

(No Model.)

3 Sheets—Sheet 1.

J. H. COOLEY & H. A. GOEBEL.
REFRIGERATING APPARATUS.

No. 575,594.

Patented Jan. 19, 1897.

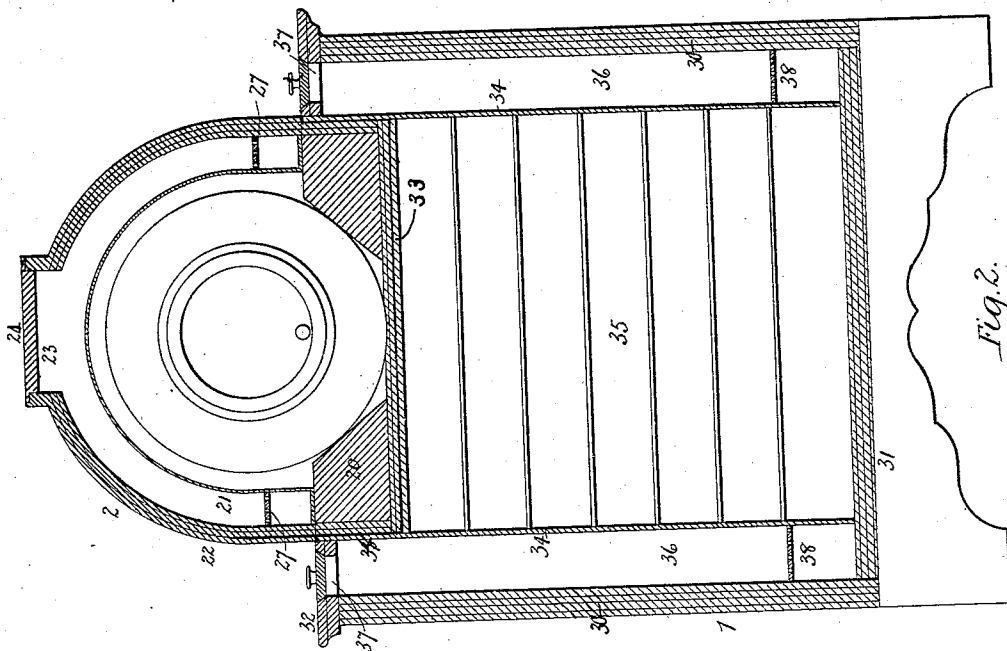


Fig. 2.

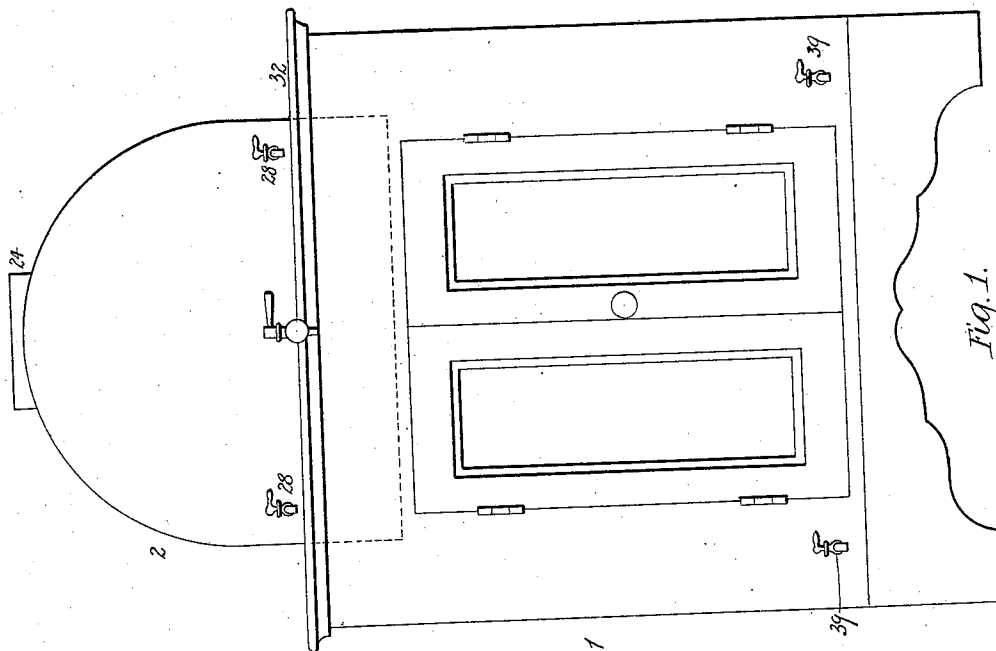


Fig. 1.

Witnesses

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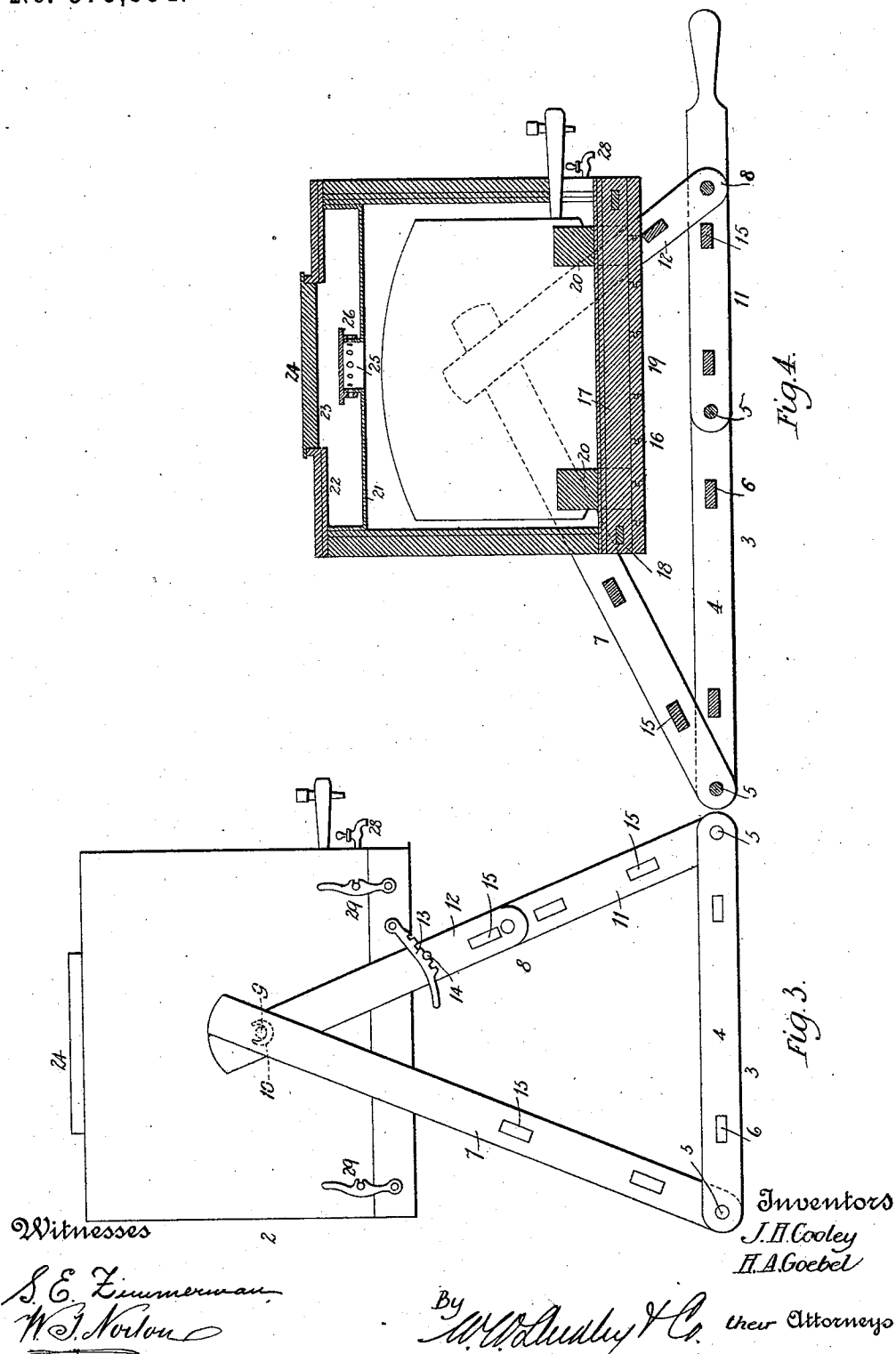
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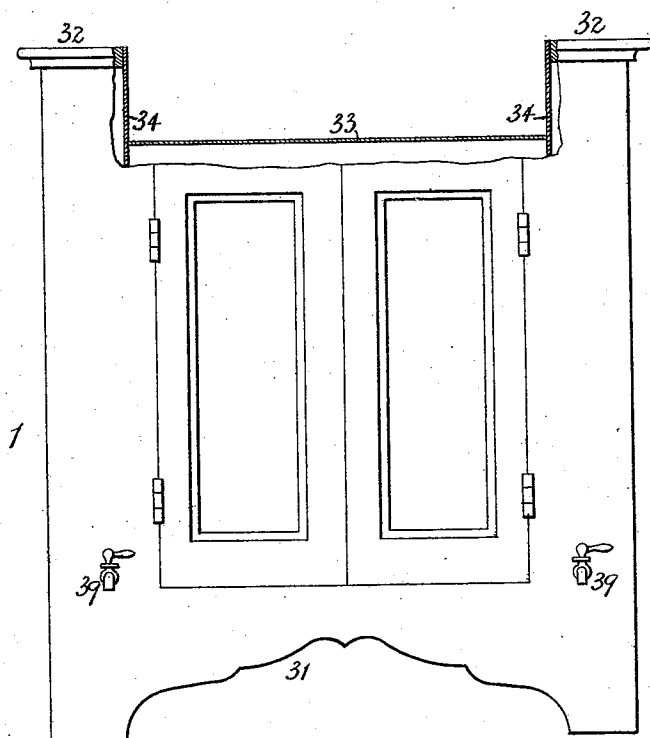
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Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH H. COOLEY AND HERMAN A. GOEBEL, OF SAN ANTONIO, TEXAS.

REFRIGERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 575,594, dated January 19, 1897.

Application filed April 10, 1896. Serial No. 586,977. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH H. COOLEY and HERMAN A. GOEBEL, citizens of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Refrigerating Apparatus; and we 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 figures of reference marked thereon, which form a part of this specification.

This invention is directed to refrigerating apparatus, and contemplates the production of improved devices for cooling liquids and solids and maintaining the same at the proper low temperature with the minimum expense for refrigerants; also, for affording ready access to the refrigerated substances.

In the following description the details of construction, arrangement, and operation of our improved apparatus are fully set forth, and in connection with such description attention is directed to the accompanying drawings, in which—

Figure 1 is a front elevation of the apparatus. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a side elevation of the upper portion of the apparatus detached, showing in connection therewith our improved supporting device. Fig. 4 is a vertical longitudinal sectional view of the construction shown in Fig. 3, the parts being in a different position. Fig. 5 is a front elevation of the lower portion of the apparatus, partly in section, to show the recess in its top for the reception of the upper portion.

Referring to the said drawings it will be seen that the refrigerating apparatus is in two separable parts, the lower device 1 serving as a refrigerating-holder for solids and bottled liquids and also as a support for the upper device 2, which latter is designed to hold and refrigerate a keg of beer or other liquid. The said upper portion 2 in lieu of being supported by the lower portion may be disconnected therefrom and mounted in a

separate supporting-frame 3, the construction of which we will first describe. This frame comprises a base made up of two side pieces 4 4, connected at the ends by rods 5 5 and between said rods by braces 6 6. From each end of the base extend standards arranged in pairs, each pair being pivotally connected at their lower ends to the rods 5, while the upper ends of one pair 7 7 overlap and are pivotally connected to the upper ends of the other pair 8 8, whereby are formed frames of triangular form, in the upper ends of which is supported the device 2, trunnions 9 9 on the latter engaging recessed lugs 10 10 in the frames, as shown. The standards 8 8 are each formed in two parts or sections, the lower part 11 being pivoted at its lower end to the base through the rod 5, and near its upper end a pivotal joint is made with the lower end of the upper part 12. The upper end of the part 11 is of handle shape, which affords a ready hold for manipulating the support which is effected by moving the part 11 outward and downward, or on the rod 5, as a center when the support is to be collapsed and the device lowered, as in Fig. 4, or by moving said part upward when the device is to be elevated, as in Fig. 3.

The device 2 carries a hook or hooks 13, which have a plurality of notches, any one of which is caused to engage a pin 14 on one or both of the upper parts 12, whereby the device and its contained keg may be caused to assume a horizontal or an inclined position at will.

15 15 are braces which connect the pairs of standards to give strength to the structure.

Referring now to the refrigerating device 2, 16 denotes the base, which is built up of side pieces 17 17 and end pieces 18 18, and 19 is the bottom, which is composed, preferably, of a number of strips mortised together and secured to the side and end pieces, as shown. 20 20 are skids for supporting the keg, the same being firmly bolted to the side pieces 17. Above the base the device is preferably of arch form, the curve of the arch being concentric with the periphery of the keg. Two casings are provided, the inner one 21 being

preferably metallic, as zinc, and the outer casing 22 is preferably composed of layers of different material, as zinc, asbestos, and wood or their equivalents. The outer casing being
 5 subjected to the outer atmosphere and its varying conditions is rendered non-conducting to heat and cold by the employment of the asbestos and wood layers, and, if desired or found necessary, other layers of the same or
 10 different materials may be added. The outer casing is preferably equidistant at all points from the inner casing, and the chamber provided between the casings is filled with broken ice or ice and salt, or other refrigerant, the
 15 same being introduced through an opening 23 in the outer casing, which is controlled by a door or other closure 24. At 25 in the inner casing is a vent which allows the warm air around the keg to pass into the ice-chamber,
 20 and from thence, if desired, through the opening 23. Around the vent 25 is a circular perforated flange, and 26 is a closure also provided with a perforated flange, which fits over the flange of the vent, the closure being ca-
 25 pable of rotation to bring the perforations in alinement to open a passage from the vent or to partially or entirely close the passage in order to control the exit of air.

The ice-chamber is of inverted-U or other
 30 form and near the lower end of each leg is a perforated plate 27, which serves as a support for the ice or other refrigerant, but by reason of its perforations allows of the water from the ice passing below it to the bottom of the
 35 leg, whereby the ice is kept comparatively dry and prevented from rapid melting. The water in the bottom of the legs is drawn off through cocks 28 28 in the end of the outer casing. In one end of the casing is a slot,
 40 which allows of the keg-faucet projecting without the device. Hooks 29 29 (see Fig. 3) are pivoted to the base and engage pins on the outer casing when the keg is in place.

When the device is to be used, its upper
 45 portion is removed and the keg is placed in position upon the base, when said upper portion, the chamber of which having been filled with ice or ice and salt, is lowered over and secured to the base by the hooks 29. The
 50 support is now collapsed and the device is placed thereon, its trunnions engaging the recessed lugs, as before explained, and the support is then manipulated in the manner previously described to elevate the device and
 55 the contained keg and the apparatus is ready for use.

Referring now to the refrigerating device 1, which, as shown and previously stated, forms the lower portion of the apparatus shown in
 60 Figs. 1 and 2, 30 denotes its outer casing, which is preferably generally rectangular in shape and built up of layers of different materials, as, for instance, zinc, asbestos, and wood, or their equivalents, said casing being supported by a
 65 base 31 and having a top 32. Said top is depressed at 33 to form a recess, or in lieu of the

recess an opening may be made, such recess or opening receiving in practice the base of the device 2, as shown more clearly in Fig. 2. At 34 is an inner metallic casing which at its
 70 top forms the wall of the recess or opening and which separates the interior of the device into a chamber 35 for containing the articles to be refrigerated, and a surrounding cham-
 75 ber 36 for containing ice, or ice and salt, the refrigerant being inserted through openings in the top 32, having closures 37. Above the bottom of the ice-chamber is a perforated plate 38, the function of which is to drain the ice of water, after the manner of the plate 27,
 80 previously described. Cocks 39 leading from the bottom of the chamber serve to carry off, when desired, the water accumulating from the ice.

The device 1 just described performs not
 85 only the function of a refrigerator for solid foods and bottled liquids, but also serves as a support for the keg-holding device 2, in lieu of the supporting-frame shown in Figs. 3 and 4. So far as acting as a refrigerator both of
 90 the devices 1 and 2 are similar, as in both the substances to be cooled are surrounded by a refrigerating agent and in both means are employed to drain the ice to prevent rapid melting.

From the foregoing it will be evident that
 we have produced by our invention an entirely efficient refrigerating apparatus, which may be produced at comparatively low cost, owing to the few and easily constructed and
 100 assembled parts. The supporting-frame combines simplicity of structure with strength and ease of operation, and reduces the labor attendant upon the setting of a keg. The refrigerating devices are very effective in operation, and by their use the quantity of refrigerant employed is reduced to the minimum. The devices are simple, durable, comparatively light of weight, small and compact, cleanly, and are susceptible of being made
 110 very attractive in appearance.

We claim as our invention—

1. A cooling apparatus comprising a lower casing composed of outer walls built up of superimposed layers and inner walls provid-
 115 ing a chamber for the substances to be cooled, and a surrounding ice-chamber, the latter being provided with openings for the cooling mixture, and with supporting perforated plates above the bottom, a rectangular recess
 120 in the upper portion of said lower casing formed of the inner walls, and a false top below the top of said casing; and an upper casing removably fitting said recess and supported on said false top and having inner and
 125 outer walls providing an inner chamber for the reception of a beer-keg and a surrounding ice-chamber having a supply-opening, perforated plates near the bottom of said ice-chamber, and outlets from below said plates.

2. In combination with a refrigerating device for liquids having trunnions on its sides,

a support comprising a base and two triangular frames having at their upper ends recesses for the trunnions, one side of each frame being in two pieces jointed together whereby the
5 support may be collapsed, and a hook carried by the device and having adjustable connection with the support, all substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH H. COOLEY.
HERMAN A. GOEBEL.

Witnesses:

W. W. DUKE,
JAMES P. NEWCOMB.