

No. 652,377.

Patented June 26, 1900.

A. STARK.
PACKING AND STORING VESSEL.

(Application filed Oct. 2, 1899.)

(No Model.)

Fig. 1.

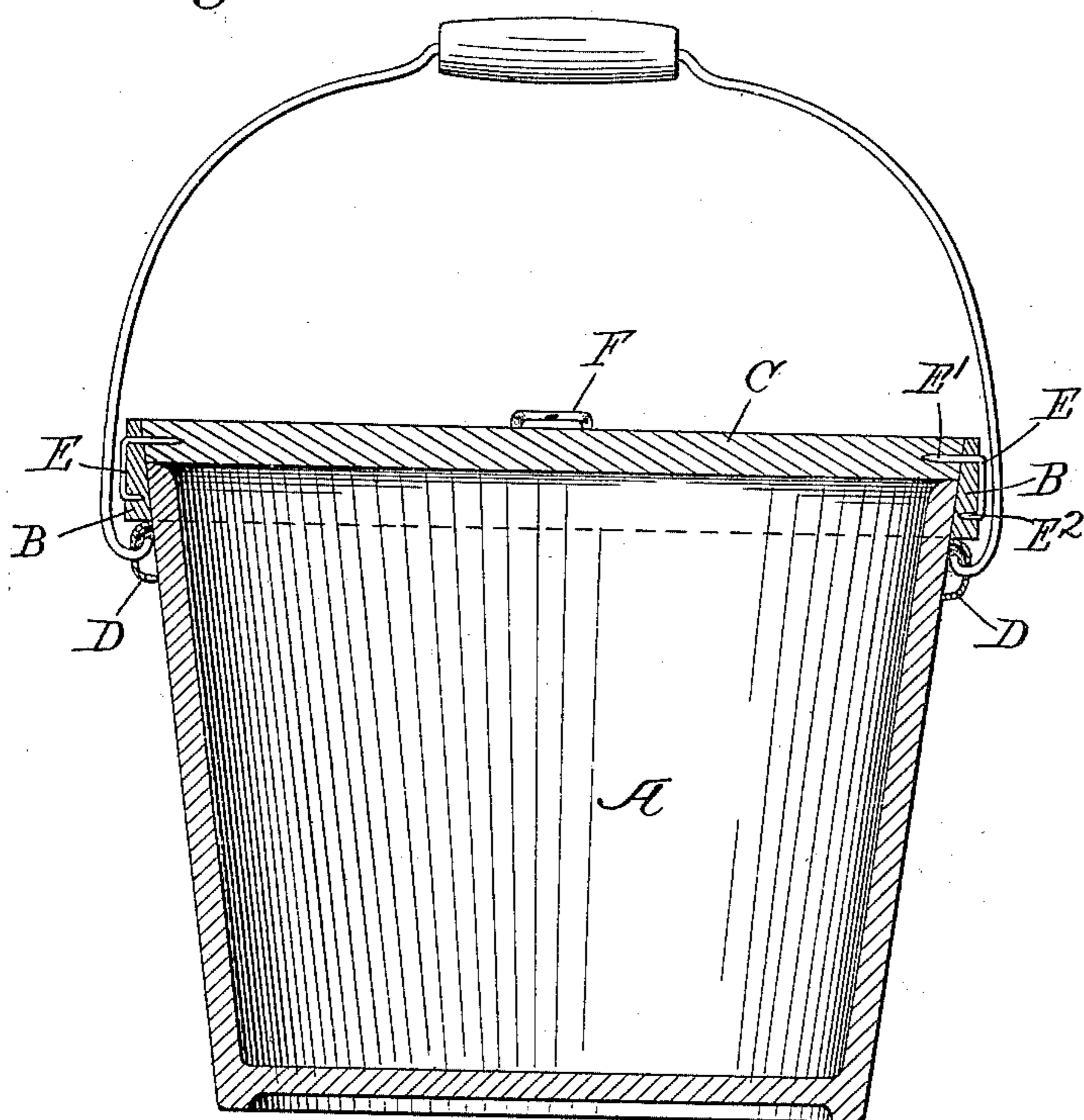


Fig. 4

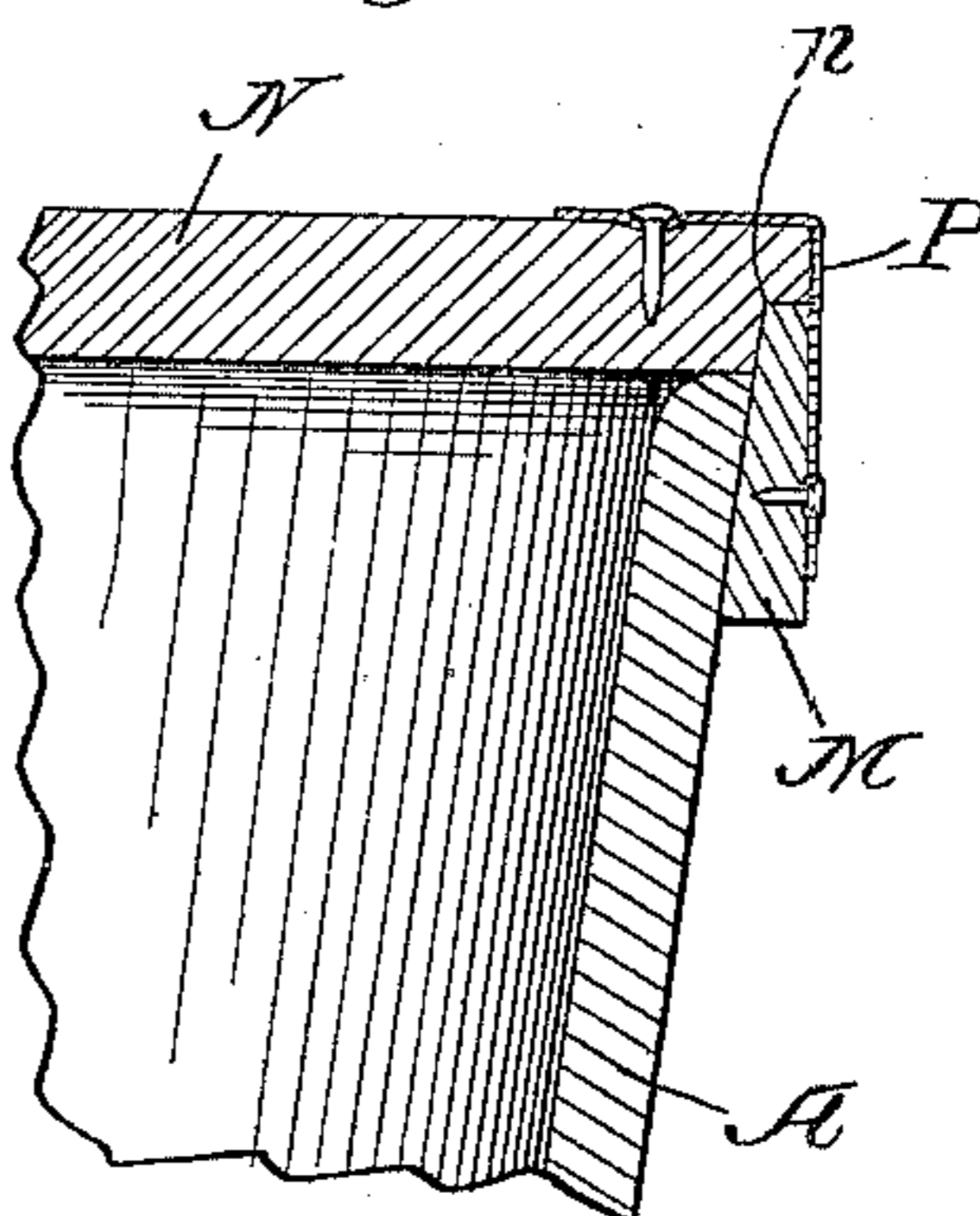


Fig. 2.

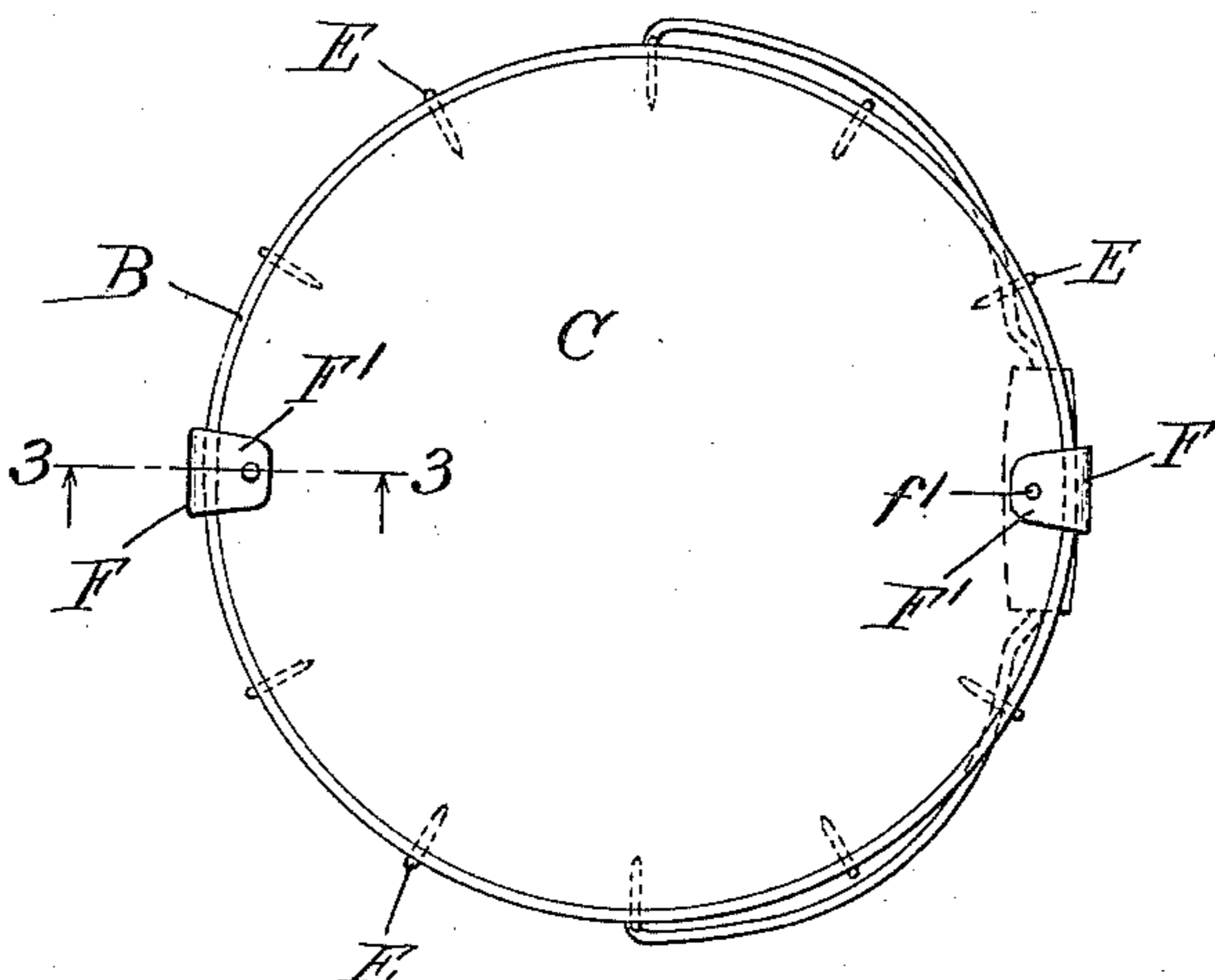
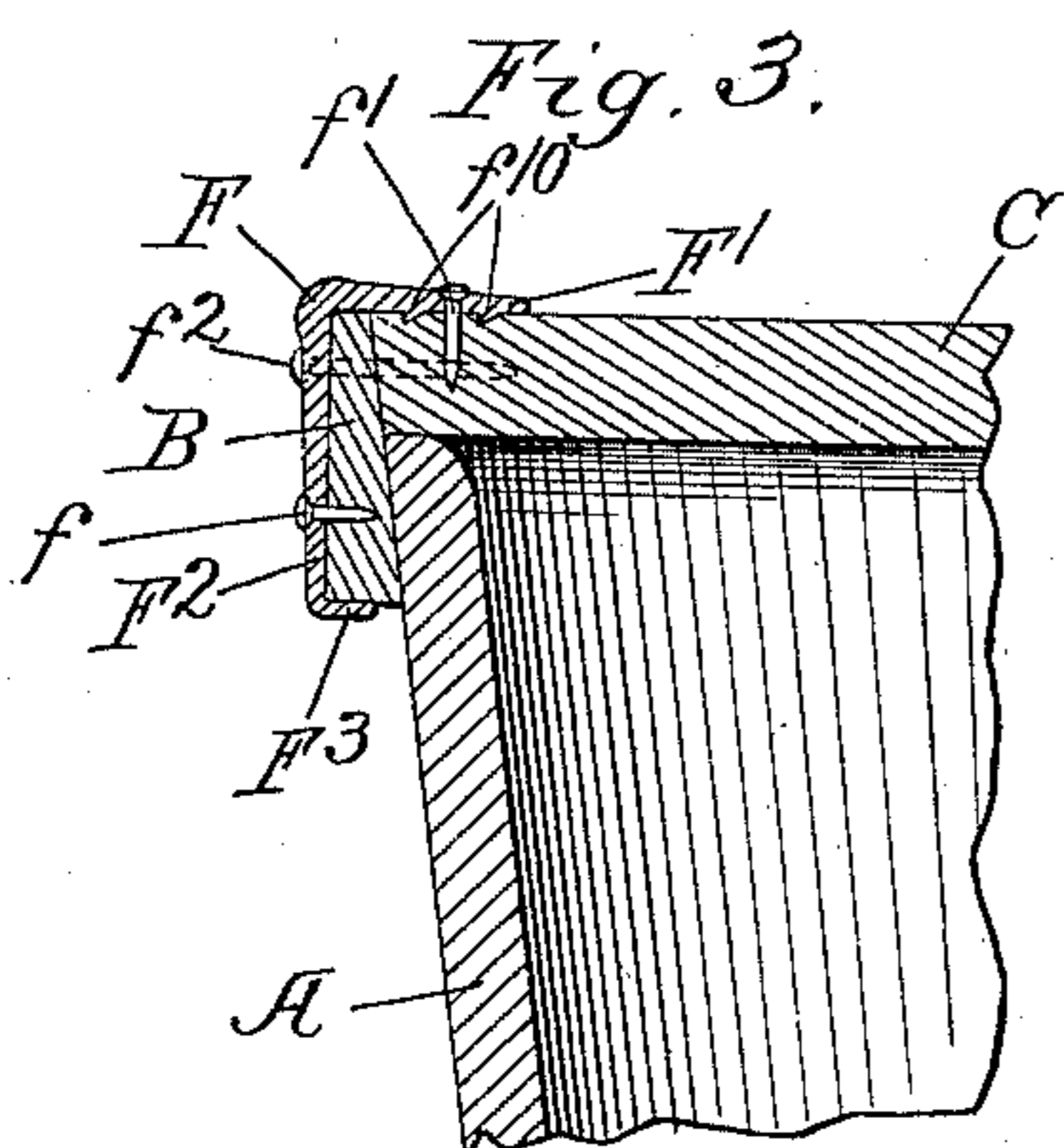


Fig. 3.



Witnesses.

Edward T. Wray.
Jean Elliott.

Inventor.

Inventor.
Andrew Stark
by ^{G. H.}Burton
his Atty's.

UNITED STATES PATENT OFFICE.

ANDREW STARK, OF CHICAGO, ILLINOIS.

PACKING AND STORING VESSEL.

SPECIFICATION forming part of Letters Patent No. 652,377, dated June 26, 1900.

Application filed October 2, 1899. Serial No. 732,315. (No model.)

To all whom it may concern:

Be it known that I, ANDREW STARK, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Packing and Storing Vessels, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to an improvement in pails, tubs, and vessels of like character designed to adapt them to serve the purpose of shipping-packages without interfering with their use as pails or tubs after the contents have been discharged.

The invention consists in the details of construction hereinafter specified, and set out in the claims.

In the drawings, Figure 1 is a vertical section of a pail having the features of my improvement. Fig. 2 is a top plan of the same. Fig. 3 is a detail section at the line 3 3 on Fig. 2. Fig. 4 is a view similar to Fig. 1, showing a modified form.

A represents a fiber pail of ordinary construction. The exterior of the vessel is assumed to be slightly tapering, as is usual in vessels of this sort.

B is a hoop, preferably of wood or like material having considerable tenacity and elasticity. It is interiorly tapered to correspond to the taper of the pail and of suitable diameter to permit it to be driven up on the outside of the pail, so that it will project above the upper margin of the latter a distance, preferably, from a half-inch to an inch, such space being designed to afford a seat for the cover C, which is also tapered at its margin to correspond to the taper of the pail and hoop and of suitable thickness to be lodged within the projecting portion of the hoop above the upper edge of the pail, upon which it seats. The ears D D for attaching the bail are secured to the body of the pail immediately below the hoop after the latter is driven to place, and they serve as a stop to prevent the hoop from receding from its position. When the pail is filled with contents, the cover C is lodged in the seat provided for it within the hoop—that is to say, so secured that the hoop tends to prevent the cover from coming out

upward and the cover tends to prevent the hoop from receding downward. A convenient and usually satisfactory method of fastening the two parts together for the purpose stated consists in the use of staples E E E, having a long tang E', which is driven through the hoop into the edge of the cover, and a short tang E², which is driven into the hoop and preferably does not penetrate the pail, (so as to avoid marring the latter.) The use of a staple instead of a mere nail in the position of a tang E' avoids the danger of splitting off the portion of the hoop above said longer tang, as might occur if a simple nail were employed instead. In addition to the staples E E, or in some instances in lieu of them, I may employ angular clips F F F, &c., which may be made of cast or malleable iron or other metal adapted to clasp the angular margin of the hoop, a horizontal arm F' overhanging the cover, while the vertical arm F² extends down along the outer side of the hoop and is secured by nails f², which are driven through the clip and hoop and into the edge of the cover and may be, in addition, secured by a short nail f, driven through the lower end of the clip into the hoop only, the nail f' being driven through the horizontal arm into the cover, preferably not penetrating the latter. The horizontal arm may have spurs or teeth f¹⁰ on its under side to engage the surface of the cover, into which it will be driven before the nails f and f² are driven in. To effect such engagement, at the lower end of the vertical arm an inverted hook F³ may be provided to engage under the lower edge of the hoop. It will be understood that when this hook is employed the clip will be applied by first engaging the hook under the edge of the hoop and then swinging the clip inward and driving it to place, the teeth of the horizontal arm being ratchet-formed, with their long slope inward and an abrupt slope outward—that is, toward the angle—so that they will engage the wood of the cover as the clip is thus driven home and prevent it from slipping back out of place, which is further permanently prevented by the insertion of the nail f'. When the hook is employed, the nails f and f² may be dispensed with or may be employed, as preferred.

I do not limit myself to the employment of both of the means described for securing the hoop and cover together or for causing each to retain the other, nor do I limit myself to the employment of either of these specific means; but it is essential that whatever means is employed shall have the quality of checking the descent of the hoop by means of the stop afforded by the upper edge of the pail and checking the ascent of the cover by means of the stop afforded by the taper of the pail and hoop. Any connection between the cover and hoop, therefore, by which the descent of the hoop relatively to the cover is prevented will serve the purpose.

I have shown this improvement applied to a fiber pail in order to adapt it for use as a shipping-package, and this use is one of the most important to which the improvement is applicable. Fiber vessels, while having great strength and adaptedness to certain uses for which they are especially designed, are more liable to fracture from falls or other accidents from which the pail receives blows on the upper margin, because such vessels have not the elasticity of coopered vessels, in which the stress of such a blow is transmitted by a hoop and more or less distributed throughout the entire circumference and which being made of staves will endure an amount of compression or distortion which would fracture the fiber-ware. When, however, the upper margin of the fiber-ware vessel is reinforced by the hoop B, such hoop not only serves to transmit the stress of a blow throughout the whole circumference, but also when it is constructed so that the cover may be lodged within it and made to fit it it transmits the stress to the cover, by which such stress is received edgewise, and the body of the vessel is therefore almost entirely relieved, because the cover prevents the hoop even from being distorted by a blow at one side. Fiber vessels when thus equipped with band and cover are fully adapted to be used as shipping-packages and will endure much more severe side blows than an ordinary coopered vessel of the same proportions. To a large extent the advantage in question may be obtained by any construction which reinforces the upper margin of the vessel by a hoop or band, which at the same time affords means of securing the cover, the latter serving not merely as a means of closing the vessel, but as a means of receiving the stress of any later blows, such as would result from the fall of the vessel when filled with heavy goods.

In Fig. 4 I have shown a modification in which the reinforcing-band is denoted by the letter M and is made to extend only above the upper margin of the pail when driven into place. The cover in this form (indicated by the letter N) is rabbeted at *n*, so that it not only extends into the band M and rests upon the margin of the pail, but also extends over the latter to the outer circumference thereof and is secured to the hoop by sheet-metal

straps P P P, which may be of ordinary commercial tin folded by hand over the edge of the cover and secured by nails driven into the hoop and cover, respectively. The necessity for special provision for securing the cover in case of fiber vessels, whether the cover is to be relied upon simply for closing the vessel or for the purpose additionally of stiffening it and taking the strain of lateral blows, arises from the fact that nails cannot be driven into the fiber-ware without seriously injuring it for its purpose, and the means of attaching the cover must be provided otherwise. In both forms of structure shown when the vessel has served its purpose as a shipping-package the hoop will be cut and stripped off, leaving the vessel ready for use as a pail or tub, as the case may be, and precisely in the same form and condition as if it had not been used for a shipping-package, no fastening having been entered into the body of the vessel in order to reinforce it or secure the cover.

I claim—

1. In combination with a vessel which is exteriorly tapered widening toward the mouth, a hoop having a corresponding interior taper and incapable at the edge of lesser diameter of passing over or admitting the upper or mouth end of the vessel, a cover seating over the mouth and abutting upon the hoop, and means securing the hoop and cover together.

2. In combination with a vessel which is exteriorly tapered, widening toward the mouth, a hoop having a corresponding interior taper and incapable at the edge of lesser diameter of admitting the upper or mouth end of the vessel, but at the other edge projecting above said mouth, a cover lodged and fitting within the projecting hoop and upon the upper margin of the vessel, and means securing the cover and hoop together.

3. In combination with a pail having an exterior taper widening toward the top; a hoop interiorly tapered to correspond with the taper of the pail, and adapted to be driven onto the same from below and to project above the upper margin of the pail, and stops permanently secured to the pail below the hoop.

4. In combination with a pail having an exterior taper widening toward the top; a hoop interiorly tapered to correspond with the taper of the pail, and adapted to be driven onto the same from below and to project above the upper margin of the pail, and ears for the engagement of the bail permanently secured to the pail immediately below the hoop, and serving to retain the hoop.

5. In combination with an exteriorly-tapering vessel, as a pail or tub, a hoop which is interiorly tapered to correspond with the taper of the vessel and adapted to be driven onto the latter from below, and incapable at its edge of lesser interior diameter of passing over the upper or mouth end of the vessel; a cover seated on the upper margin of the vessel and abutting upon the hoop, and fasteners

securing the hoop and cover together, the same being engaged with the cover and also engaged with the hoop at a distance below the upper margin of the vessel.

5 6. In combination with an exteriorly-tapering vessel, as a pail or tub, a hoop interiorly tapered to correspond with the taper of the vessel and adapted to be driven onto the latter from below, and incapable at its edge of
10 lesser interior diameter of passing over the wider or mouth end of the vessel, but having the other edge projecting above said margin; a cover seated within the upper projecting margin of the hoop and upon the upper margin
15 of the pail and abutting circumferentially upon the encompassing projecting marginal portion of the hoop, and fasteners securing the hoop and cover together having a projection which extends from the outer side of the
20 hoop inwardly and engages the cover, and another projection which engages the hoop at

a substantial distance below the upper margin of the vessel.

7. In combination with a tapering vessel, as a pail or tub, a hoop interiorly tapered to correspond with the taper of the vessel, and adapted to be driven onto the latter from below, and to project above the upper margin, a cover adapted to be seated within the projecting margin of the hoop and upon the upper margin of the pail, and staples E E having a long tang adapted to penetrate the hoop and extend into the edge of the cover and having a short tang adapted to enter the hoop at the lower thicker part.

In testimony whereof I have hereunto set my hand, at Chicago, Illinois, this 29th day of September, 1899.

ANDREW STARK.

Witnesses:

CHAS. S. BURTON,
JEAN ELLIOTT.