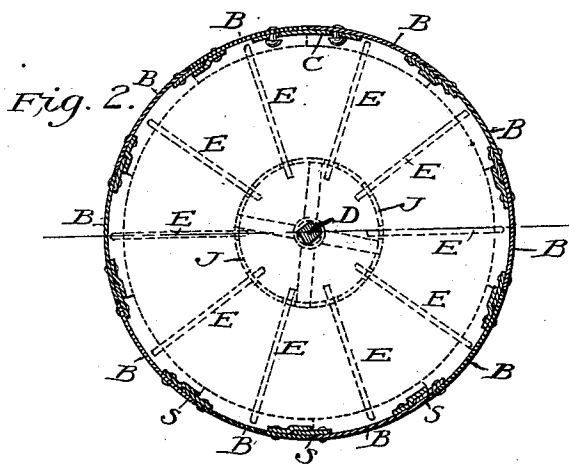
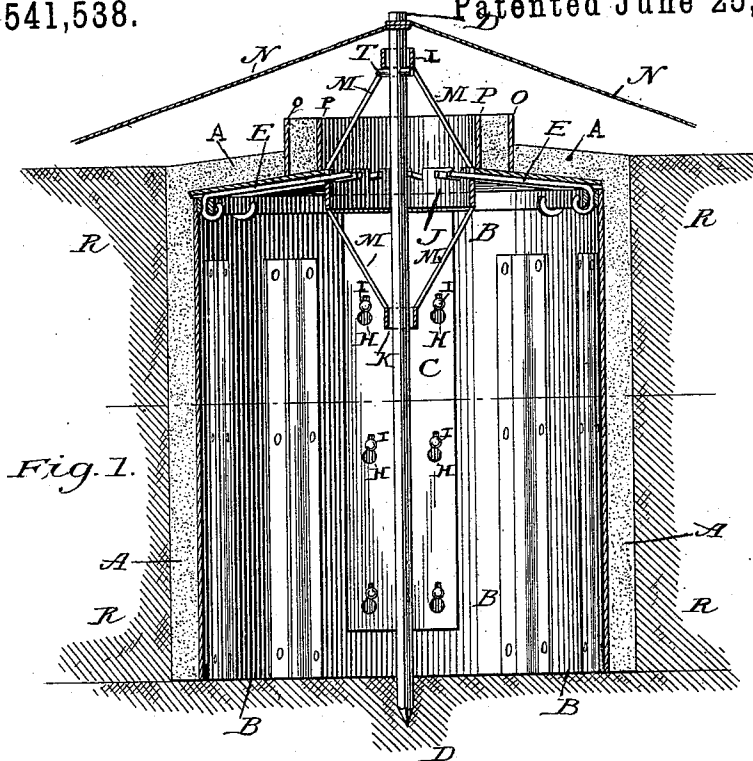


(No Model.)

J. A. HARTZELL.
CISTERN FORMING DEVICE.

No. 541,538.

Patented June 25, 1895.



Witnesses.
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UNITED STATES PATENT OFFICE.

JONAS A. HARTZELL, OF PORTLAND, INDIANA.

CISTERN-FORMING DEVICE.

SPECIFICATION forming part of Letters Patent No. 541,538, dated June 25, 1895.

Application filed August 30, 1894. Serial No. 521,752. (No model.)

To all whom it may concern:

Be it known that I, JONAS A. HARTZELL, a citizen of the United States, residing at Portland, in the county of Jay and State of Indiana, have invented certain new and useful Improvements in Cistern-Forming Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in cistern forming devices, in which detachable sections or staves are connected together in a circular form; and the objects of my improvements are, first, to provide a form over which to mold a cistern; second, to afford facilities for removing the sections and other parts of the device, after the cistern is completed. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of the device. Fig. 2 is a top view or plan of the device.

Similar letters refer to similar parts throughout both views.

The staves or sections B which are tongued and grooved as shown at S, the rafters E, the center post D and the cone L, K, M, M, M, M, and J constitute the frame work of the device. The sections B are formed with a tongue on one edge and a groove on the opposite edge as shown at B, S Fig. 2. The rafters E are hinged to the sections B, at their outer end, and the inner ends rest in the notches of the band J, which band is the center part of the cone formed by the parts marked L, K, M, M, M, M, and J.

L and K are bands through which the center post D can pass. The pin T goes through a hole in center post D at the point shown and thus secures the cone L, K, M, and J at the point desired. The guy rope N secures the center post D in an upright position in the center of the device.

R represents the earth and A the cement

between the earth and the sections or staves of the device.

The rings O and P are for forming the mouth of the cistern.

At the place where the side sections B meet they are secured by means of a plate C, with slotted holes H. The heads of the rivets I, pass through the holes H and by pressing the plate C down it securely locks the device as shown. A hole is to be made in the earth R, larger than the diameter of the device. The staves B are then set on end in this hole, the ends with the arms E attached being uppermost. The staves or sections are placed securely together by means of the tongues and grooves thus forming a circular drum. The last two staves have no tongue or groove on their edges nearest the ending point, but they have rivets or studs with comparatively large heads I, which project through the holes H, in plate C. After the drum is formed as described, all the arms E are turned upward out of the way. The center post is then placed in the center of the drum, said post resting on the bottom or earth. The cone formed by L, K, M and J is then placed in position by sliding it down over the center post D, until it is at the proper place when the pin T is placed through a hole in the post D, which holds the cone L, K, M and J securely in its place. The guy ropes N, are then fastened to the top of the post D, and secured to stakes, thus holding the center post in an upright position. The arms E are then turned in toward the center until they rest in the notches on the band J, thus forming rafters for the top of the cistern. A metal top is then laid loosely on these rafters. The space A between the earth R and the sections B, is then filled in with cement and the same thickness of cement is placed on the top as shown. Two rings O and P are set over the center on top of the roof and the space between O and P is filled with cement thus forming a neck to the cistern. After the cement has become dry the pin T is pulled out which releases the cone, when it will immediately fall to the bottom of the cistern. The arms E will then drop down parallel with the sections B. The center post and the cone can then be taken

out through the neck at P. The plate C is then taken off and each section can then be taken out separately. After the device is all removed the bottom can be plastered with
5 cement as desired.

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

10 The combination in a cistern forming device, of the sections or staves B, placed in an upright position forming a circular drum, as shown, the post D placed in an upright position in the center of the drum and designed to support the cone formed by the bands L

and K surrounding the post D, the band J located between and connected to the bands K and L by the rods M, by means of the pin T, placed in a hole in the post D, and the rings O, and P, for forming the neck of the cistern, all substantially as shown and described and
15 20 for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

JONAS A. HARTZELL.

Witnesses:

P. M. HEARN,
ROBT. W. RANDLE.