No. 646,809. Patented Apr. 3, 1900.

T. DICKMAN.

CLAMP.

(Application filed Nov. 7, 1899.)

(No Model.)

Fig. 1

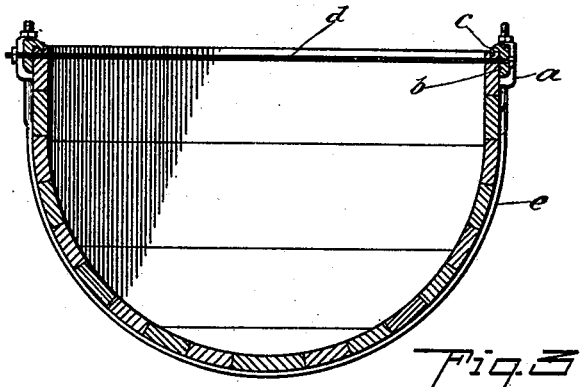


Fig. 2

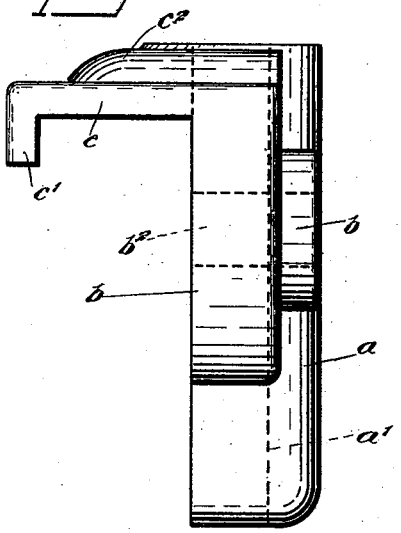


Fig. 3

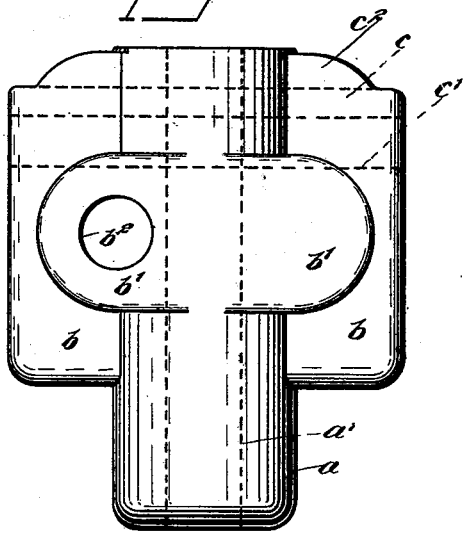
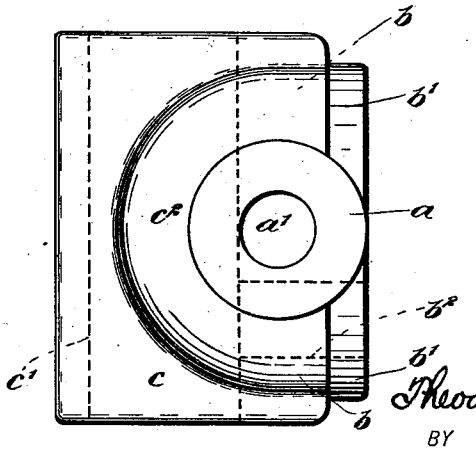


Fig. 4



WITNESSES:
J. A. Brophy
2 Owens

INVENTOR
Theodore Dickman
BY
Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THEODORE DICKMAN, OF WAPAKONETA, OHIO.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 646,809, dated April 3, 1900.

Application filed November 7, 1899. Serial No. 736,173. (No model.)

To all whom it may concern:

Be it known that I, THEODORE DICKMAN, of Wapakoneta, in the county of Auglaize and State of Ohio, have invented a new and Improved Clamp, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide superior means for clamping together the parts of troughs and like structures which are built of staves held together by tie-rods; and the invention is comprised in a clamp-iron which engages the top staves and receives the strain of the cross and bolting tie-rods.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a cross-section of a trough to which the invention is applied. Fig. 2 is an edge elevation of the clamp. Fig. 3 is a side elevation of the same, and Fig. 4 is a plan view.

The clamp comprises a vertically-disposed main portion or body *a*, with a passage *a'* formed longitudinally therein. From each side of the main portion or body *a* projects a wing *b*, and these wings are strengthened by integral ribs *b'*, projecting laterally from the body *a*. A transverse hole b^2 is formed in the clamp, the hole extending through one of the wings *b* and ribs *b'* and being so positioned as not to intersect with the passage *a'*. Projecting inward from the upper end of the body *a* and wings *b* is a ledge *c*, provided at its inner end with a downwardly-disposed flange *c'*. This ledge is strengthened by an approximately-semicircular enlargement or rib c^2, partly surrounding the body *a*.

In using the clamps they are placed in pairs opposite each other, as shown, the body *a* and wings *b* lying against the outer side of the trough and the ledges *c* lying on the top edges, with their flanges *c'* embedded therein. The cross tie-rod *d* is then placed with its end portions in the holes b^2 and secured by nuts bearing against the clamp, and the bolting-rods *e* are placed with their end portions in the passages *a'* and are also secured by nuts, as shown. These clamps therefore serve not only to hold the tie-rods *d* and *e* in place, but also to effectively apply to the trough the pressure of the rods, thus holding the staves firmly and immovably engaged and permitting slack in the rods to be taken up at will.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A clamp for troughs and like structures, having a body with a longitudinal passage, a wing projecting from each side, one of the wings having a transverse passage, and a ledge projecting inwardly from the upper ends of the body and wings and formed with a downwardly-projected flange.

2. The combination with a trough or like structure built of staves and having tie-rods passed through the uppermost staves and also encircling bolting-rods, of clamps having body portions adapted to lie against the side of the uppermost staves and formed with longitudinal openings to receive the ends of the bolting-rods, projecting ledges adapted to engage the tops of said staves and wings projecting from each side, one wing of each clamp being formed with a transverse opening adapted to receive one end of a tie-rod.

3. A clamp for troughs and like structures, consisting of a body formed with a longitudinal passage, a ledge at its upper end, a wing at each side, and strengthening-ribs projecting laterally from its rear side to the wings, there being provided a transverse opening extending through one of the wings and its adjacent strengthening-rib.

THEODORE DICKMAN.

Witnesses:
C. A. STUEVE,
J. J. CONNAUGHTON.