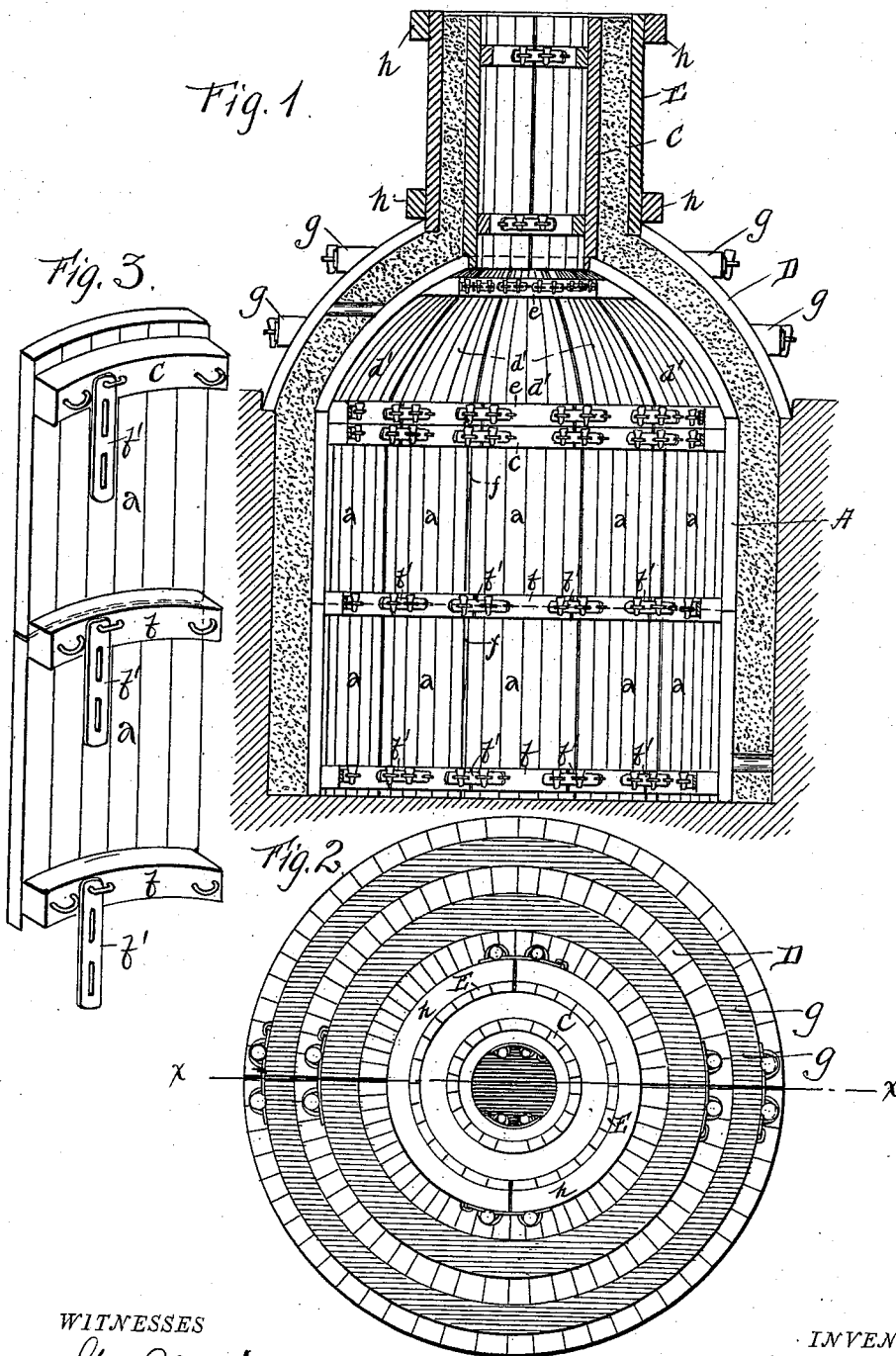


(No Model.)

I. W. SIMPSON.
MOLD FOR CISTERNS.

No. 532,917.

Patented Jan. 22, 1895.



WITNESSES

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UNITED STATES PATENT OFFICE.

IRA W. SIMPSON, OF BEDFORD, IOWA.

MOLD FOR CISTERNS.

SPECIFICATION forming part of Letters Patent No. 532,917, dated January 22, 1895.

Application filed August 31, 1894. Serial No. 521,856. (No model.)

To all whom it may concern:

Be it known that I, IRA W. SIMPSON, a citizen of the United States, and a resident of Bedford, in the county of Taylor and State of Iowa, have invented certain new and useful Improvements in Molds for Cisterns; 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a section on line $x-x$, Fig. 2. Fig. 2 is a plan view of the invention. Fig. 3 is a detail of two superimposed sections of the mold for the body of cistern.

This invention has relation to certain new and useful improvements in the construction of cisterns, the object being to provide simple and efficient means for the construction of underground cisterns from concrete, or other plaster material, whereby the entire structure may be formed in one integral wall without joints and without the aid of skilled labor.

With this object in view, the invention consists in a mold of the novel construction and combination of parts, all as hereinafter described and pointed out in the appended claim.

Referring to the accompanying drawings, the letter A designates the mold for the body of the cistern, which is preferably of circular, cylindrical form, and composed of one or more series of narrow, curved sections a . The sections composing the lower tier are supported against inward movement by means of upper and lower arcuate cleats b on the inside, each cleat being made in sections joined by suitable means such as the double hasps b' shown. The upper cleat is made to project sufficiently above the upper ends of the sections to form a bearing for the sections of the upper tier, which are held together by an upper cleat c similar to the cleats b , and set a short distance from the upper ends of the sections.

The number of tiers used in constructing

any cistern depends upon the depth of such cistern.

B designates the inner mold of the cistern dome, which is of approximately semi-spherical form with an opening d in the top, and made up of a series of sections or segments d' , which at their lower ends are supported upon the upper ends of the sections of the upper tier of the body portion, and having inside upper and lower annular cleats or rings e which are made in sections and secured in the same manner as the cleats b and c . The lower cleat e projects sufficiently below the sections to enable it to fit inside the sections a of the upper tier.

C designates the inner mold for the neck of the cistern, also made in sections and held by cleats or rings in the same manner as the body and dome sections, said sections resting upon the edge of the opening d , or fitting therein, as shown. The sections of the various parts are made up of narrow boards nailed to the cleats or rings. Wedges f may be driven between the sections to tighten them. All of the sections must be sufficiently small to pass through the opening of the neck.

D designates the outer mold of the dome which is the same shape as the inner dome, and also made in sections which, however, may be of any convenient size. These sections are secured together by outside cleats or rings g , with hasp or other fastenings.

E designates the outer mold for the neck which is of the same form as the inner mold, but of sufficiently larger diameter to leave an intervening space or chamber of a thickness equal to that of the wall to be formed. Said outer mold at its lower end is supported upon the outer dome mold, which in turn is supported upon the ground.

The fastening rings or cleats h for the outer neck mold are of course on the outside.

The method of constructing the cistern is as follows: An excavation is first made in the earth from two to six inches larger all around than the molds, depending upon the size of the cistern and the kind of material used. The bottom tier of the mold is then set in this excavation and the surrounding space filled in with the plastic material which

should be thoroughly stamped down. The second tier is then placed on top of the first tier and also filled around, and this is continued until the shoulder is reached. The inner dome is then set in place, and the outer dome mold is placed over it. The space between the two molds is then filled with the plaster material, and thoroughly tamped. A tamp with a handle curved to correspond to the curvature of the dome is employed. When this mold is nearly completed, the inner neck mold is set, and the dome then completed. Then the outer neck mold is set and filled. The proper holes should be made for the inlet and outlet pipes, during the construction. The molds are left in place until the plaster material is thoroughly set and hardened, which usually requires from two to three days. They are then knocked to pieces and the sections singly removed through the neck. After the molds have been removed, the bottom of the inclosure is slightly concaved and covered with concrete which is tamped down and joined closely to the side walls.

The inside of the structure may be covered

with a slush made of some suitable cement, which will close up any holes that may occur in the walls.

A cistern can be constructed as above, in a continuous, integral, homogeneous structure, with a great saving in labor and material, and without the aid of skilled mechanics.

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

The herein described cistern mold, built up of arcuate sections detachably fitted together, and formed each of narrow boards nailed to upper and lower curved cleats or rings, said rings or cleats being so arranged on those sections which support other sections as to form shoulders or abutments, and the double hasps and staples carried by said rings or cleats for securing the sections together, substantially as specified.

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

IRA W. SIMPSON.

Witnesses:

WM. E. CRUM,
ED. E. CASS.