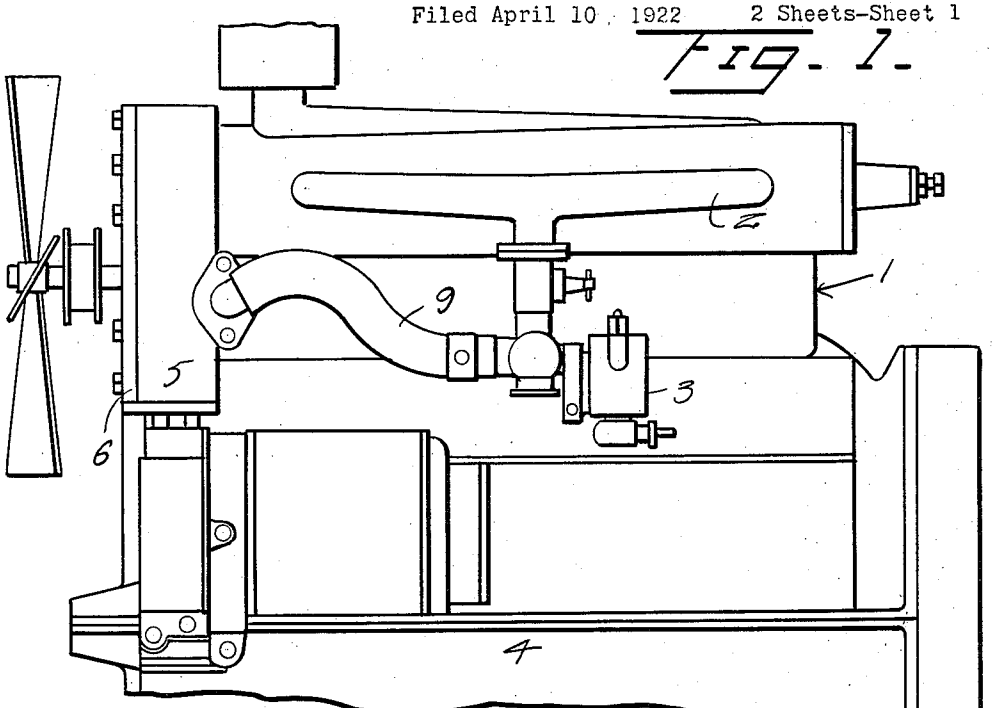
March 18, 1924. 1,487,585

T. M. McKELVY

OIL VAPOR BAFFLE BOX

Filed April 10, 1922 2 Sheets-Sheet 1

Fig. 1.



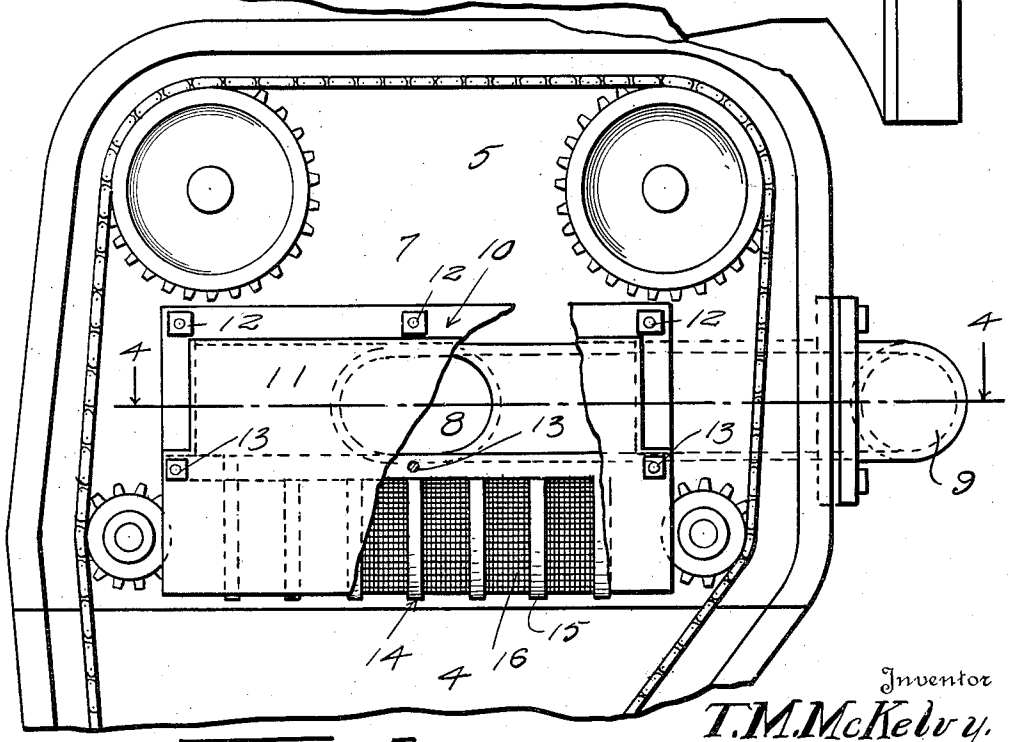


Fig. 2.

Inventor
T. M. McKelvy.

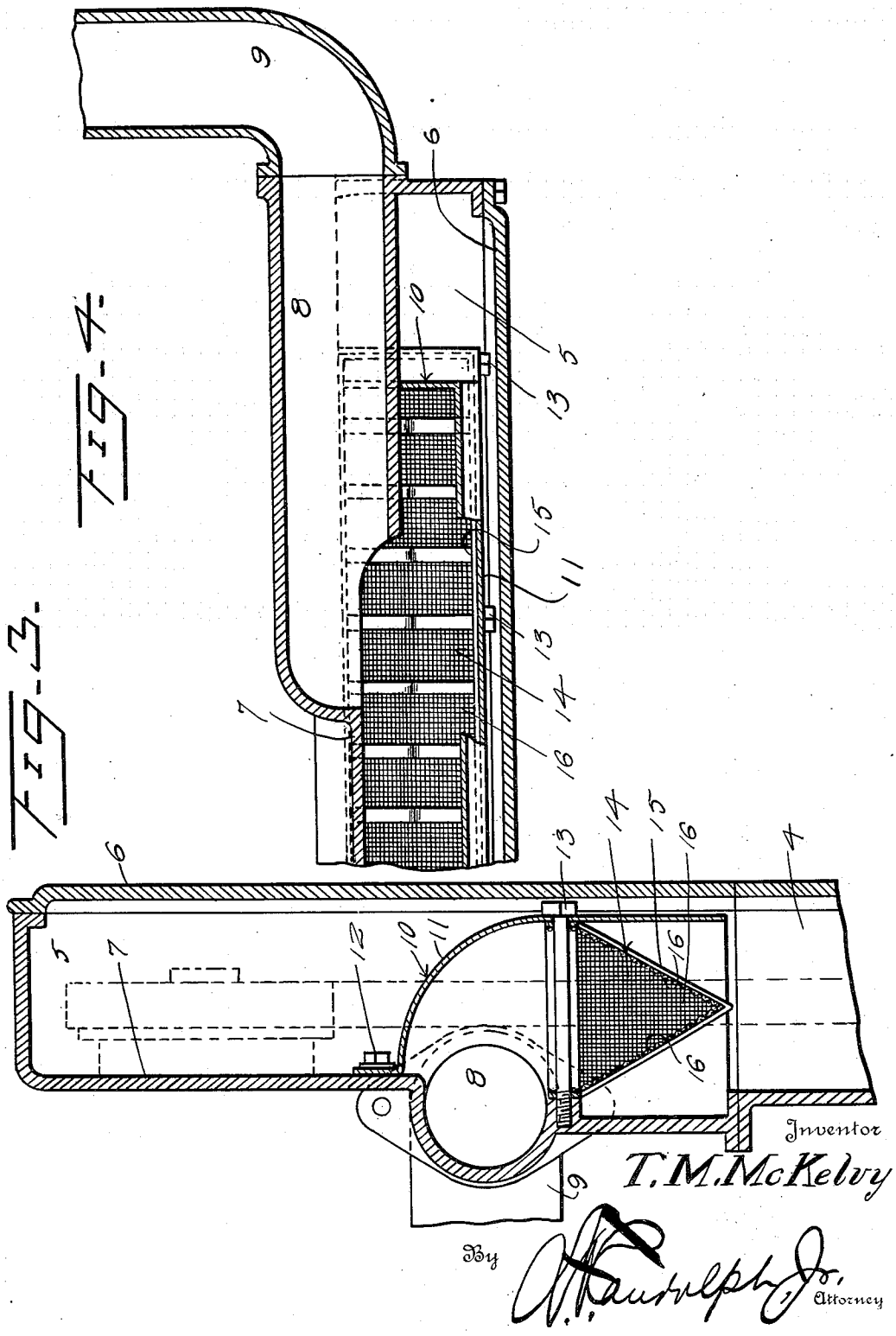
By A. Randolph & Co
Attorney

March 18, 1924. 1,487,585

T. M. McKELVY

OIL VAPOR BAFFLE BOX

Filed April 10, 1922 2 Sheets-Sheet 2



Patented Mar. 18, 1924. 1,487,585

UNITED STATES PATENT OFFICE.

THOMAS M. McKELVY, OF FRESNO, CALIFORNIA.

OIL-VAPOR BAFFLE BOX

Application filed April 10, 1922. Serial No. 551,430.

To all whom it may concern.

Be it known that I, THOMAS M. McKELVY, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Oil-Vapor Baffle Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in oil vapor boxes for internal combustion engines and has for its primary object the provision of a device of the above stated character whereby gases may be conveyed from the crank case of an engine to the carburetor without oil vapor for the purpose of mixing with the fuel and to enter the explosive chambers to be compressed and ignited and thereby render a saving in fuel and providing a scavenging medium to the crank case.

Another object of this invention is the provision of an oil vapor baffle box of the above stated character which will be simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view, as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation, illustrating an engine with my invention applied thereto,

Figure 2 is a front elevation, illustrating the box located in the priming gear chamber of an engine,

Figure 3 is a sectional view, illustrating the box,

Figure 4 is a sectional view, taken on the line 4—4 of Figure 2.

Referring in detail to the drawings, the numeral 1 indicates an internal combustion engine equipped with an intake manifold 2 having a carburetor 3. The engine 1 is provided with the usual crank case 4 and timing gear chamber 5 in communication with the crank case 4 and closed by a removable wall 6. The foregoing description relates to a well known construction of engine to which my invention is applied and the rear wall 7 of the chamber 5 has formed therein a conduit or passage 8, one end of which opens outwardly through one side of the cylinder block of the engine 1 and has connected thereto a pipe 9 which is in turn connected to the air intake of the carburetor 3, while the other end of said conduit or passage 8 opens outwardly through the wall 7 into the chamber 5. Between the last named end of the conduit 8 and the crank case 4 of the engine is an oil deflector 10 comprising a curved plate 11 which has its upper edge detachably secured to the wall 7 above the conduit 8 by a bolt 12, while the lower portion of said plate extends in parallelism with the cover 6 and in close proximity thereto. Bolts 13 also secure the plate 11 to the wall 7 below the conduit 8 and supports a screen 14 through which the gases leaving the crank case and entering the carburetor must pass and as the gases leave the crank case they contain a certain amount of oil vapor which is removed from the gases when the latter pass through the screen and the oil vapor accumulates on the screen and falls by gravity back into the crank case, thus retaining the lubricant within the crank case and obviating the passage of the same into the carburetor. The screen 14 comprises a skeleton frame 15 of triangular shape in cross section which has its apex disposed lowermost with its side portions mounted on the bolts 13. The sides and ends of the frame are covered with foraminous material 16 for the purpose of forming a screen. The gases, after passing through the screen, are directed into the conduit 8 by the curved portion of the plate 11 and prevented from passing into the upper end of the chamber 5.

From the foregoing description taken in connection with the accompanying drawings, it should be apparent that a device is provided which can be easily and conveniently installed on an internal combustion engine so that the gases accumulating within the crank case of the engine may be conveyed to the carburetor for mixing with the fresh fuel without any liability of oil vapor passing into the carburetor to inter-

fere with the proper fuel entering the engine or explosive chambers thereof and also prevent a waste of the lubricant as would be the case if the oil vapor were permitted to escape from the crank case, and further the device provides a very effective scavenging medium to the crank case whereby the gases escaping by the piston of the engine into the crank case may be again utilized for fuel by entering the carburetor and becoming mixed with fresh fuel, consequently providing a saving of fuel in the operation of the engine.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention what I claim is:

1. In combination with a chamber having a passageway in communication with the fuel line of an internal combustion engine and open at one side thereof, an oil trap means consisting of a screen disposed in the path of travel of oil vapor to said passageway, a deflector plate extending upwardly from the screen adjacent one side thereof and over the screen and terminating adjacent the plane of the other side of and above the screen to deflect material to said passageway.

2. In combination with a chamber having a passageway in communication with the fuel line of an internal combustion engine and open at one side thereof, an oil trap means consisting of a screen disposed in the path of travel of oil vapor to said passageway, a deflector plate extending upwardly from the screen adjacent one side thereof and over the screen and terminating adjacent the plane of the other side of and above the screen to deflect material to said passageway, and fastening means extending through the deflector and screen into the chamber and adjacent the base of said passageway.

3. An oil trap means consisting of a screen disposable in the path of travel of oil vapor and being substantially V-shape in cross section and with its apex lowermost, a deflector plate extending upwardly over one side of the screen and then above and over the top of said screen, the upper edge of the plate terminating above and in spaced relation to the screen and constituting a fastening flange, and a fastening bolt passing through the deflector plate and screen to secure them together and to a support.

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

THOMAS M. McKELVY.

Witnesses:
A. D. JACK,
FRANCES L. BLAIR.