Feb. 19, 1924. 1,484,267

W. W. HULL ET AL

ENGINE COVER

Filed Aug. 25, 1923

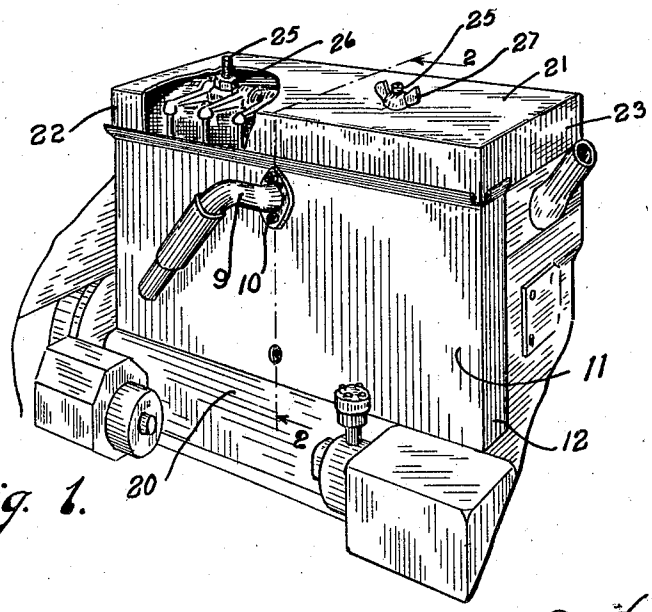


Fig. 1.

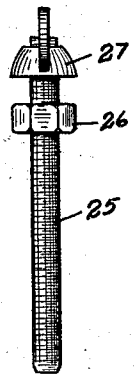


Fig. 4.

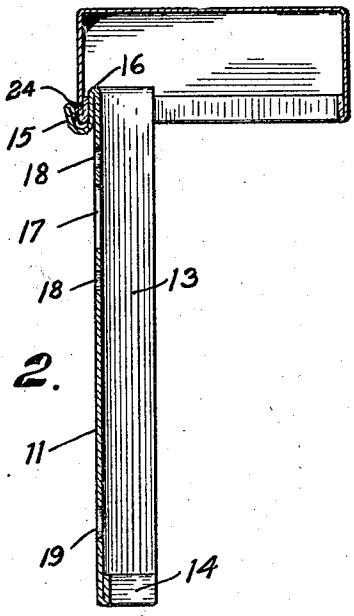


Fig. 2.

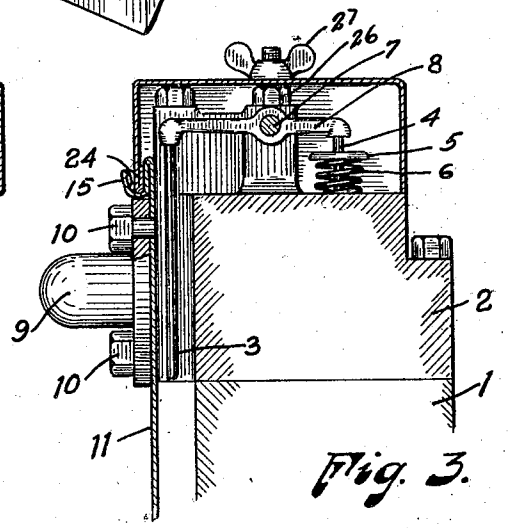


Fig. 3.

Inventors

William W. Hull.

Charles H. Hull.

By A. J. O'Brien

Attorney

Patented Feb. 19, 1924. 1,484,267

UNITED STATES PATENT OFFICE.

WILLIAM W. HULL AND CHARLES H. HULL, OF DENVER, COLORADO.

ENGINE COVER.

Application filed August 25, 1923. Serial No. 659,406.

To all whom it may concern:

Be it known that we, WILLIAM W. HULL and CHARLES H. HULL, citizens of the United States, residing at Denver, in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Engine Covers; and we do 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to a protective cover or casing for internal combustion engines.

Internal combustion engines of the type employed in automobiles are constantly exposed to dust and dirt, since the cooling fan blows a stream of dusty air over it at all times. Where the engine is constructed in such a manner that the engine gets oily on the outside, the dust will adhere thereto and accumulate until it forms a layer of considerable thickness. Engines that are provided with overhead valves in the head, which are operated by levers of the walking beam type, are especially subjected to oily surfaces which accumulate dirt, as the mechanism requires lubrication and some of this lubricating oil is always getting onto the engine surface.

As a well known type of the engine construction to which we refer, we will call attention to the engine employed in Chevrolet automobiles. The push rods extend up along one side of the engine block and the levers and valves are carried by the cylinder head. It is found from experience that one side of this type of engine will remain dry and clean, while the other side is wet with lubricating oil and dirty.

Our invention, briefly described, consists of applying to an engine of the type referred to a sheet metal cover which entirely encloses the side which carries the push rods and enclosing the rocking levers and valve stems by a casing that fits snugly against the upper surface of the cylinderhead and cooperatively engages in a suitable groove along the upper edge of the side casing.

Our invention can be best explained by means of a drawing and reference will therefore be had to the accompanying drawing in which our invention in its preferred form is shown, and in which:

Fig. 1 is a perspective view of an engine equipped with our protective casing, a portion of the casing being broken away.

Fig. 2 is a transverse section of the casing in assembled relation, but removed from the engine.

Fig. 3 is a section taken on line 2—2, Fig. 1; and

Fig. 4 is a drawing showing the stud bolt employed by us in securing the casing in place.

The cylinder block is designated by numeral 1 and the cylinder cap by numeral 2, while 3 indicates the push rods which form part of the mechanism, by means of which the cams operate the valves. The valve stems 4 project through the cylinderhead and have a spring seat 5 secured in place thereon. A spring 6 surrounds the valve stem and abuts its ends against the cylinderhead and the seat and holds the valve resiliently in closed position. A rod 7 is mounted in suitable brackets on the cylinderhead and has pivotally mounted thereon a number of rocking bars 8, one end of each of which contacts with the end of a valve stem and the other end contacts with the upper end of a push rod, all in the manner old and well known. Numeral 9 indicates the exhaust pipe which is secured to the cylinderhead by means of bolts 10.

In order to enclose the push rods we provide a casing member 11 comprising a piece of sheet metal having the two ends 12 and 13 bent at right angles. The bottom edge is folded back and pressed down in the manner indicated at 14 in Fig. 2. The upper edge of the side and ends is bent downwardly on the outside and then bent upwardly, as indicated at 15, so as to form a gutter. The upper edge of the outer wall 15 of the gutter terminates below the upper edge of the inner wall 16 so that if the gutter becomes full of water, none of the water will flow down on the inner surface of the casing member.

This member has an opening 17 corresponding to the exhaust opening and openings 18 corresponding to the openings for the bolts 10, and is clamped between the cylinderhead and the exhaust pipe in the manner shown in Figs. 1 and 2. An opening 19 is provided near the bottom for the gas control rod. When the casing member just de-

scribed is clamped in place, the edges of the end pieces 12 and 13 fit snugly against the side of the engine and the bottom fits against the upper surface of the crank casing 20. For the purpose of enclosing the rocking bars 8 and valve stems 4 and other cooperating parts that are on top of the cylinderhead, we provide a boxlike casing member having a top 21, sides 22 and ends 23. The edges of the sides and ends are folded back, as shown at 24 in Figs. 2 and 3. Two stud bolts 25 are secured to the cylinder head and locked thereto by means of lock nuts 26. These bolts project through suitable openings in the top 21 and the casing member is clamped to the cylinderhead by means of butterfly nuts 27. The upper casing member is so constructed that one side and a portion of each end rests in the gutters, while the other side and the remaining portions of the ends rest on the top of the cylinderhead. The casing just described entirely encloses the valve operating mechanisms and protects the engine from dust and dirt. The casing members may be enameled a battle ship gray or any other color and gives the engine a neat, clean appearance.

Having now described our invention, what we claim as new is:

An engine protective cover comprising a section having a side and two end portions, said end portions being bent at right angles to the side, the upper edge of the side and ends being bent downwardly and then upwardly so as to form a gutter, the outer wall of said gutter being lower than the inner wall; and an open boxlike section adapted to cooperate with the first-named section, one side and a portion of each end wall of said boxlike section cooperating with said gutter.

In testimony whereof we affix our signatures.

WILLIAM W. HULL.
CHARLES H. HULL.