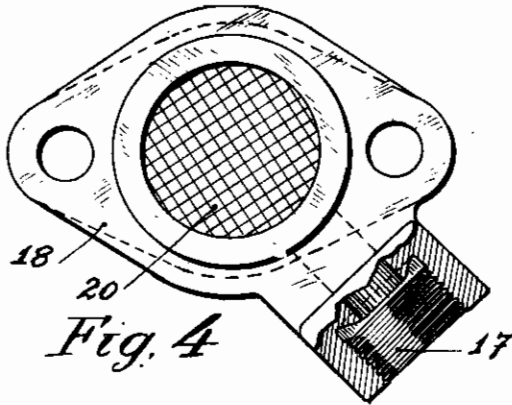
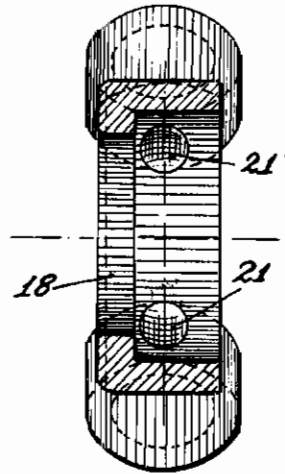
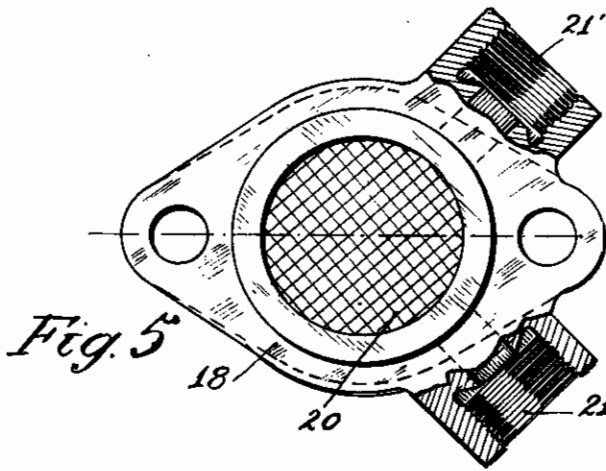
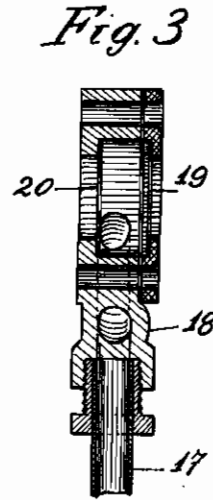
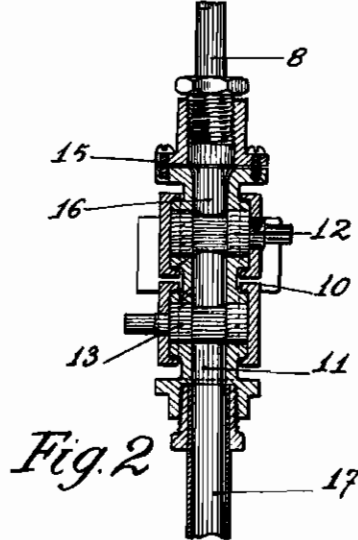
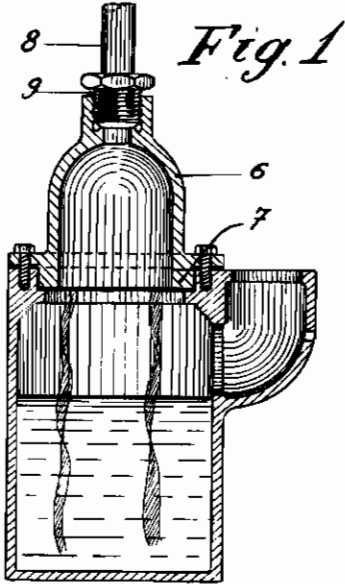


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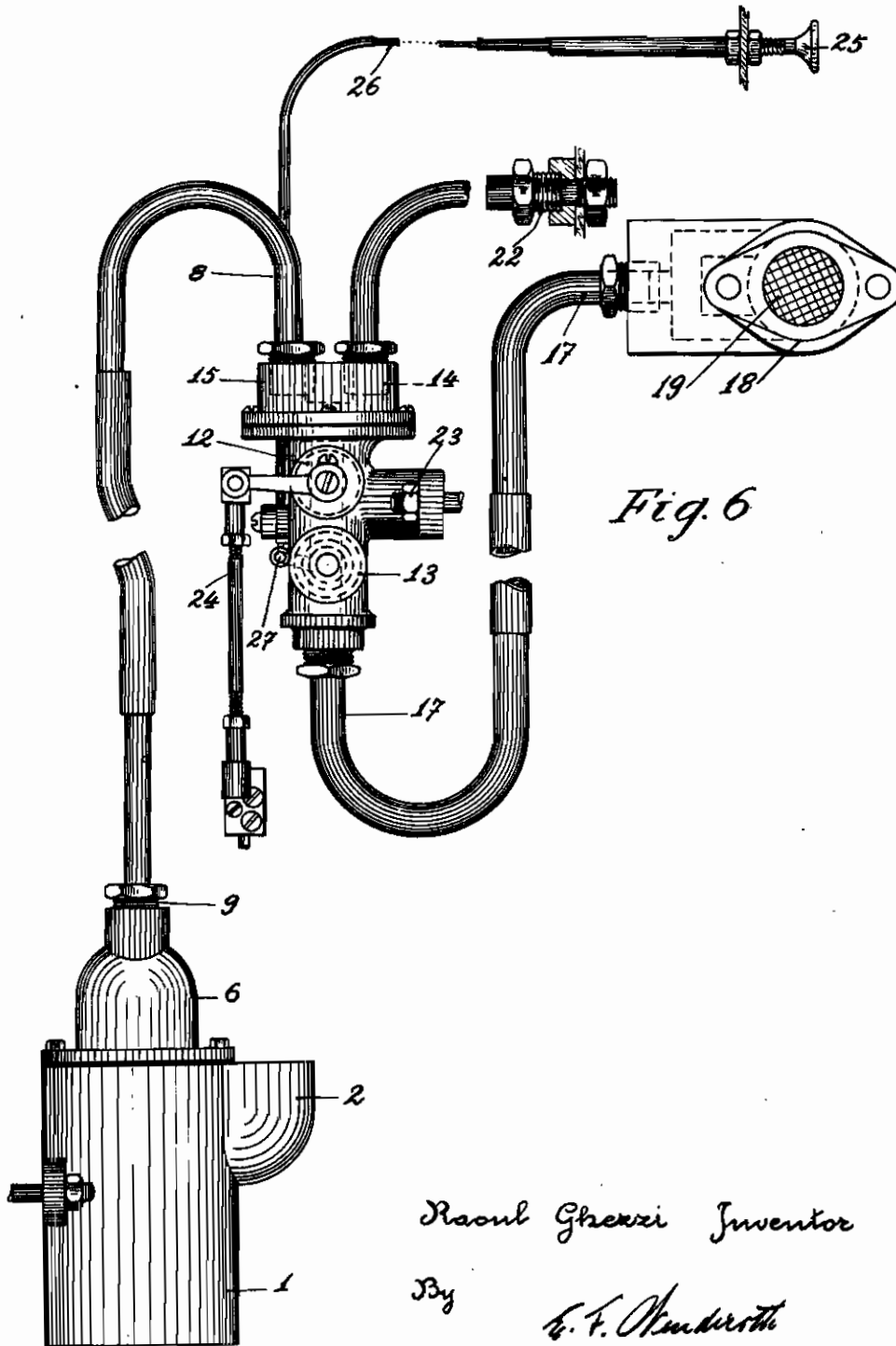


Fig. 6

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ALIEN PROPERTY CUSTODIAN

DEVICES FOR SAVING GASOLINE AND IMPROVING THE CARBURIZATION OF EXPLOSION MOTORS OF ANY KIND, THROUGH THE SIMULTANEOUS ADDITION OF OIL VAPOURS AND MOIST AIR

Raoul Ghezzi, Monte Carlo, Monaco; vested
in the Alien Property Custodian

Application filed July 2, 1941

The object of the present invention is to provide a device permitting of the simultaneous addition of oil vapours and moist air to the gas mixture usually supplied by the carburettor.

Since humidity is unexplosive and antiscaling, its corrects the action of oil vapours, while these, being inoxidable, escape the inconveniences produced by moist air.

The device object of the present invention essentially consists of a moist air generator, an oil vapour feeding piping, a distribution chamber, a flange inserted between the admission collector and the carburettor where the mixture gasoline-air, moist air and oil vapours is performed.

In the annexed drawings, merely intended to offer a schematic example, not limiting in any way the range of the present invention, of some embodiments of the said invention:

Figs. 1—2—3 show respectively, in longitudinal section, the moist air generator, the distribution chamber and the flange inserted between the admission collector and the carburettor.

Fig. 4 is the view of a flange with the inlet for moist-air and oil vapours mixture disposed in an inclined position.

Fig. 5 is a front view and the section of a flange with a double inlet for the mixture of moist air-oil vapours, being provided for distribution chambers having two outlets.

Fig. 6 is a scheme of the whole assembly.

The moist air generator (Fig. 1) consists of a hollow body 1, or cup, containing water, provided with air inlet 2; on the upper portion of this body is provided a circular groove 3 carrying the filtering elements 4, to which web strips 5 or strips of any other suitable material are suspended for the purpose of carrying water to the upper portion by capillarity. These filtering elements or members are fixed by closing the dome shaped cover 6 having a shoulder 7 corresponding to the cavity of the body 1.

The piping 8, which carries moist air into the distribution chamber is fixed onto the generator in the following manner:

The collar of the copper pipe is located in a seat provided for in the cover, being pressed against it by the half-joint 9. The distribution chamber (Fig. 2) comprises a body 10 bored through by a hole 11, forming a duct, and on which are mounted: the cock plug 12, synchronized with the acceleration drive and regulating the quantity of oil vapours and moist air which is to be admitted according to the motor speed, and the cock plug 13, permitting of the passage

of such quantity, actuated by the operator's hand.

Oil vapours and moist air arrive respectively at 14—15 and mix themselves in the chamber 16 located on the top of the body 10. The mixture is then conveyed, according to position of cocks 12—13, through the piping 17, to flange 18 (Figs. 3—4—5—6) inserted between the admission collector and the carburettor. This flange is provided with two grates 19—20, the one on the carburettor side, the other on the collector side and the piping 17 is ending between them. This piping may be inclined to the longitudinal axis of the flange 18 (Fig. 4). There may be provided two inlets 21—21' for the mixture of oil vapours-moist air (Fig. 6), corresponding to the two outlets of the distribution chamber. As for instance the mounting of the device may be carried out as follows:

(1) The joint 22 for oil vapours feed piping is being fixed onto the tappet cover or the perforated plug closing the filling hole of the engine sump, or at any other suitable place.

(2) The cup is fixed by any suitable means onto the inner wall separating the motor from the actual car body.

(3) The distribution chamber is fixed through fastening means 23 on the wall as well as on the frame or any other suitable place, so that the control means 24 of cock 12 is located near the accelerator, to which it is connected.

The tension rod 25 is adjusted on the dash board and connected by a rope 26 or other means to lever 27 controlling the cock 13, so that the cocks close the opening 11 when the motor rests. Through joints, and copper piping, the oil vapours feed piping is connected to the distribution chamber at 14 and the moist air feed piping at 15.

The original carburettor is momentarily removed and the flange 18 is inserted hermetically between the carburettor and the admission collector; then the distribution chamber is connected to the flange by the piping 17.

The working of the device is the following:

The tension rod is in closed position and the device separated. The motor may consequently be started without any admission of oil vapours or moist air taking place whatever the position of the accelerator may be; but the starting is easier and with greater elasticity since the mixture gasoline-air, which at this time feeds the motor, is being finely pulverized by grates 21—21'.

After the motor has rotated for a few minutes the tension rod 25 may be actuated. The depression in the motor affects the cup 1 and the

atmospheric air sucked in impregnates with water by contacting the strips 5; then it goes through the filtering elements 4, which prevent the water drops from passing through; consequently only moist air arrives at the chamber 16, where it mixes with oil vapours captured in a suitable place of the motor.

This mixture is admitted, in a quantity controlled by cock 12 connected to the accelerator, into the flange 18, where a vigorous turbulence takes place because of motor suction and the passage through the grate 21 of the mixture air-gasoline coming from the carburettor.

The whole forms a homogeneous mixture, which is even more finely pulverized and atomized by grate 21', on the side of the admission collector.

This disposition offers following advantages:

(1) Increased motor efficiency, a remarkably

great elasticity and better picking-up conditions with the motor.

(2) Perfectly working lubrication at any time by means of fresh oil, saving lubricant, with less frequent necessity of removing incrustations or scales; consequently longer duration of all members without repairs.

(3) Fuel saving from 25 to 50% according to motor charge and capacity, in consequence of being obliged to reduce the diameter of the main sprayer.

(4) Advanced ignition without crepitation.

It is apparent that shapes, dimensions and disposition of the main organs of this device, as well the materials used in its construction may vary without altering the principle of the invention described.

RAOUL GHEZZI.