

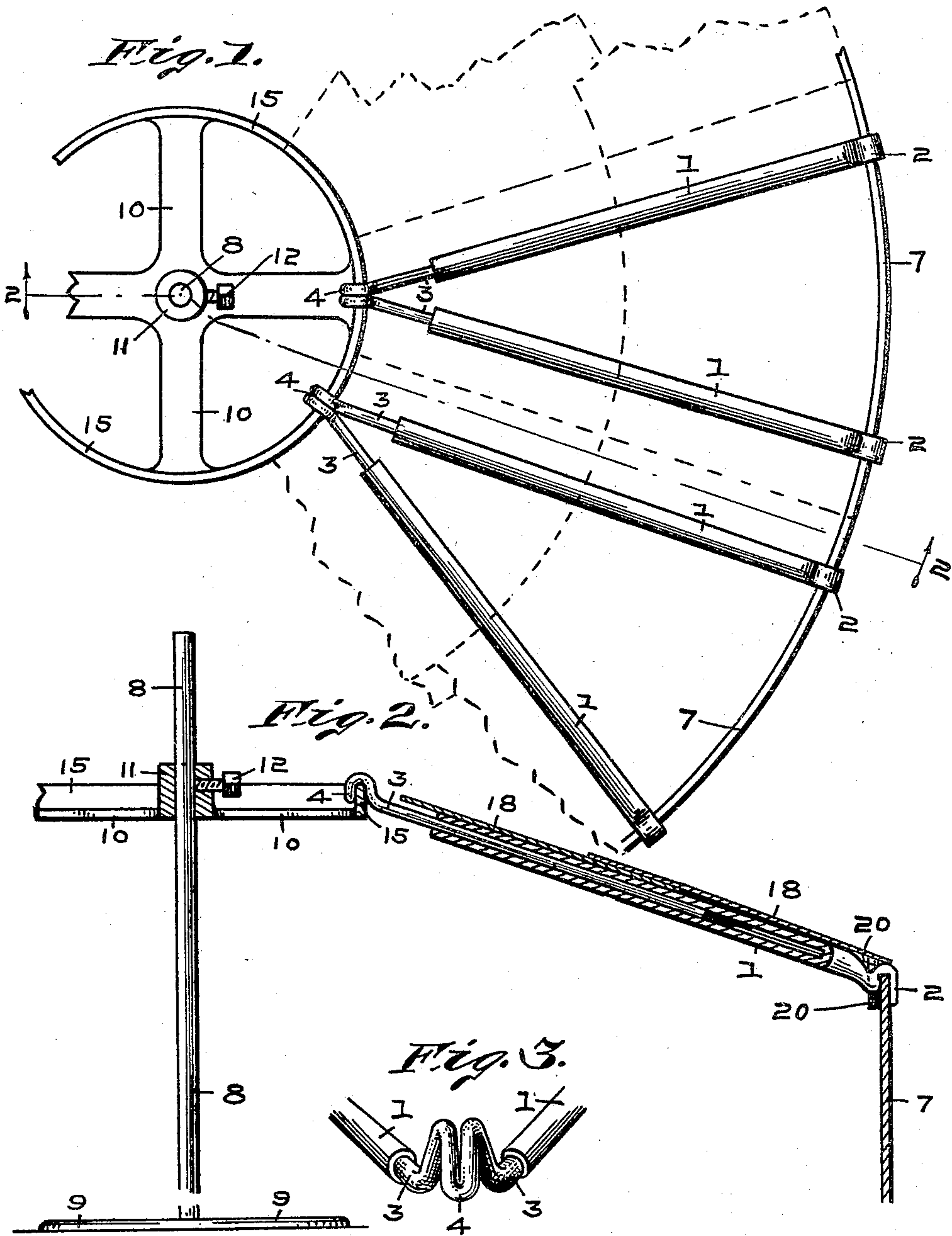
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F. R. KEISER.

EXTENSIBLE DOME FORM FOR CEMENT CISTERNS.

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WITNESSES:

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EXTENSIBLE DOME FORM FOR CEMENT CISTERNS.

No. 824,548.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed September 23, 1905. Serial No. 279,843.

To all whom it may concern.

Be it known that I, FRANCIS R. KEISER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Extensible Dome Forms for Cement Cisterns, of which the following is a specification.

This invention relates to a temporary support or pattern on which cement domes are formed for cisterns; and the object of the invention is to provide a pattern which will be extensible in its nature, so that one pattern will suffice for building cisterns of various sizes.

The object consists, further, in an extensible dome pattern which when once placed into position can be adjusted to change the line of inclination of the dome without disturbing the various parts. There are other features, and the arrangement and construction of the parts of such a pattern whereby the advantages sought are attained will first be more particularly described in the annexed specification and the novel features then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar numerals of reference indicate similar parts, Figure 1 is a fragmentary detail plan view of the extensible supports of the pattern in operating position. The segmental plates that form the cover for supporting the green cement are omitted; but the positions they occupy are defined by means of the dotted lines. Fig. 2 is a fragmentary detail sectional view as seen from the dotted line 2 2 in Fig. 1. Fig. 3 is a front view of the front members that comprise the supporting-sections and shows how the bifurcated members are connected.

In the drawings, 1 represents a plurality of hollow tube members that comprise a part of the supporting dome-sections. These members terminate at their outer ends in the hooks 2, which engage the upper edge of the pattern that forms the side wall of the cistern and by which means they are supported.

3 represents V-shaped members that form the front portions of the supporting dome-sections. These members are preferably made of solid material and telescope with the members 1, so that they may be contracted or ex-

panded to conform to cisterns of different diameters. The front members of the dome-supporting sections have a bifurcated formation in which the diverging members that comprise the individual unit serve to form a guide for the hollow members 1. It will be noted by examining Fig. 3 that where the members forming the unit converge they are bent to form hooks 4, and the object of these hooks will be hereinafter described.

When the side wall pattern 7 of the cistern is placed into position, which is the initial step in cistern construction, a rod 8 for supporting the inner ends of the dome-supporting sections is placed in the center of the excavation that ultimately forms the cistern-chamber. The rod 8 is provided with a wide base-plate 9, so that ample stability is afforded the rod in operating position. A ring 10, having a hollow hub 11 that registers with the diameter of the rod 8, is passed over said rod until the desired height of the dome is reached. The hub 11 of the ring 10 is provided with a set-screw 12, so that the ring may be secured in the desired position on the rod 8. The ring 10 is also provided with a wide periphery in order that the annular shoulder 15 may be secured. After the ring 10 is properly located and secured to the rod 8 the dome-supporting sections may readily be placed in position. This is accomplished by placing the hooks 2 on the ends of the hollow members 1 over the edge of the side wall 7 and placing the hooks 4, formed on the ends of the V-shaped members 3, over the annular shoulder 15 on the ring 10.

Having placed the desired number of the dome-supporting sections in position, the top is then completely covered by means of the thin segmental cover-plates 18, which are placed upon the dome-sections. These segmental plates 18 may be lapped, as shown, so as to permit them to be employed in cisterns of different diameters. The outer plates 18 are usually provided with the pins 20, which rest against the inner surface of the side wall. The pins 20 are unnecessary on the inner segments, as the cement that is placed on the outer segments during the progress of the work affords sufficient weight to hold them in position.

It will be noted that the supporting-sections in this device are susceptible of auto-

matic contraction and expansion, which is one of the chief features of this invention. Special attention is directed to the fact that when the pattern is completely placed in position and it is desired to change the pitch of the proposed dome it may be accomplished without causing displacement of the pattern by loosening the set-screw 12 in the ring 10. The latter may then be raised or lowered to the pitch desired, while the extensible sections will readily accommodate themselves to the varying angle that follows the changed position of the ring 10.

Having thus fully described my said invention, what I desire to secure by Letters Patent is—

1. In a dome form for cisterns, a plurality of supporting members telescoped together, hooks formed in the ends of said members, stationary supporting means engaging the hooks in the outer ends of the supporting members, an adjustable supporting means engaging the hooks in the inner ends of said members, and an upright support to engage the adjustable supporting means.

2. In a dome form for cisterns, a plurality of supporting members forming the primary sections of the supporting-frame, secondary supporting members forming a part of said frame and telescoping with the primary members, hooks formed in the inner ends of the primary members, an adjustable means engaging said hooks and adapted to support said ends of the primary members, an upright support engaging the adjustable means, means permitting adjustment of the adjust-

able means on the upright, and the cistern-casing engaging the hooks on the outer ends of the supporting-frame and adapted to support the outer end thereof.

3. In a dome form for cisterns, a plurality of V-shaped members forming the primary sections of the supporting-frame, secondary members telescoping with the primary members, hooks formed in the ends of both the primary and secondary members, fixed and adjustable supporting means engaging said hooks, an upright support engaging the adjustable supporting means, and means carried by said adjustable supporting means to permit the latter to be adjusted.

4. In a dome form for cisterns, a plurality of V-shaped members forming the primary sections of the supporting-frame, secondary members telescoping with the primary members, hooks formed in the ends of both the primary and secondary members, the cistern-casing engaging the outer hooks and adapted to support the outer ends of the frame, a supporting annular ring, an annular shoulder formed on said ring and adapted to engage the hooks formed on the primary members of the supporting-frame, an upright support engaging the ring, and means on said ring to permit its adjustment on said upright.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of September, A. D. 1905.

FRANCIS R. KEISER. [L. s.]

Witnesses:

F. W. WOERNER,
J. A. MINTURN.