bolts 24, which extend through the registering openings of the several strips, and upon the other side the nuts 25, by which the rods are subjected to strain and the strips bound firmly together. At the rear end a cross-strip 26 is secured between and substantially as high as the side rails and forming a rear rail, while a cross-piece 27 is secured across the forward end and a draft-opening 28 formed adjacent the cross-piece and at the forward portion of the boat and preferably in alinement with the longitudinal axis of the latter.

It will be obvious that as the rods or bolts 24 are near the upper surface the boat will resist a large amount of wear before the bolts are exposed and that by tightening and loosening the bolts swelling and shrinkage may at all times be compensated for. With the several component strips thickened at the

curve or point of greatest wear it is obvious the life of the boat will be greatly increased without unduly adding to the weight. The several strips may be sawed in the form shown with the grain of the wood extending longitudinally of the strip, the forward bent portions being curved relative to the grain, whereby the curve presents not only a thickened surface, but a surface partially exposing the grain transversely, which resists wear in a greater degree. By sawing and curving relative to the grain the danger of straightening, owing to moisture, is eliminated.

Having thus described the invention, what is claimed is—

1. A stone-boat comprising a plurality of longitudinal strips disposed in contact with each other and having their forward ends curved upwardly and connected by a transverse end strip, tie-rods extending transversely through the several strips, there being an opening formed in one of said longitudinal strips at the forward end of the boat.

2. A stone-boat comprising a plurality of longitudinal strips disposed in contact with each other and each having one end thereof thickened and curved upwardly to present a reinforced bearing-surface, side rails extending above the intermediate strips and having their longitudinal edges inclined downwardly, end strips connecting the intermediate side strips, and tie-rods extending through the intermediate and side strips, there being an opening formed in one of the longitudinal strips at a point adjacent the forward end strip.

3. A stone-boat comprising a plurality of longitudinal strips disposed in contact with each other and having their forward ends thickened and curved upwardly, one of said longitudinal strips being provided with an elongated opening disposed at the forward end of the boat, side strips extending vertically above the intermediate strips and provided wth spaced recesses, and tie-rods seated in said recesses and extending transversely through the side rails and intermediate strips.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY A. McLEAN.

Witnesses:

W. H. JOSLIN,

W. A. NEWELL.