

(No Model.)

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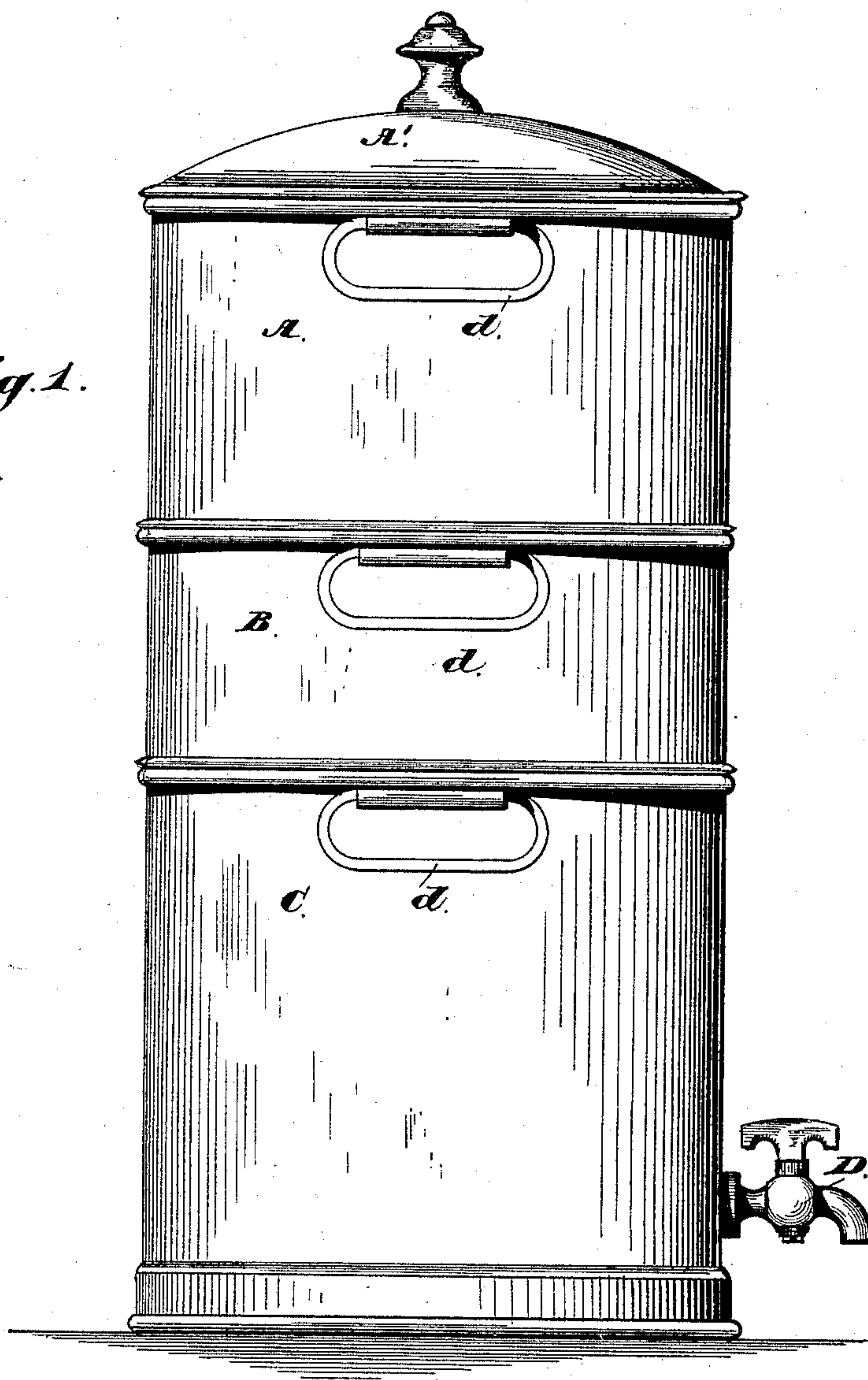
J. BAKER.

OIL FILTER.

No. 328,872.

Patented Oct. 20, 1885.

Fig. 1.



Witnesses:

Charles S. Hoyer.

Russell H. Scott.

Inventor:

John Baker.

By

Emmable

Atty.

(No Model.)

2 Sheets—Sheet 2.

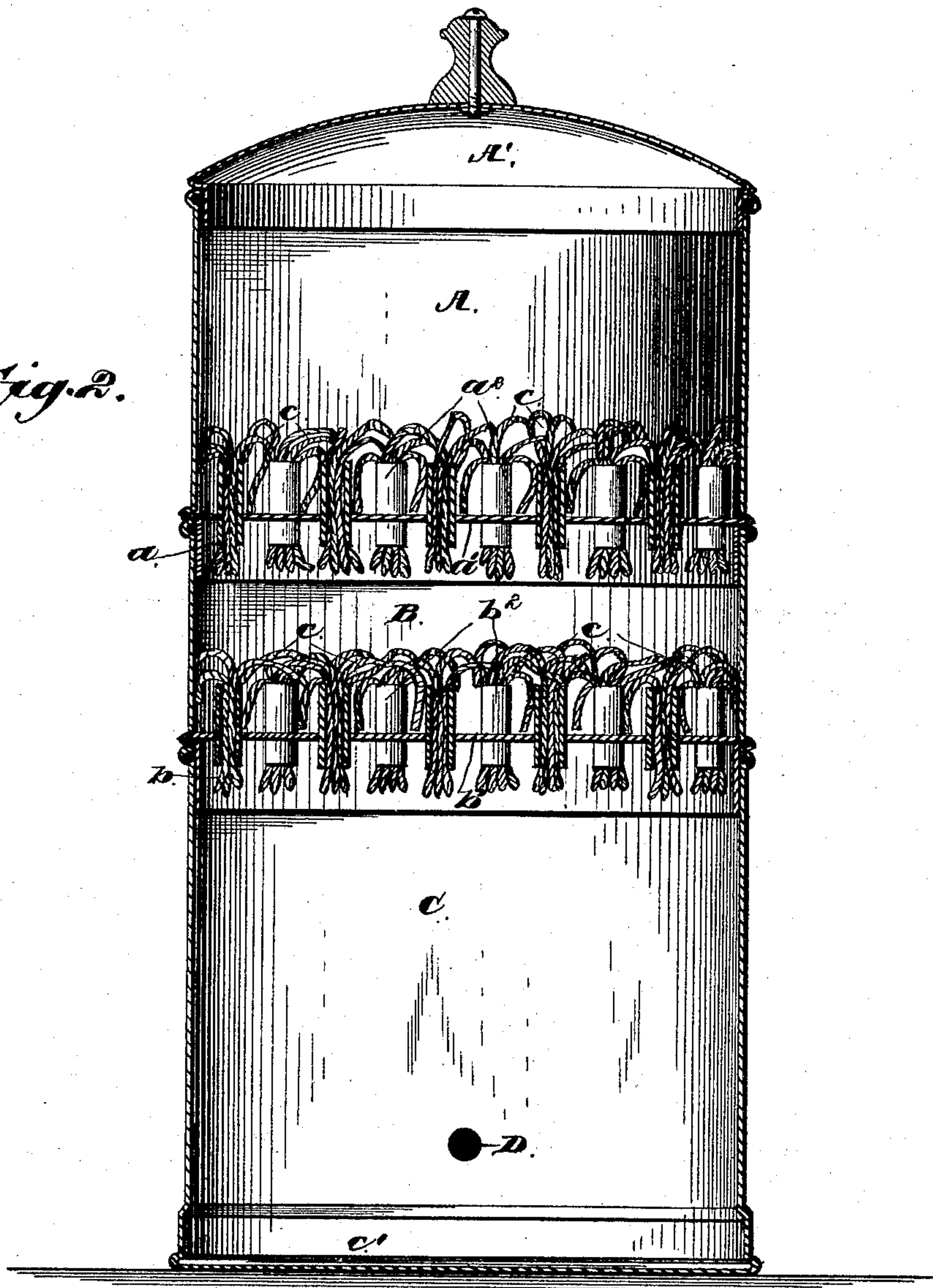
J. BAKER.

OIL FILTER.

No. 328,872.

Patented Oct. 20, 1885.

Fig. 2.



Witnesses:

Charles S. Byer.

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Inventor:

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UNITED STATES PATENT OFFICE.

JOHN BAKER, OF SALT LAKE CITY, UTAH TERRITORY.

OIL-FILTER.

SPECIFICATION forming part of Letters Patent No. 328,872, dated October 20, 1885.

Application filed February 5, 1885. Serial No. 155,161. (No model.)

To all whom it may concern:

Be it known that I, JOHN BAKER, a citizen of Great Britain, residing at Salt Lake City, in the county of Salt Lake and Territory of Utah, have invented certain new and useful Improvements in Oil-Filters, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to oil-filters; and it consists in the peculiar construction and arrangement of the several parts of the device, which will be more fully hereinafter described, and definitely pointed out in the claims.

The object of my invention is to provide a device for the filtration and consequent purification of oils which have been used for lubricants or other purposes, whereby they are rendered free from grit and dirt and adapted to be again used, the operation being repeated upon the same oil as often as it is necessary to cleanse it, thus saving a great expense in the use of oil which has heretofore been wasted by being thrown away or destroyed. I attain this object by the device illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a side elevation of my improved oil-filter. Fig. 2 is a vertical longitudinal section of the same.

This device consists, essentially, of the compartments or chambers A, B, and C, made of tin or other suitable light metal. The top compartment or first filter, A, is provided with a lid or cover, A', which fits into the top of said compartment by a suitable flange or rim. The bottom of this compartment has a flange or rim, *a*, which fits into and engages with the upper part of compartment B, which compartment in like manner has a similar flange, *b*, which engages with the upper part of the lowermost compartment or reservoir, C. The compartments A and B have bottoms *a'* and *b'*, situated a short distance above the lowest part of the flanges or rims *a* and *b*, and in these bottoms *a'* and *b'* are inserted vertically short tubes *a²* and *b²*. These vertical tubes *a²* and *b²* are so situated in the bottoms *a'* and *b'* that their uppermost portions extend farther above

the upper surface of said bottoms than their lower portions do below the lower surfaces thereof.

In the tubes *a²* and *b²* are placed lengths of woolen yarn or cords *c*, which extend a short distance below the extremities of said tubes, and at the upper parts of said tubes they are made to fall over, being of some length at this point, for the purpose of forming siphons. The long ends, massing together, cover all the space of the upper surface of the bottoms *a'* and *b'*, and by capillary attraction the oil is drawn up through the woolen yarn or cords and allowed to percolate through the tubes *a²* and *b²* into the adjacent compartment. The lower compartment, C, forms a reservoir or depositing-receptacle for the oil which passes through the filtering chambers or compartments A and B. This compartment C is provided with a bottom, *c'*, and also in its lower portion with a drain-cock, D, which is used to convey the purified oil from the receptacle C. On the sides of the compartments A, B, and C are attached lifting links or handles *d*, which aid in separating the compartments when it becomes necessary to clean them or to replenish the tubes *a²* and *b²* with the woolen yard or cords *c*.

The operation of my improved oil-filter is as follows: The lid A' of the upper compartment, A, is removed, and the oil which has previously been collected from drip-cups or like receptacles on machinery is put into the filter A.

By the arrangement of the woolen yarn or cords *c* heretofore described the oil is drawn up and passed down off of the lower ends of the yarn into the next compartment, B, from whence it is again passed through the filtering process and drips into the reservoir or receiving-receptacle C, and from this compartment the purified oil is drawn off by means of the drain-cock D, and is ready for use. After the oil has all drained out of the filter A it is removed by means of the handles *d*, and the dirt or grit is removed from its bottom and it is reset in position and again ready to receive a new charge of unclean oil to be purified.

The advantage gained by having the two fil-

tering-compartments A and B is that the oil in passing through the filter A is cleaned of dirt and grit, and by its second passage through filter B is purified and bleached to a color substantially the same as when first used.

When it is desired to cleanse the oil more perfectly, as many filtering-chambers may be used as are deemed necessary, being arranged in the same manner as those heretofore described.

It is obvious that this filter could be used for filtering other liquids as well as oils, and that many minor mechanical changes in construction could be substituted for those shown without in the least departing from the nature and principle of my invention.

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

1. A filter consisting of the combination of a filtering-vessel provided with a series of wick-tubes projecting into it upward and through its bottom, a series of wicks in said tubes, their upper ends hanging over the tops

of the tubes and their lower ends extending down within the tubes sufficiently far to cause the wicks to act as capillary siphons, and a receiving-vessel for the filtered liquid arranged beneath the bottom of the said vessel and receiving the drip from said wicks, substantially as and for the purposes set forth.

2. The combination, to form a capillary filter, of two or more filtering-vessels constructed to fit one above another, and each provided with wick-tubes inclosed within it extending upward from its bottom, with a closed receiving-vessel for the filtered liquid arranged beneath and fitting the lowermost filtering-vessel, substantially as set forth, whereby the liquid in the upper vessel is subjected to successive capillary filtrations and the wicks are concealed and protected.

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

JOHN BAKER.

Witnesses:

JNO. G. BECHTOL,
E. B. WILDER.