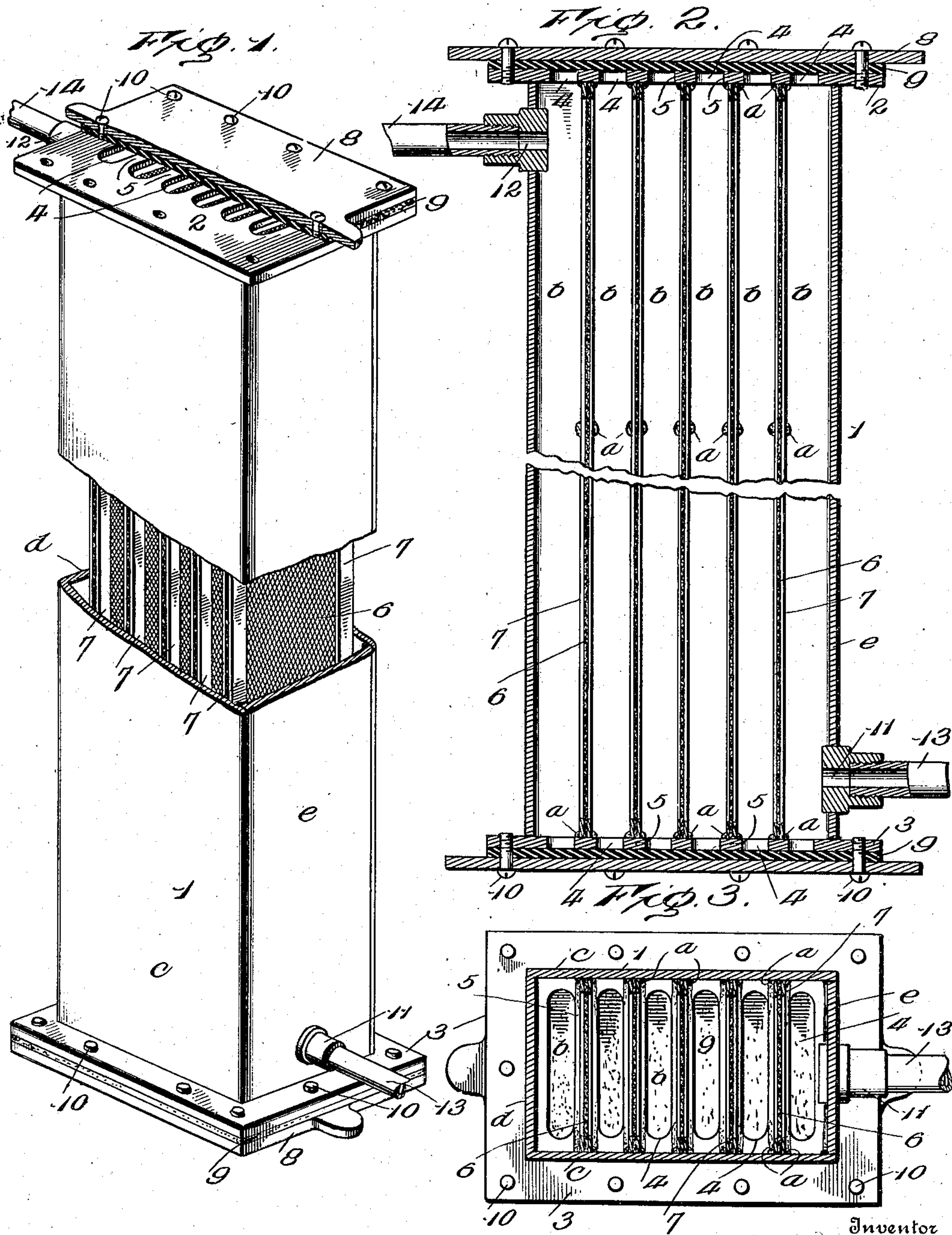


A. WINTON.  
OIL FILTER.

APPLICATION FILED JUNE 1, 1907.

923,747.

Patented June 1, 1909.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ALEXANDER WINTON, OF CLEVELAND, OHIO.

## OIL-FILTER.

No. 923,747.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed June 1, 1907. Serial No. 376,964.

*To all whom it may concern:*

Be it known that I, ALEXANDER WINTON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Oil-Filters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in oil filters, for use in the oiling systems of automobiles, whereby the used oil escaping from the lubricated parts of the engine may be collected and forced through the filter to the oiling mechanism, and used over and over again.

In carrying this invention into practice the escaping oil is collected in the crank case of the engine and by means of a pump forced through the filter and to the oil-distributing mechanism in a manner fully disclosed and described in my co-pending application, No. 368,700, April 17th, 1907.

In the accompanying drawings, Figure 1, is a perspective view of my improved filter, the casing being broken away to disclose the interior construction thereof. Fig. 2, is a central longitudinal sectional view of Fig. 1. Fig. 3, is a transverse sectional view of my improved filter.

My improved filter consists of a suitable vertical casing 1, which is preferably rectangular in cross-section, as here shown, and preferably vertically elongated, as also shown. In the use of this filter it is arranged in a vertical position, and connected to the automobile at a convenient and suitable position, and in any well known way to enable it to be attached and detached therefrom. The top 2 and bottom 3 of the casing are provided with a plurality of openings or passage-ways 4, preferably parallel, as here shown, which forms the intervening web-portions 5.

Placed within the casing 1 are a plurality of screens 6 which are preferably formed of metal and provided with, preferably, the edge frames 7 entirely surrounding the screens and placed on both sides thereof. The edges of these screens and frames abut against opposite sides of the casing 1, while the top and bottom edges engage the inner sides of the web portions 5, and are suitably secured thereto, as by solder or otherwise at suitable points, as indicated at *a*.

Suitable detachable covers 8 are provided

for the openings 3 and 4, and preferably placed between the covers and the top and bottom are suitable packings 9 for the purpose of making oil-tight joints. These covers may be detachably held in position in any desired manner, but, as here shown, they are secured by a suitable number of screws 10.

By reference to Fig. 2, it will be seen that the arrangement of the screens divides the casing into a plurality of parallel passage-ways *b*.

Connected to the bottom of one side of the casing, is an inlet orifice 11, and attached to the top of the opposite side of the casing is an outlet orifice 12. The orifice 11 is connected by means of a suitable pipe 13 with the pump which takes the oil from the crank case and forces it into the casing, as shown in the aforementioned co-pending application. The outlet orifice 12 is connected by means of a pipe 14 with the oil-distributing mechanism, as also shown and described in the afore-mentioned co-pending application.

Attention is called to the fact that the passageways *b* are free and unimpeded, and offer no resistance to the flow of the oil through the filter, and that the filtering of the oil is accomplished solely by the screens. This leaves a plurality of passage-ways in which any sediment contained in the oil will find its way to the bottom of these passageways, if it is not intercepted by the screens. In operation, the casing is full of oil, so that there is comparatively little disturbance on account of the shaking of the automobile.

The top and bottom of the casing are provided with the openings located between the screens and the removable covers for the purpose of enabling the passage-ways to be readily flushed or cleaned out. By removing the covers access between the screens and the opposite sides thereof is provided, whereby the screens may be cleaned by a flushing, or by the use of a suitable scraper or brush, or by both.

The oil supplying pump keeps the filter filled with oil, from which it passes to the oil-distributing mechanism, which again delivers it to the parts to be lubricated, after which it is again collected and carried to the filter, thus making a continuous lubricating system thereof.

For facilitating the assembling of the parts, the casing is formed of sheet metal with the two sides *c*, and the end *d* integral, while the



end *e* is made of a separate piece and soldered in position. The top and bottom 2 and 3 are also formed of separate pieces which are soldered in place. This enables 5 the screens to be placed in position and secured at suitable points *a* by solder.

Having thus described this invention, what is claimed, and desired to be secured by Letters Patent, is:—

10 1. A filter for lubricating systems of automobiles, of the character described, comprising a vertically-arranged casing, a plurality of parallel screens arranged therein and dividing the casing into parallel oil passages, 15 the top and bottom of the casing having openings between the screens, and removable covers for closing the said openings as and for the purpose described.

20 2. A filter for automobile lubricating systems of the character described, comprising

a casing having parallel elongated openings in its top and bottom, a plurality of screens within the casing and arranged parallel the openings on the opposite sides thereof, and removable covers for the openings, for the 25 purpose described.

3. A filter for automobile lubricating systems of the character described, comprising a casing having a plurality of parallel screens therein and dividing the casing into parallel 30 oil passages, the ends of the casing having openings between the screens, and removable covers for closing the said openings for the purpose described.

In testimony whereof I affix my signature 35 in presence of two witnesses.

ALEXANDER WINTON.

Witnesses:

HAROLD B. ANDERSON,  
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