

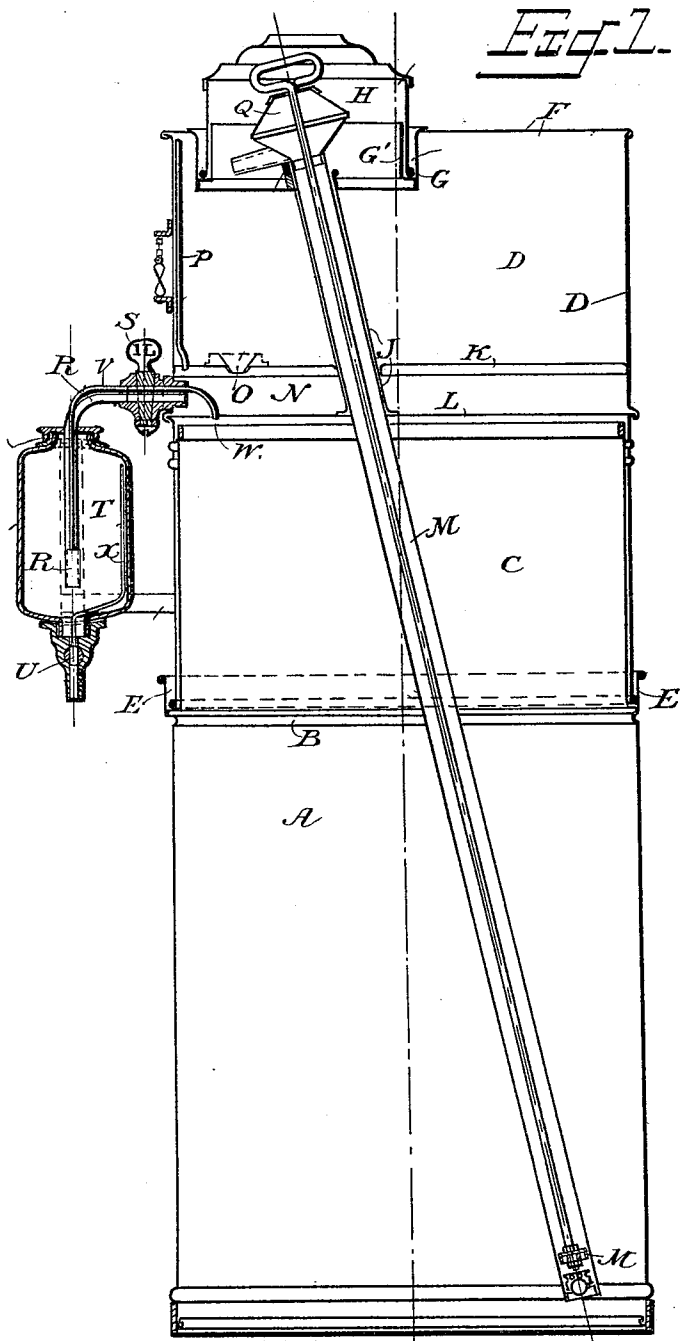
(No Model.)

2 Sheets—Sheet 1.

G. M. NYSTRÖM & A. C. LEMBKE.
OIL TANK.

No. 544,416.

Patented Aug. 13, 1895.



WITNESSES:
Charles Schaefer.
W. H. Rowe

INVENTORS
G. M. Nyström,
and A. C. Lembke.
*By his Atty. *Paul H. Wood**

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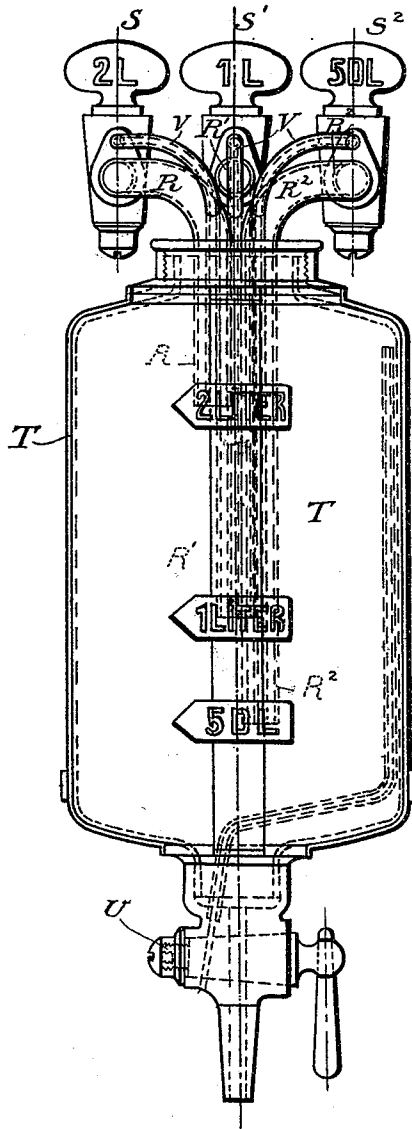
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Fig. 2.



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Charles Schaefer.
W. H. Rowe

INVENTORS-
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UNITED STATES PATENT OFFICE.

GUSTAF MAGNUS NYSTRÖM AND ASSAR CHRISTOPHER LEMBKE, OF MALMO, SWEDEN.

OIL-TANK.

SPECIFICATION forming part of Letters Patent No. 544,416, dated August 13, 1895.

Application filed December 22, 1894. Serial No. 532,700. (No model.)

To all whom it may concern:

Be it known that we, GUSTAF MAGNUS NYSTRÖM and ASSAR CHRISTOPHER LEMBKE, subjects of the King of Sweden and Norway, and residents of Malmo, in the Kingdom of Sweden, have invented certain new and useful Improvements in Oil-Tanks, of which the following is a specification.

Our invention relates to an improvement in oil reservoirs and pumps; and it consists in a lower reservoir, an upper one placed upon its top and provided with a chamber from which the oil is drawn, combined with a pipe which extends from near the top of the upper reservoir down through the chamber, and an oil-pump which is passed down through the pipe.

It also consists in the arrangement and combination of devices, which will be more fully described hereinafter, whereby oil and other liquids can be drawn off in any desired quantities.

The object of our invention is to provide a reservoir in which oil and other similar liquids can be stored in bulk and then drawn off in small quantities to be retailed to purchasers.

In the accompanying drawings, Figure 1 is a vertical section of an apparatus which embodies our invention. Fig. 2 is an enlarged front view of the measuring-vessel into which the oil or other liquid is run for the purpose of being measured.

A represents the lower reservoir, of any desired shape or size, and which is slightly contracted at B, so that its upper part C is of less diameter. These two parts A C form but a single reservoir, and upon the top of which is placed the upper reservoir D. As shown in Fig. 1, the lower portion of the reservoir D fits over the contracted portion C of the lower one A, the lower edge of the one D fitting in the flange E formed around the lower portion A, and which flange is to be filled with water, glycerine, or other suitable fluid, so as to form a tight joint, and thus prevent the odor of the oil from escaping into the room at this point.

The upper reservoir is provided with a cover F, and depending from this cover are the annular rings G, open at their tops, and which form a support for the cover H, which covers

over the top portion of the pump. The space between the two rings G forms a water-joint for the cover to prevent the odor of the oil from escaping at this point.

Extending downward at a suitable inclination from the bottom of the chamber I formed by the two rings G is a pipe J, which extends down through the two partitions K L near the center of the upper reservoir D, and through which pipe J the pump M passes down to the bottom of the lower reservoir A, as shown. The pipe J forms a tight joint with both of the partitions K L, so that no air can have access to the chamber N between the two partitions K L by means of this pipe.

The two partitions K L form a chamber N, into which the oil can only enter through the strainer O placed in the partition K, and which serves to free the oil from all impurities. The oil is pumped into the upper reservoir above the the partition K to any desired height, and as long as the oil covers the strainer O the chamber N is kept full. Leading from this chamber N through the partition K is the air-pipe P, which extends upward to any desired distance.

The pump M, either of the construction here shown or any other that may be preferred, is supported by means of a rubber or metallic spring Q on the upper end of the pipe J, and by means of which the oil is pumped from the lower up into the upper reservoir. This pump, being loosely placed in position, can be entirely removed from the apparatus and placed in the barrel of oil, so as to first transfer the oil, by means of a suitable extension attached to the pump, through the pipe J into the lower reservoir. The pump is then returned to position and used to pump the oil from the lower reservoir into the upper one. The cover H must be removed whenever the pump is to be used and then returned to position afterward.

Extending from the chamber N are three pipes R of uneven lengths, each one of which is provided with a stop-cock S, and all three of which extend down to a greater or less distance into the glass measuring-vessel T, which is provided at its lower end with a stop-cock U of its own for drawing off its contents. The pipes R are made of different lengths, accord-

ing to the quantity of fluid that is to be drawn off from the chamber into the measuring-vessel. When the fluid reaches the bottom of one of the pipes the operator knows that a certain quantity has been drawn off, and when it reaches the second pipe that another certain regulated quantity is in the vessel T. There may be any desired number of these pipes R, and the length of each one may be made to indicate a certain quantity, or a graduated scale may be applied to the vessel in the usual manner.

In order to keep the reservoir A supplied with air each one of the pipes R is provided with a small air-pipe V, which extends down through the pipe R inside of the vessel T, and which rise through the top of the pipe after getting above the top of the vessel, so as to connect with a separate air-passage of its own through the cock S. A pipe W connects each one of the air-passages through each cock S with the top of the reservoir A, so that when the air is displaced from the vessel T the air will pass through the air-pipe V that has been opened by its stop-cock into the top of the reservoir, and thus supply a quantity of air that is proportioned to the quantity of fluid that has been drawn off from the upper reservoir.

The air-pipes V serve to automatically check the filling of the vessel T, for when the liquid rises to the end of the pipe through which the supply is being furnished to the vessel T the sealing of the lower end of the air-pipe serves to check the ingress of more fluid. In the vessel T is also placed an air-pipe, which extends up to the top of the vessel and is connected with an air-passage through the cock

U at its lower end, so that when the cock is opened to draw off the contents of the vessel T air will freely flow into the top of the vessel, and thus prevent a vacuum from being formed. As here shown, three stop-cocks S are used, and each one has marked upon its plug the quantity which will be drawn into the vessel T by the time the fluid reaches the lower end of its pipe.

Having thus described our invention, we claim—

1. In an apparatus for measuring fluids, the lower reservoir, the upper one fitting down over the top of the lower one, and provided with the two partitions, so as to form a chamber to receive the fluid after it has been strained, and the pipe J, combined with the pump which passes down through the two reservoirs, substantially as shown.

2. A reservoir, provided with a chamber, suitable stop cocks connected to the chamber, pipes R, extending from the stop cocks, a measuring vessel into which the lower ends of the pipes extend, and an air pipe for each stop cock, combined with the pipes W, which form an extension of the air pipes, and pass down through the bottom of the chamber; the lower reservoir, and a pump for pumping the fluid from the lower reservoir into the upper one, substantially as described.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

GUSTAF MAGNUS NYSTRÖM.
ASSAR CHRISTOPHER LEMBKE.

Witnesses:

H. J. MURMAN,
C. F. G. TENGBERG.