

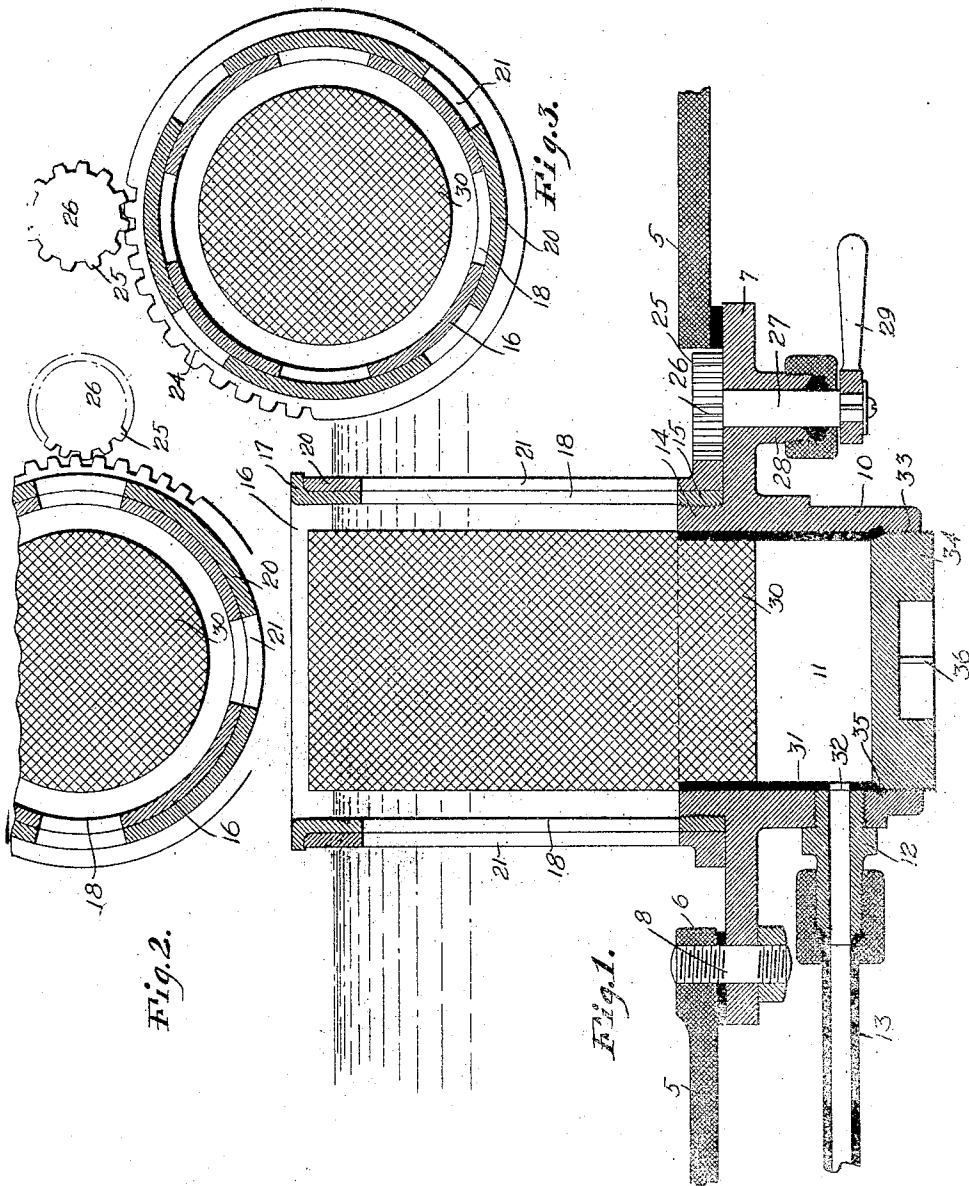
July 15, 1924.

1,501,804

V. W. PAGÉ

OIL SUMP SCREEN

Filed April 16, 1921



WITNESSES
 Donald Brooks
R. H. Attorney

Inventor
 VICTOR W. PAGE
 By Attorney *Mumford & Co.*

UNITED STATES PATENT OFFICE.

VICTOR W. PAGÉ, OF NEW YORK, N. Y.

OIL-SUMP SCREEN.

Application filed April 16, 1921. Serial No. 461,938.

To all whom it may concern:

Be it known that I, VICTOR W. PAGÉ, a citizen of the United States, and a resident of the city of New York, Kew Gardens, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Oil-Sump Screen, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in internal combustion motors, and it pertains more particularly to a screen construction for straining the lubricating oil before the same is introduced to the oil-circulating pump.

It is one of the objects of the invention to construct a screen in such a manner that the same may be entirely removed to facilitate the cleaning thereof.

It is a further object of the invention to provide means whereby the screen may be bodily removed without necessitating the draining of the lubricant from the crank case.

It is a still further object of the invention to provide a new and novel form of operating means for operating the oil-controlling means.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a screen constructed in accordance with the present invention;

Fig. 2 is a horizontal sectional view partly broken away of the device in one position, and

Fig. 3 is a horizontal sectional view of the device in its other or closed position.

Referring more particularly to the drawings, the reference character 5 designates the bottom wall of a motor crank case, and said bottom wall is provided with an opening 6 of any desired shape. The reference character 7 designates a plate and said plate is of a size sufficient to close the opening 6 in the bottom wall of the crank case and is adapted to be secured to the crank case by means of bolts or the like 8.

This plate 7 is provided with a central cylindrical portion 10 depending from said plate 7 to form an oil receptacle 11. Secured in one of the sides of the depending portion 10, is a nipple 12, and leading from said nipple 12 to an oil pump (not shown)

is a pipe 13. The plate 10 is provided with a flange 14, and said flange 14 is threaded as indicated by the reference character 15.

Adapted for threaded engagement with the flange 14, is a vertically projected tubular member 16, and said tubular member 16 has its upper edge defined by a flange 17. This tubular member 16 is provided with a plurality of cut-out portions 18 extending throughout the major portion of its length in order that the oil contained in the crank case may flow through the said cut-out portions to the oil receptacle 11. Surrounding the tubular member 16 is a sleeve 20, and said sleeve 20 is provided with a plurality of cut-out portions 21 adapted to register with the cut-out portions 18 in the tubular member 16 in order that said oil may flow to the receptacle 11 when these cut-out portions are in registry. The sleeve 20 is adapted for rotation about the tubular member 16, and to provide for this rotation the said sleeve 20 is provided on its lower end with a plurality of teeth 24 meshing with the teeth 25 of a small gear wheel 26. This small gear wheel 26 is carried by a shaft 27 mounted in a lug 28 depending from the lower face of the plate 7, and said shaft 27 is provided with an operating handle 29, by means of which the shaft 27 and its gear 26 may be rotated.

The reference character 30 designates a screen and said screen is carried by a metallic sleeve 31 adapted to fit in the depending portion 10 of the plate 7. This sleeve 31 is provided with an opening 32 adapted to register with the passage through the nipple 12 in order that communication may be established between the pipe 13 and the receptacle 11.

The lower end of the depending portion 10 is threaded as indicated at 33, and having threaded engagement with this threaded portion of the depending member 10, is a plug 34, which plug is adapted to close the open lower end of the member 10. As indicated by the reference character 35, the sleeve 31 is flared outwardly by the plug 34 in order that a tight joint between the sleeve 31, the member 10 and the plug 34 may be had. The plug 34 is provided with any suitable tool connection 36 in order that the same may be operated.

The device operates in the following manner: With the parts in the position shown

in Fig. 1, it is apparent that a free circulation of oil may be had from the interior of the crank case through the registering openings 18 and 21 of the tubular member 16, and the sleeve 20, respectively, to the receptacle 11. From the receptacle 11, the oil passes through the opening 32 through the nipple 12 to the pipe line 13 under the influence of a pump (not shown.)

When it is desired to remove the screen for the purpose of cleaning the same, the operating handle 29 is moved to rotate the shaft 27 until the cut-out portions 21 of the sleeve 20 pass out of registry with the cut-out portions 18 of the tubular member 16, which position of parts is shown in Fig. 3. With the parts in this position it is apparent that the flow of oil from the crank case to the receptacle is cut off. After this flow of oil has been cut off as above described, it is only necessary to remove the plug 34 after which the screen 30 may be removed and cleaned. After the screen has been cleaned, it is replaced and the plug 34 is positioned, after which the openings 18 and

21 are moved into registry, in which position a free circulation of oil is had.

From the foregoing it is apparent that the screen 30 may be removed for the purposes of cleaning without necessitating any great waste of oil since the volume of oil lost upon removal of the screen 30 is only that which is contained within the receptacle 11 and the tubular member 16, which amount is negligible as compared to the bulk.

I claim:

In an engine sump, a stationary plate provided with a passage extending there-through, a slotted tubular member surrounding said passage and projecting inwardly of the sump, a slotted sleeve surrounding said slotted tubular member and movable with respect thereto, a sleeve slidably mounted in the opening of said plate, means for retaining said sleeve in position in the opening in said plate, and a screen carried by said sleeve and projecting inwardly of the sump within the confines of the slotted tubular member.

VICTOR W. PAGÉ.