

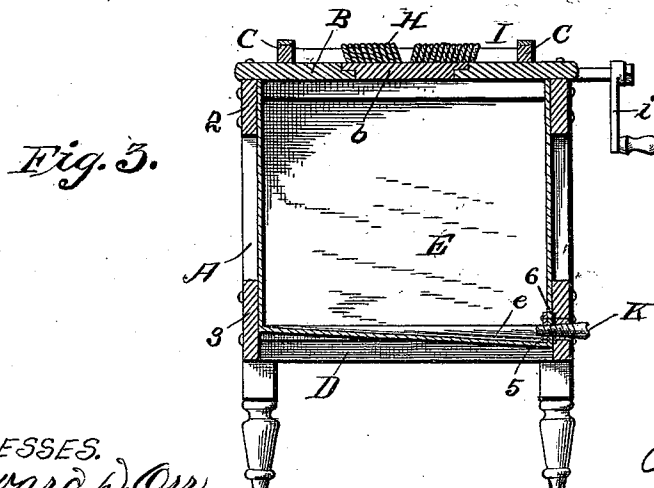
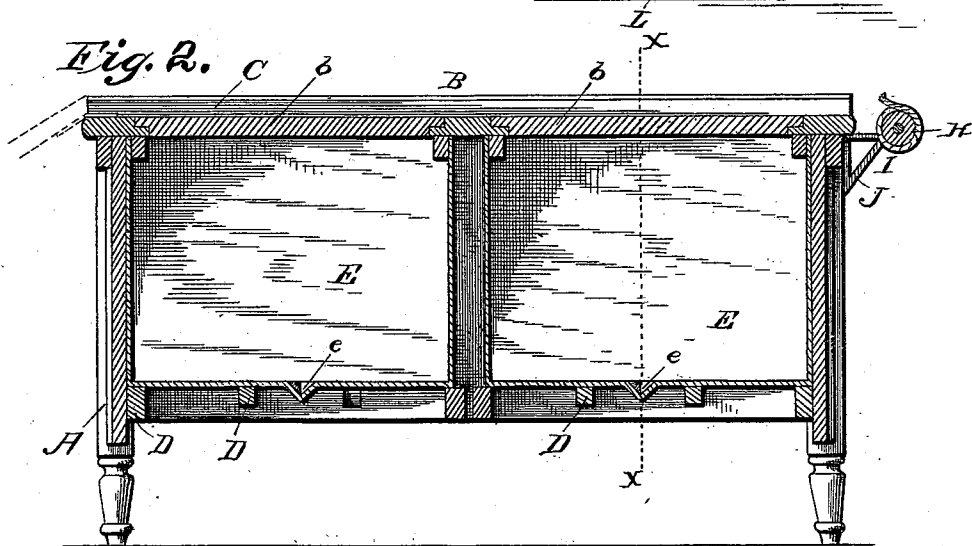
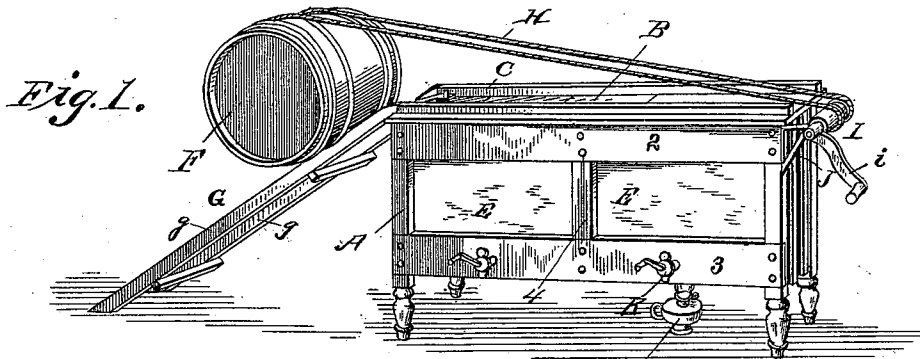
(No Model.)

2 Sheets—Sheet 1.

P. H. BERG.
FLUID STORAGE TANK.

No. 555,034.

Patented Feb. 18, 1896.



WITNESSES.
Howard W. Orr.
E. V. Barnett.

INVENTOR.
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Van Buren Hillyard
HIS ATTY.

(No Model.)

2 Sheets—Sheet 2.

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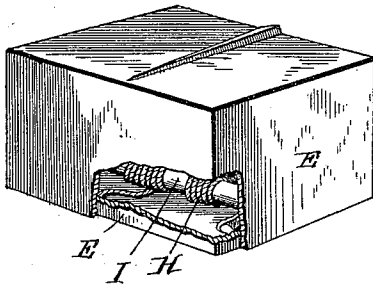


Fig. 4.

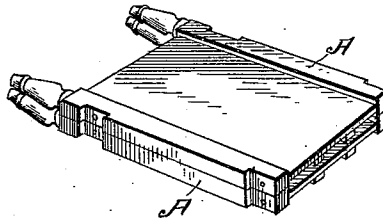


Fig. 4^a.

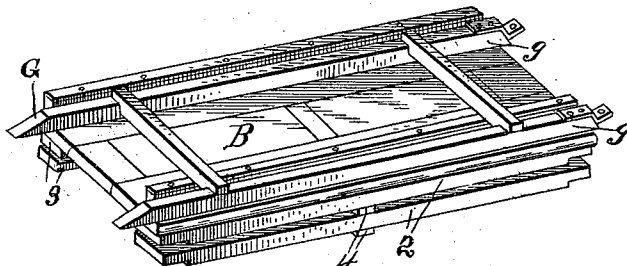


Fig. 4^b.

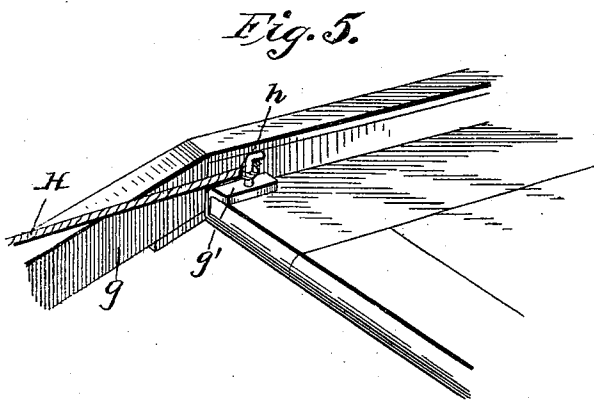
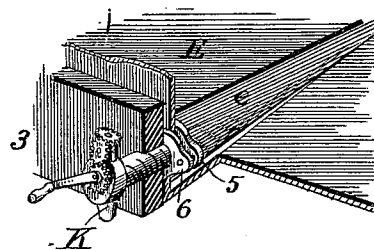


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

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LEONARD THIELMAN, PETER R. THIELMAN, DONALD QUNILIOAN,
THEODORE C. WING, AND HENRY KELLER.

FLUID-STORAGE TANK.

SPECIFICATION forming part of Letters Patent No. 555,034, dated February 18, 1896.

Application filed February 4, 1895. Renewed January 25, 1896. Serial No. 576,893. (No model.)

To all whom it may concern:

Be it known that I, PETER H. BERG, a citizen of the United States, residing at Pierz, in the county of Morrison and State of Minnesota, have invented certain new and useful Improvements in Fluid-Storage Tanks, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The purpose of the invention is the provision of a tank especially designed for the storage of sirup, molasses, oil, varnish, and fluids of all kinds which it is required to measure out in small quantities, and which it is desirable to protect from dirt, insects, and all foreign substances. One great objection to the use of tanks of this character heretofore has been the difficulty experienced in getting the original bulky and heavy packages, such as barrels and casks, into position for emptying their contents into the tank. The present device is constructed with special reference to meet this requirement and enable the heaviest barrel to be easily and conveniently placed in position for discharging all its fluid contents into the tank, being equipped with a skid and elevating devices, the latter consisting of a windlass journaled at one end of the frame or structure, and ropes attached at one end to the said windlass and having their other ends provided with hooks or other attaching devices, by means of which they can be secured to the frame after being passed around the barrel to be elevated and placed over the tank. The skid is an essential part of the structure, and is removably attached thereto so as to be detached and laid aside when not required for immediate use.

40 Another object of the invention is the provision of means for heating sirup and similar fluids which have a tendency to thicken in cold weather and run vexatiously slow when required to be drawn, thereby obviating this difficulty and maintaining the sirup or other heavy fluid at a proper temperature to prevent its thickening.

50 The invention consists, essentially, of a framework constructed to be shipped in a knockdown condition and which can be readily set up, the several parts being secured to-

gether by screws and similar fastenings, and metal reservoirs adapted to be placed within the framework and supported a proper distance from the floor to admit of a lamp or other heating device being placed beneath the reservoirs in cold weather to warm the fluid contained therein. Inasmuch as the tank will be provided in various sizes to meet the demands of the trade, the metal reservoirs will be graduated so as to nest, thereby economizing space in storing and shipping, as the different sizes will be stored or shipped nested together.

The invention also consists of the novel features and the peculiar construction and the combination of the parts, which hereinafter will be more fully described and claimed, and which are shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the application of the invention. Fig. 2 is a longitudinal section of the tank on a larger scale, the skid being detached. Fig. 3 is a cross-section on the line X X of Fig. 2. Fig. 4 is a detail view of the metal reservoirs nested, a portion being broken away to show the parts inclosed thereby. Fig. 4^a is a detail view of the end pieces placed together. Fig. 4^b is a detail view of the side pieces, the top, and the skid placed together. Fig. 5 is a detail view showing the manner of securing the skid to the framework, and the end of the hoisting-rope. Fig. 6 is a detail view showing the manner of securing a close joint between the reservoir, the framework, and the spigot.

85 The framework comprises similar end and side sections attached at their respective ends to corner-posts A in such a manner as to form a strong and durable structure, the end sections being preferably closed and the side sections open, whereby a light device is obtained. The side sections comprise upper and lower rails, 2 and 3, respectively, and a connecting-bar 4, the rails being attached at their ends to the corner-posts A by screws or similar fastenings, whereby the framework can be taken apart and stored or shipped in a knockdown condition. The top B is provided with openings over the reservoirs, which are closed by covers b, the latter fitting snugly

at their edges and coming flush with the upper side of the said top. The bottom of the framework is open and provided with cross-bars D, upon which the reservoirs E are supported when placed in position.

The rails C, upon which the package or barrel F rolls and is supported when discharging its contents into the reservoir, are placed parallel with the edges of the top B and are suitably secured to the said top. The skid G has its side bars, *g*, arranged to form a continuation of the rail C, the upper ends being constructed to form a close joint with the ends of the said rails and provided with irons *g'*, which form means of attachment with the said top B. These irons *g'* are metal straps which are secured to the side bars, *g*, and project a short distance beyond the ends of the said bars and are apertured. These apertured ends rest upon the edge portion of the top and are held in place by pins passing through said apertures and entering openings in the top B. These pins are preferably the hooks *h* at the ends of the ropes II and serve the double purpose of securing the ends of the ropes and preventing accidental displacement of the skid when elevating a barrel thereon to the top of the tank. Any suitable form of pin may be provided, and in some instances their use may be dispensed with altogether. However, it is preferred to use some form of pin to secure the skid from accidental displacement.

The windlass I is journaled at its ends in brackets J secured to an end section, the one opposite the end to which it is designed to apply the skid, and is rotated in its bearings by means of a crank *i* provided and fitted on its end. The hoisting-ropes II are made fast at one end to the windlass and the other ends have hooks *h* or equivalent devices, by means of which they are secured to a suitable part of the framework when it is required to elevate a barrel.

The reservoirs E are metal, being galvanized iron, and are rectangular in construction. The size will depend upon the capacity of the tank, it always being understood that the framework and the size of the reservoir will correspond for a tank of required size. The reservoirs are supported within the framework upon cross-bars D and are placed in position prior to adjusting the top B. Each reservoir has a trough *e* in its bottom which deepens from its inner to the delivery end to drain thoroughly the contents of the tank. The usual faucet K is provided and attached to the tank after the reservoir is in place. The character of the faucet will depend upon the nature of the fluid to be stored in the tank, and the said faucet will be placed at the lower end of the trough *e*.

The number of reservoirs to a tank will vary according to the number of different kinds of fluids to be stored in a single organized structure, each reservoir being separate and distinct from the other.

To fill a reservoir the cover leading thereto is removed, the skid being placed in position and secured from accidental displacement, and the hoisting-ropes II being properly adjusted to the barrel F, the windlass being operated the barrel is elevated upon the skid and finally rolls upon the rails C, the bung being knocked in and the barrel rolled over to permit its contents to drain into the reservoir, after which the barrel is removed and the cover replaced. In cold weather a lamp L or other heating device is provided and placed beneath the bottom of the elevated reservoir, so as to keep the contents of the tank at the proper temperature to prevent the congealing of the fluid stored therein.

When storing or packing the parts for transportation, the end pieces are placed together, as shown in Fig. 4^a, and the side, top, and skid are placed together in a second bundle, as indicated in Fig. 4^b, and the reservoirs are inverted and placed together so as to form a case to receive the small part, as shown most clearly in Fig. 4.

In order to secure a close joint between the metal reservoirs, the framework, and the spigot K a packing 6 is interposed between the reservoir and the lower rail, 3, of the side piece opposite the hole through which the stem of the spigot passes. A metal plate or casting 5 is arranged on the inner side of the reservoir in register with the packing, and the reservoir is clamped between the packing and the plate by bolts or other fastenings passing through the parts 5 and 6 and the reservoir and the rail 3. This construction is most clearly indicated in Fig. 6 of the drawings.

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

1. A fluid-storage tank comprising similar side and end sections, and corner-posts which are secured together by removable fastenings, cross-bars connecting the lower rails of the side pieces, a series of separate and independent reservoirs mounted upon the cross-bars, each having a trough at its bottom deepening from its inner to its delivery end, faucets located at the delivery end of the said trough, a top having openings opposite the reservoirs and closed by removable covers, rails mounted upon the top and extending lengthwise thereof one on each side of the said openings and a skid to be applied to one end of the framework and forming a continuation of the said rail, substantially as set forth for the purpose described.

2. The herein shown and described fluid-storage tank, comprising a framework, having similar side and end sections and corner-posts which are secured together by removable fastenings, cross-bars connecting the lower rails of the side sections, metal reservoirs supported upon the cross-bars and having troughs at their bottoms which gradually deepen from their inner to their delivery ends, faucets applied to the reservoirs and communicating

with the delivery ends of the trough, metal
plates secured upon the opposite sides of the
troughs and receiving the inner end of the
faucets, a top having openings opposite the
5 reservoirs closed by removable coverings, lon-
gitudinal rails mounted upon the said top and
extending upon opposite sides of the open-
ings therein, a skid to be applied to one end
of the framework and forming a continuation
10 of the said rails and having irons to rest upon
the top and which are apertured, hoisting-
ropes having pins at one end to pass through
the openings in the said iron to secure the
skid to the framework and fastened to one end

of the said ropes, and a windlass at the oppo- 15
site end of the framework to the skid and hav-
ing the opposite ends of the hoisting-ropes
secured thereto, whereby the barrel or cask
can be rolled upon the skid and framework to
any reservoir, substantially as set forth. 20

In witness whereof I have hereunto signed
my name in the presence of two subscribing
witnesses..

PETER H. BERG.

Witnesses:

JOHN NEUMAN,
PATRE L. NEUMAN.