E. L. SIEMANTEL.

OIL CONTAINER.

APPLICATION FILED DEC. 23, 1918.

1,302,865. Patented May 6, 1919.

Fig. 1.

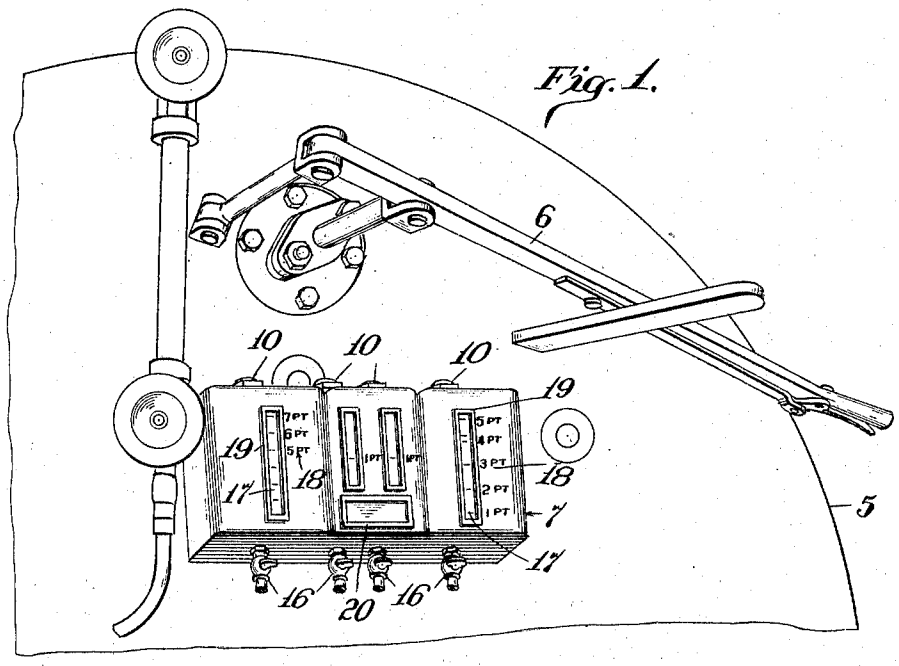


Fig. 2.

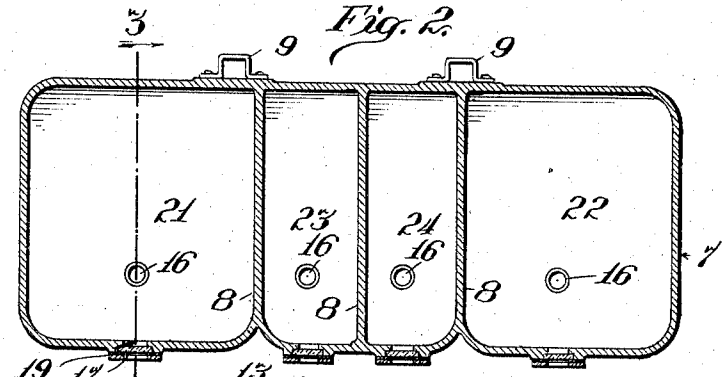
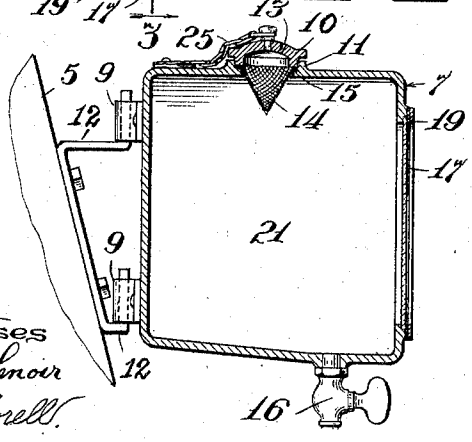


Fig. 3



Witnesses
Milton Senour
F. W. Howell

Inventor
Edward L. Siemantel,
By Heidman & Street,
Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD L. SIEMANTEL, OF TOPEKA, KANSAS.

OIL-CONTAINER.

1,302,865. Specification of Letters Patent. Patented May 6, 1919.

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To all whom it may concern:

Be it known that I, EDWARD L. SIEMANTEL, a citizen of the United States, and a resident of Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Oil-Containers, of which the following is a description, reference being had to the accompanying drawing, which forms a part of my specification.

My invention relates to a container adapted to hold given quantities of various grades of oil intended for different uses; the invention contemplating a construction more especially adapted for use on locomotives and the like.

The object of my invention is to provide a construction more especially adapted to overcome the serious difficulties at present encountered in railroad practice, through loss and misuse frequently encountered, as well as the considerable expense incurred by leaky cans, the loss of tops and spouts; as well as the improper or excessive use of oil supplies by the various engine crews; the invention contemplating a construction adapted to hold predetermined quantities of various grades of oil; the container being so constructed that the supply of oils may be readily and quickly ascertained from the container exterior.

With my invention a construction is provided whereby the various locomotives may be provided with predetermined supplies of oils commensurate with their respective requirements for the assigned "runs" of given distances.

The objects of the invention and its advantages will be more fully comprehended from the following detailed description of the accompanying drawing, wherein:—

Figure 1 illustrates, in perspective, the application of my improved container to the boiler-head of a locomotive, only a portion of the boiler-head and operating mechanisms being shown.

Fig. 2 is a horizontal sectional view of my improved container looking downwardly.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2 looking in the direction of the arrows.

While my invention is equally applicable for use in connection with any mechanically driven vehicle, as well as with stationary engines, I have chosen to illustrate its application to the boiler-head of a locomotive in order to more fully present its advantages and uses.

In the exemplification, 5 denotes a portion of the boiler-head shown provided with a well known type of throttle lever at 6 and other steam connections, which have been illustrated for the purpose of disclosing the feasibility of applying my invention to a boiler-head without in any way interfering with the operating mechanisms of the locomotive.

In the adaptation of the invention to a locomotive boiler-head, the latter is preferably provided with a number of brackets as at 12 securely bolted or otherwise secured to the boiler-head, as shown in Fig. 3, whereby means for suspending the container from the boiler-head are provided. As the boiler-head in a good many locomotive constructions are arranged at a slope or angle, as shown in Fig. 3, the upper set of brackets 12 are preferably made of greater horizontal length or dimensions than the lower brackets in order that the container may be suspended in substantially vertical position.

The container 7 is made of any suitable metal, either cast or sheet metal, and is provided with any suitable number of compartments by means of transversely disposed fluid-tight partitions 8; the exemplification showing three partitions 8 whereby four compartments are provided thus adapting the container for locomotive use as hereinafter set forth. The container is preferably rectangular in cross section, as shown in Figs. 1 and 2, with the side walls, top, bottom and partitions secured together or formed integral with one another so as to provide a fluid-tight receptacle. The rear side of the container is shown provided with a number of brackets or loops 9, arranged near the top and the bottom of the container, which are intended to receive the vertically disposed portions of the brackets 12, 12 for the purpose of suspending the container in place and yet out of physical contact with the boiler-head. The top of each compartment is provided with an inlet provided with suitable removable closure means as at 10; the inlets being preferably surrounded by the circumferential flanges 11 internally threaded to receive the externally threaded cap or closure member 10, see Fig. 3. Each closure member or cap 10 is provided with a minute aperture as at 13 for the admission of air in order to induce flow of the oil when

the take-off cocks are opened. The inlet openings of the various compartments are also provided with strainer members 14 of suitable material and mesh and preferably formed in the funnel shape shown in Fig. 3, with the upper end provided with a marginal laterally disposed flange, as at 15, adapted to rest upon the laterally disposed flange disposed about the inlet orifice, so as to be engaged by the screw-end of the closure member or cap 10. By providing each inlet with a strainer as at 14, the oils poured into the respective compartments of the container will be strained and extraneous matter prevented from passing into the containers. The bottom of the container is preferably sloped downwardly toward what may be termed the front side of the container, as shown in Fig. 3, in order that the oil will drain toward the front wall or side, at which point the bottom of each compartment is provided with an outlet in the nature of a suitable spigot or cock, as shown at 16 in Figs. 1 and 3.

The front wall of the container at points coincident with the vertical axis of each compartment is provided with suitable sight openings formed by means of glass panels or other transparent substance, as at 17, which may be provided with graduations or indicating means, as shown in Fig. 1, which markings register with and denote capacity levels of the values indicated at 18 in Fig. 1, where the valuations are suitably placed or imprinted on the front wall of the container lengthwise of the respective sight openings; the markings or graduations being in keeping with the size and capacity of the respective compartments. The glass panels have their marginal edges surrounded by flanges 19 and fluid-tight connections between the glass and metal are formed by means of any suitable substance, as for example hydraulically setting material or suitable gaskets.

The container, preferably on the front side thereof, is also provided with suitable card-holding flanges, as at 20 in Fig. 1, formed so as to permit a card to be slid edgewise between the flanges and the wall of the casing; the card being intended to disclose the quantity of various oils with which the container is to be charged, especially where my improved container is intended for use on locomotives.

In railroad practice, each locomotive is given an allotment of the different oils necessary for the trip or "run" to be made by the locomotive; for example, the locomotives, before entering on their respective "runs" or "trips", are provided with quantities of what are known as engine oil, valve oil, signal oil and head-light oil. Heretofore the locomotive has been provided with four separate cans of the different oils mentioned; these cans being placed in a suitable box on the front of the tank or tender. With such an arrangement, it is necessary to remove and replace the oil cans at the terminals and also necessary to provide space in a supply house for storing the cans. Furthermore, with such practice, in a number of instances the locomotives are provided with cans of larger capacity than is necessary to carry the amount of oil for a given trip. As a result of this practice, a considerable loss of oil is encountered; the loss of oil resulting from the frequent upsetting of such cans in the can holding box, thus often allowing the oil to spill and waste; while in other instances, by reason of the chilled condition of the oil resulting from the location of the can-holding box on the front of the tank or tender, the engine-crew often place the tallow pot, as it is called, on a scoop and hold it in the fire-box in order that the oil may be warmed and acquire sufficient fluidity. This practice very often results in the complete loss of both oil and tallow pot due to sudden jolting or swinging of the engine-cab while the locomotive is in action. Then again with this practice, considerable difficulty has been experienced in keeping the tops on such oil cans because of their improper replacement by the crew and because of the frequent improper treatments of the tops as a result of the hasty methods used to remove them.

The loss of can-tops results in the deterioration of the lubricating qualities of the oil because of the accumulation of dirt and grit in the cans, which dirt and grit is subsequently transmitted to the cylinders and cylinder-packing with the result that the latter eventually becomes unnecessarily worn and cut away.

It is quite important, especially during the cold season of the year, to keep the oil in a more or less warm state in order that it will flow freely. In forming my improved container with means whereby it may be suitably suspended on the boiler-head of the locomotive, as shown in Figs. 1 and 3, and yet at a slight distance removed from the boiler-head so as to permit circulation of air therebetween, the oils are kept at a suitable temperature, which will enable them to flow freely through the draw-off cocks or spigots when the latter are operated. During the warm seasons of the year, the container may be suspended, by means of similar brackets, at any suitable point on the tender or in the engine cab where it will not be subjected to the excessive heat of the fire-box or boiler-head.

The compartments of the container are of different sizes or capacity, as is clearly evident from Fig. 2, wherein the one compartment is adapted to contain a gallon of engine oil, as for example compartment 21; compartment 22 being adapted to hold say

three quarts of valve oil; and compartments 23 and 24 being each adapted to hold approximately one quart of signal oil and one quart of head-light oil, respectively.

As previously stated, each locomotive before starting on its "run" or trip is provided with an allotment of the different oils in quantities sufficient for the respective trips, thus eliminating the loss of oil heretofore encountered by reason of improper excessive use, negligence or otherwise. By reason of my invention, each locomotive may be provided with a container of capacity sufficient to meet the requirements of the trip contemplated by the locomotive, and this quantity is clearly visible and determinable by means of the sight openings or gages provided on the front or forward wall of the container.

In order that the supply man or individual whose duty it is to supply the locomotives with the requisite quantity of oil may know the quantity of the different oils to be supplied to the various locomotives, I provide the indicating card-holder at 20, which is previously supplied with a card provided with data as to oil requirements, stated in pints, or other given quantities commensurate with the graduations on the container, so that the requisite amount of oil will be supplied for each trip of the locomotive.

As a result of my improved construction, the condition of the oils is not only kept to the proper standard, but the waste and losses heretofore encountered will be entirely eliminated and a complete check or record of individual engineer's oil supplies thereby obtained; while at the same time the present frequent condition of the topless and spoutless cans entirely obviated, which in itself is a material item of expense in railroading.

In order that the closure members of the various compartments may not be misplaced and lost, I prefer to secure them to the container by means of suitable chains, as at 25, so secured to the container and to the caps or tops as to permit proper and free manipulation thereof.

My improved container may be made of sheet or cast metal; and instead of the oil being fed therefrom by gravity, the same may be placed under pressure and force feed employed, especially in instances where it is desired to feed the valve oil to the lubricator and thus save the time of the enginemen as well as the possible loss of oil; and at the same time it will be readily understood that my improved container may be used on stationary engines or any mechanically driven vehicle where the need for oil supplies exists.

I have shown and described what I believe to be the simplest and best adaptation of my invention, especially for use in connection with locomotives and the like, but it will be understood that alterations may be made in certain details of construction without departing from the spirit of my invention.

What I claim is:—

1. A container of the class described, comprising a receptacle having top, side and bottom walls and inner partitions formed so as to provide a plurality of fluid-tight compartments, each compartment being provided in its top with inlets having removable closure means while the bottom of each compartment is provided with a draw-off cock, one side wall of each compartment being provided with a vertically disposed sight opening having graduations correlated to the internal dimensions or capacities of said compartments, and means secured to the opposite side wall whereby the receptacle may be removably suspended in place.

2. A container of the class described, comprising a receptacle provided with a plurality of partitions, the partitions, top, side and bottom walls of the receptacle being secured together so as to provide fluid-tight compartments, the bottom of the receptacle being sloped downwardly toward one side thereof, the bottom of each compartment at the lower point thereof being provided with a draw-off cock, one side wall of each compartment being provided with an elongated graduated sight opening or gage whereby the quantity of oil in the respective compartments may be determined, the top of each compartment being each provided with an inlet having removable closure means, said inlets being each provided with an oil strainer, and means whereby the receptacle may be suspended.

3. A container of the class described, comprising a closed receptacle provided with a plurality of fluid-tight compartments of predetermined capacity, the bottom of the receptacle being made sloping toward one of the side walls and provided at the lowest point with a plurality of draw-off cocks communicating with the respective compartments, one outside wall of each compartment being provided with a graduated sight-opening whereby the quantity of fluid in each compartment may be ascertained, the top of said compartment being provided with a closable inlet having a funnel-shaped fluid-straining element depending therein, suspending brackets secured to the wall opposite to that provided with the sight openings, and a card-holding socket on one side of the receptacle.

4. A container of the class described, comprising a closed receptacle provided with partitions whereby the receptacle is divided into a plurality of fluid-tight compartments of predetermined capacity, an outside wall

of each compartment being provided with a graduated sight-opening whereby the quantity of fluid in each compartment may be ascertained, the bottom of each compartment being provided with a controllable outlet, while the top of each compartment is provided with a closable inlet having a liquid straining element depending into the compartment, and bracket-receiving loops secured to the receptacle whereby the receptacle may be suspended in upright position.

EDWARD L. SIEMANTEL.

Witnesses:
HARRY L. SHIPMAN,
DAN. C. DAVIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."