

J. STEVENS.
Paper-Vessels.

No. 165,270.

Patented July 6, 1875.

Fig. 1.

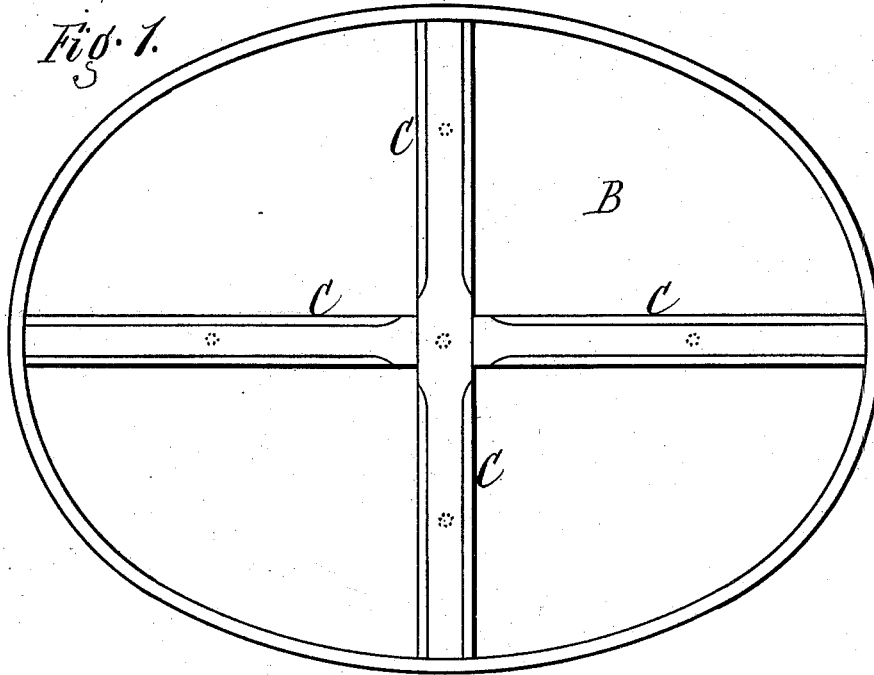
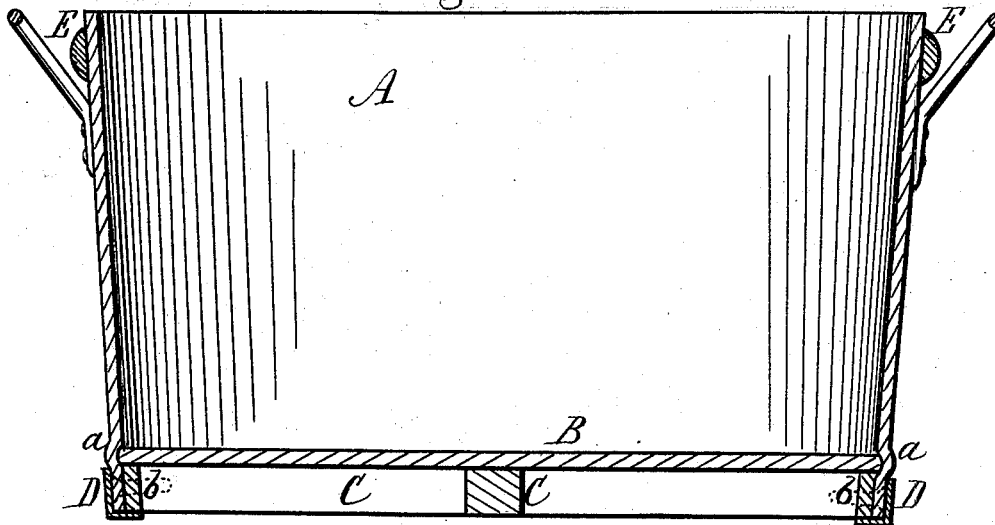


Fig. 2.



Witnesses
Edwin B. Scott
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Inventor:
John Stevens,
per R. F. Asgood,
Atty.

UNITED STATES PATENT OFFICE.

JOHN STEVENS, OF PORT BYRON, NEW YORK, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO MRS. J. L. DAVIS AND MRS. T. B. DICKEY, OF SAME PLACE.

IMPROVEMENT IN PAPER VESSELS.

Specification forming part of Letters Patent No. **165,270**, dated July 6, 1875; application filed March 2, 1875.

To all whom it may concern:

Be it known that I, JOHN STEVENS, of Port Byron, in the county of Cayuga and State of New York, have invented a certain new and useful Improvement in Paper Vessels; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a bottom view of a foot-bath, showing my improvement. Fig. 2 is a vertical section.

My invention relates to paper vessels, such as foot-baths, pails, pans, &c., and consists essentially of a paper vessel, constructed with cross-ties supporting the bottom and chime, and an outer metallic hoop binding the chime to the cross-ties, as hereinafter described.

A represents a foot-bath of ordinary form, being oval or oblong in outline, and provided with a bottom, B, which is made of paper-board. A groove, *a*, is struck in the sides, in which the edges of the bottom rest, being cemented therein and also upon a paper-hoop or rim, *b*, which is applied beneath.

In order to apply this hoop or rim, it is placed upon a mandrel or form of proper diameter, resting against a shoulder, and forced into the body, the size of the mandrel being such that when the hoop reaches the proper position it is pressed with force against the outer rim. Being previously covered with cement, it soon secures itself in place, and serves not only as the shoulder upon which to rest the bottom, but also gives thickness, strength, and substance to the chime.

C C are the ties, which support and strengthen the chime. They are made of wood, metal, or other material, and cross each other at right angles, being halved together, and the ends rest against the interior of the chime, as shown in Fig. 1. Screws or nails are inserted through the chime, striking into the ends of the ties, and, if desired, also, screws or nails may be inserted down through the bottom B, into the top of the ties, as indicated by the dotted lines in Fig. 1.

After the ties are thus secured in place, the outside of the chime is covered by an exterior hoop, D, of metal, which rests below the groove or bead *a*, covering the screws or nails in the chime, and, being driven tightly in place, it causes the chime to bear inward hard against the ends of the ties and the edges of the bottom. The bottom edge of the hoop is turned in at right angles, and made to overlap the lower edge of the chime, as shown. The top of the vessel is also provided with a hoop, E, of solid iron, of half-oval or half-rounded form in cross-section, which gives strength to the top of the vessel. By this means it forms a stiffener to the top of the vessel, preserving its form and preventing the warping of the top.

This invention is applicable to all kinds of paper vessels having chimes, and also to barrels, giving strength and solidity to the ends of the vessels. It is particularly applicable, however, to foot-baths and other vessels of an oblong form, in which the span of the bottom is considerable, and in which the tendency of the sides to expand or crush out is greater than in a circular form. In such cases the ties C C furnish stays in the line of the major and minor axes, where the expanding tendency is the greatest, and firmly bind the chime at the quarters, while the encircling hoop D, resting outside, retains all the parts in true position. These ties also support the bottom B, removing the strain from the edges, and allowing it to be made from thinner material than usual.

In foot-baths, particularly, the ties are of importance in sustaining weight, as the person frequently bears his whole weight upon the bottom, either in standing or in drawing up the chair in which he sits; and such weight in ordinary vessels would quickly force the bottom from place or strain it so to as to produce leakage. The ties C C obviate all difficulties of this kind, and render the vessel much stronger and more serviceable at a very trifling cost.

What I claim as new is—

The paper vessel herein described, consisting of the body A, bottom B, the cross-

ties C C, halved together and bearing against the quarters of the chime, and the encircling outer hoop D, resting below the groove *a*, and binding the chime to the ends of the cross ties and the edge of the bottom, as herein shown and described.

In witness whereof, I have hereunto signed

my name in the presence of two subscribing witnesses.

JOHN STEVENS.

Witnesses:

R. F. OSGOOD,
J. L. DAVIS.