L. R. STEEL.

LIQUID COOLING APPARATUS.

APPLICATION FILED MAR. 4, 1911.

1,057,893.

Patented Apr. 1, 1913.

2 SHEETS—SHEET 1.

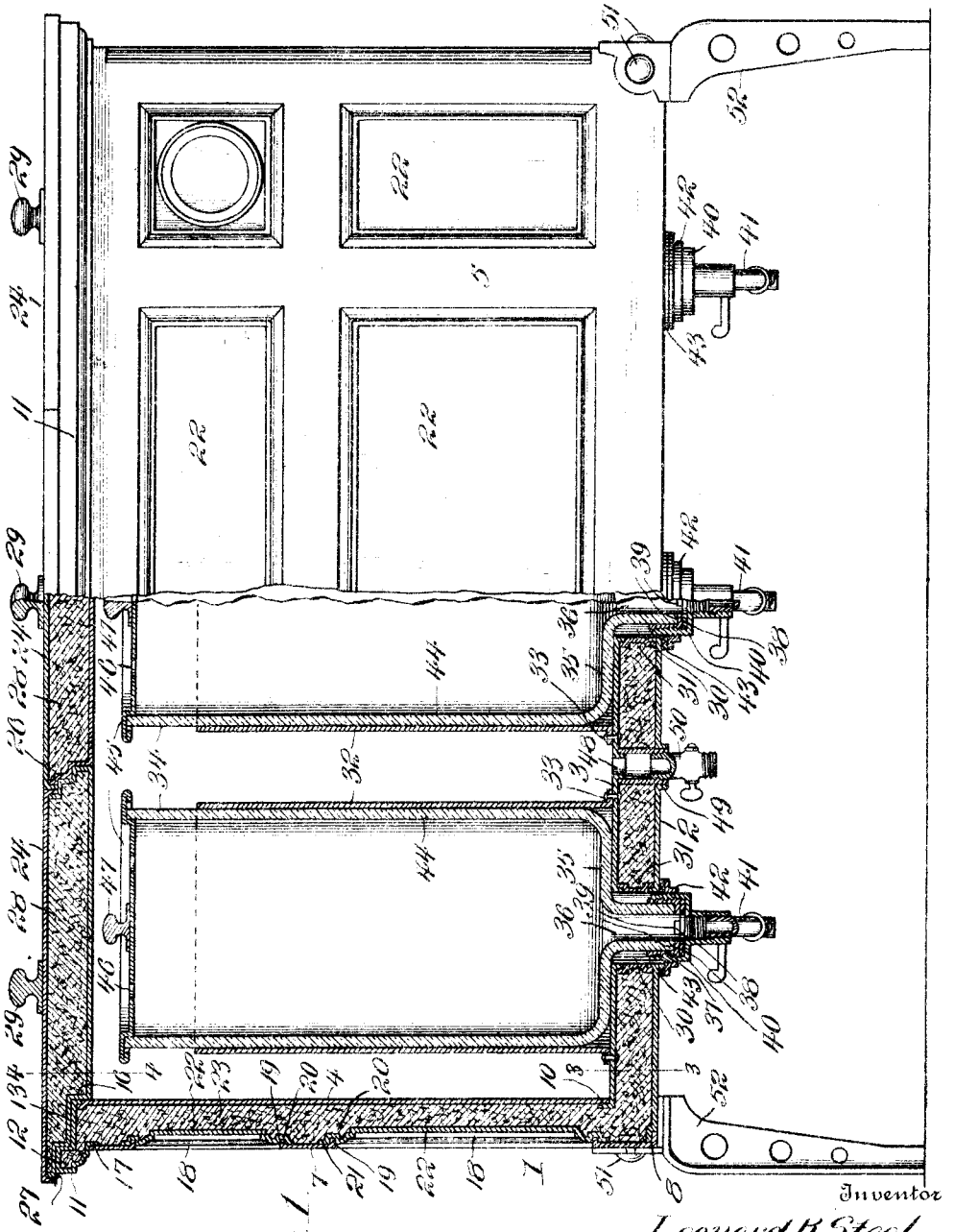

Fig. 1.

Witnesses

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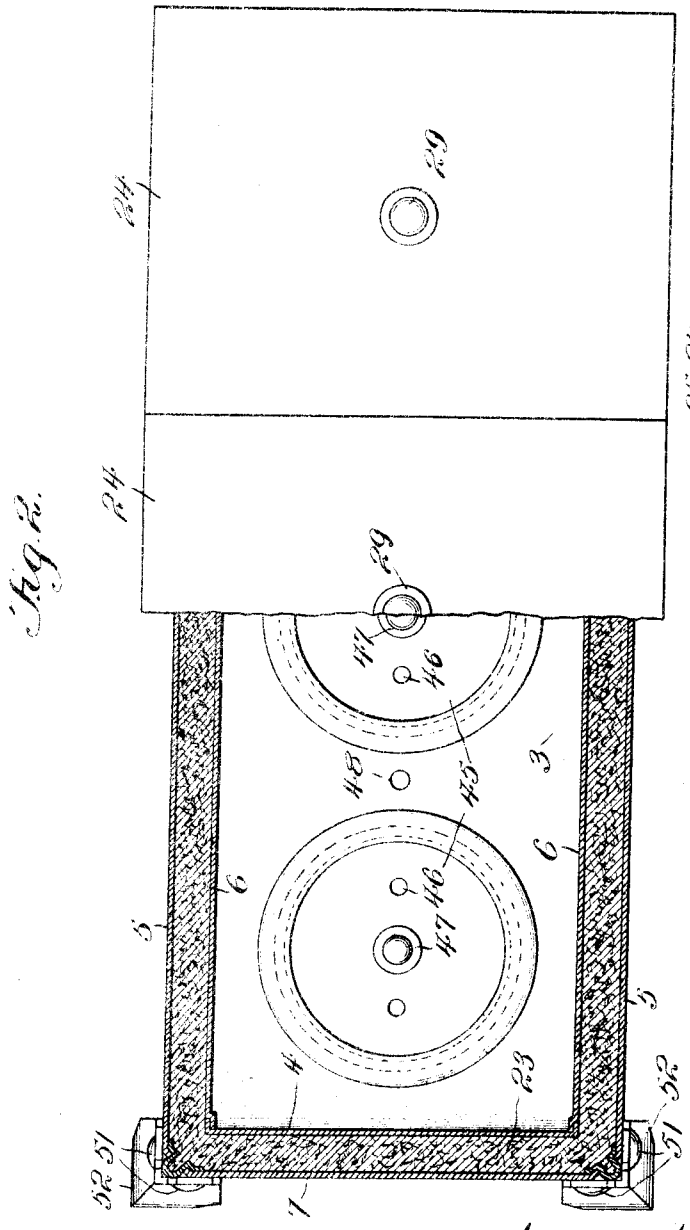

Fig. 2.

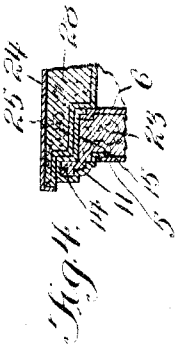

Fig. 4.

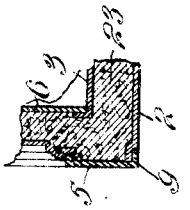

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

LEONARD R. STEEL, OF CLEVELAND, OHIO.

LIQUID-COOLING APPARATUS.

1,057,893. Specification of Letters Patent. Patented Apr. 1, 1913.

Application filed March 4, 1911. Serial No. 612,236.

To all whom it may concern:

Be it known that I, LEONARD R. STEEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Liquid-Cooling Apparatus, of which the following is a specification.

An object of the invention is to provide a casing of heat insulating walls and to provide a container for the beverage or liquid to be cooled, the said container and the casing including means whereby the former can be securely locked to the latter.

In the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a side elevation of the dispensing apparatus, parts being shown in section. Fig. 2 is a plan view of the apparatus, parts being shown in section. Fig. 3 is a section on line 3—3 of Fig. 1. Fig. 4 is a section on line 4—4 of Fig. 1.

The apparatus comprises a casing 1 which includes an outer bottom wall 2, and inner bottom wall 3, inner end walls 4, outer side walls 5, inner side walls 6, and outer end walls 7. The outer bottom wall 2 is soldered or otherwise secured, at 8, to the outer end walls 7 and secured in a like manner, at 9, to the outer side walls 5. The inner bottom wall 3 is secured, at 10, by solder or any other suitable means to the inner end walls 4 and to the inner side walls 6. A top or joint member 11 connects the inner side and end walls with the outer side and end walls. This member is stepped cross sectionally so as to form the supporting surfaces 12 and 13 at the ends of the casing and the similar surfaces 14 and 15 at the sides of the casing.

The portion 13 of the member 11 is formed with a depending flange 16 which is soldered or otherwise suitably secured to the inner end and side walls 4 and 6. The portion 12 of the member is constructed to provide an attaching flange 17 which is soldered or otherwise suitably secured to the outer ends and side walls 5 and 7. The end walls are each provided with openings 18, the walls thereof being inturned to form flanges 19. These flanges are seated in suitable recesses 20 in the flanges 21 of panels 22, being preferably soldered therein. The outer side walls 5 are provided with similar openings in which are fitted and secured panels 22. The spaced walls of the casing, as described herein, have interposed therebetween non-heat conducting material 23 of mineral wool, cork, asbestos, card-board, felt or the like. Covers 24 are provided for closing the upper end of the casing. These covers are provided with side rabbeted or stepped portions 25 which are adapted to be supported upon the surfaces 14 and 15 of the member 11. The edge portions 26 of the covers are rabbeted or stepped, the adjacent stepped portions of the covers interfitting each other. The outer surfaces 27 of the end covers are rabbeted, as shown, so as to snugly fit the stepped portions at the ends of the member 11 and to securely contact with the surfaces 12 and 13, as shown in Fig. 1 of the drawings. This construction is such that any one of the covers can be removed without requiring the removal of the remaining covers. The covers are each constructed of spaced walls, as shown, and interposed between the walls is non-heat conducting material 28. Each cover is provided with a suitable knob 29 by means of which the cover can be lifted from the casing. The bottom of the casing is provided with a series of openings 30 in which are mounted sleeves 31.

The cylindrical supports 32 are mounted vertically in the casing, being secured, at 33, to the wall 3 and arranged in line with the openings 30. Each member has removably fitted therein a glass container 34 which is open at its top and closed at its bottom by a head 35. A neck 36 depends from the head 35 and extends into the openings 30, being provided exteriorly with a threaded ring 37. This ring carries fingers 38 which are seated in correspondingly formed recesses 39 in the neck, being preferably cemented in the recesses so as to hold the sleeve against any possible rotation on the neck. A coupling member 40 is threadedly fitted to the ring 37, and as shown, this member is provided with a detachable faucet 41 by means of which the liquid can be drawn from the container. A threaded clamping device 42 is mounted on the coupling member and is adapted to bear against a suitable gasket 43, the object being to hold the gasket tight against the bottom wall 2 of the casing so as to form a perfect liquid tight joint at the point of connection of the container with the casing.

The vertical walls 44 of the container extend beyond the upper ends of the supports 32 so that the container can be conveniently grasped when it is desired to remove the

same. The container is substantially of the same transverse diameter throughout from the head 39 to its upper open end so that the interior of the container can be readily exposed for cleaning purposes. A cover 45 closes the upper open end of the container 34. The cover may be constructed of glass, enamel, or the like. This cover is provided with air vent passages 46 and a knob 47.

The cylindrical supports 32 are spaced from each other and are spaced from the inner walls of the casing 1, the intervening space being used as a chamber for the refrigerant. The inner and outer bottom walls 2 and 3 of the casing are provided with openings 48 which are arranged in coincidence with each other and connected together by a drain pipe 49 to which is attached a draw-off cock 50.

The supports 32 operate to hold the liquid containers vertically arranged in the casing and wholly out of contact with the refrigerant which surrounds the supports. When it is desired to remove the containers from the casing 1 the coupling members 40 of the containers are removed so as to permit free movement of the liquid containers in the openings 30 to allow the container to be withdrawn vertically from its support. Secured, at 51, to the corners of the casing are suitable supporting legs 52.

The central portion of each of the panels 22 in the outer walls of the casing are pressed inwardly in the direction of the inner walls of the casing. This construction is such that each panel will be possessed of considerable rigidity and the outer walls of the casing will be reinforced and held against outward swelling on expansion of the insulating material.

I claim:—

1. A casing having an opening in its bottom, a container removably mounted in the casing and having a neck extending through the opening, an exteriorly threaded ring secured to the neck, a coupling member interiorly threaded for adjustment on the ring, a gasket interposed between the coupling and the neck, and a clamp adjustable on the coupling and adapted to engage against the bottom of the casing and to secure the container in the casing.

2. A casing provided with an opening in its bottom, a container having a neck extending through the opening, the said neck having radial notches therein, a ring embracing the neck and having portions extending into the notches whereby the ring is held against rotation on the neck, a coupling threadedly adjustable on the ring, and adjustable means on the coupling adapted to engage against the casing so as to hold the container in place therein.

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

LEONARD R. STEEL.

Witnesses:
JOHN D. LLOYD,
ROBT. J. STEEL.