G. A. WEIDELY.

INTERNAL COMBUSTION ENGINE.

APPLICATION FILED JUNE 27, 1919.

1,345,048. Patented June 29, 1920.

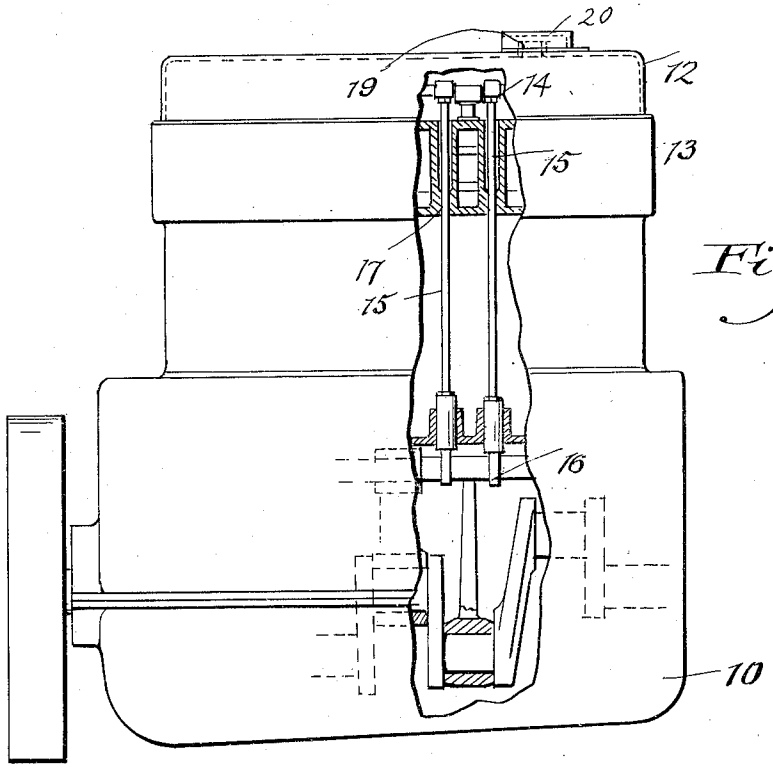


Fig. 1.

Fig. 2.

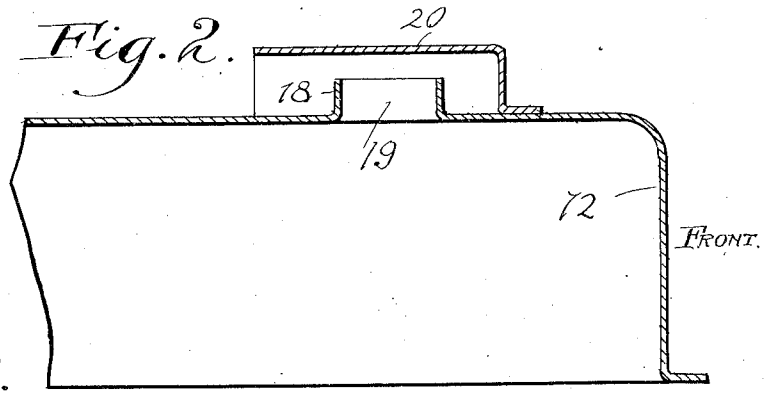
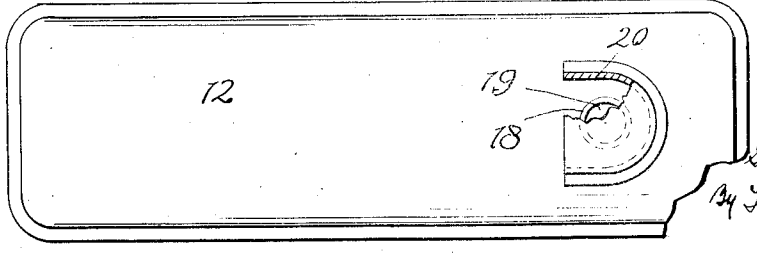


Fig. 3.



Inventor:
George A. Weidely
By Thurston Kiess & Hudson
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE A. WEIDELY, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE CLEVELAND TRACTOR COMPANY, OF EUCLID, OHIO, A CORPORATION OF OHIO.

INTERNAL-COMBUSTION ENGINE.

1,345,048. Specification of Letters Patent. Patented June 29, 1920.

Application filed June 27, 1919. Serial No. 307,059.

To all whom it may concern:

Be it known that I, GEORGE A. WEIDELY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a certain new and useful Improvement in Internal-Combustion Engines, of which the following is a full, clear, and exact description.

The object of this invention is to prevent, in a substantial degree, the entry of dust to the cylinders and certain other working parts of an internal combustion engine. A practical and efficient embodiment of the invention, such as is shown in the drawing, is produced by closing or eliminating the so-called breather carried by the crank case for the admission of air thereto, and the application to a casing which covers the valve operating mechanism of a breather hood which opens rearward and is secured over a hole formed in the top of said casing.

In the drawing, Figure 1 is a side elevation partly broken away of an internal combustion engine in which the invention is embodied; Fig. 2 is a plan view of said engine, and Fig. 3 is a sectional side elevation.

The engine shown is a so-called valve-in-head engine.

Referring to the parts by reference characters, 10 represents the crank case to which, in ordinary construction a breather is attached, but from which, in the present construction, the breather is omitted.

12 represents a casing cover which is secured upon the head 13 of the engine so as to cover the rockers 14 by which the valves are operated, and the upper ends of the tappet rods 15 through which the cams 16 on the cam shaft actuate said rockers. These tappet rods 15 are guided in their up and down movements by passing through holes in parts located near their upper and lower ends,—in which holes they do not have an air tight fit. This is the ordinary construction. Through the top of the cover 12 is a hole 19. 20 represents a light sheet metal breather hood which is secured to the top of this cover over the hole 19, and is so constructed that the only opening through which air may flow into the hood is through the rear end of the hood.

Those familiar with this art understand that associated with the engine and secured and mounted at the front end thereof is a fan, the action of which is to draw air through the radiator and discharge it rearward over and around the engine. Therefore, in the under-the-hood space in which the engine is located there is an air current in a rearward direction. Therefore such dust particles as may be in the air flowing over and around the hood 20 will be carried past the rear opening of the hood, although the lighter air will be drawn through said rear opening of the hood from said hood, through the hole into the space inclosed by the cover. This air will flow down around the tappets, through the guideways in which they operate, into the crank case.

The breather hole 19 is surrounded by an upstanding flange 18, which will measurably interfere with the entry into the hole 19 of any dust which may by chance get under hood 20.

Having described my invention, I claim:—

The combination with an internal combustion engine, of a cover which is secured over the valve operating rockers and upper ends of the tappet rods by which said rockers are operated, which cover has a hole through it, and a breather hood which is secured to said cover over said hole and has a single air admitting opening in its rear end.

In testimony whereof I hereunto affix my signature.

GEORGE A. WEIDELY.