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Ries et al.

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[54] **CARBURETOR SYSTEM**

[76] Inventors: **Gordon E. Ries**, 4423 Third Ave., E.; **Harley D. Johnson**, 708 9th St., W., both of Bradenton, Fla. 33505

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[51] **Int. Cl.²** **F02M 27/04**

[58] **Field of Search** ..... 123/119 E, 122 F, 148; 204/DIG. 6; 317/4

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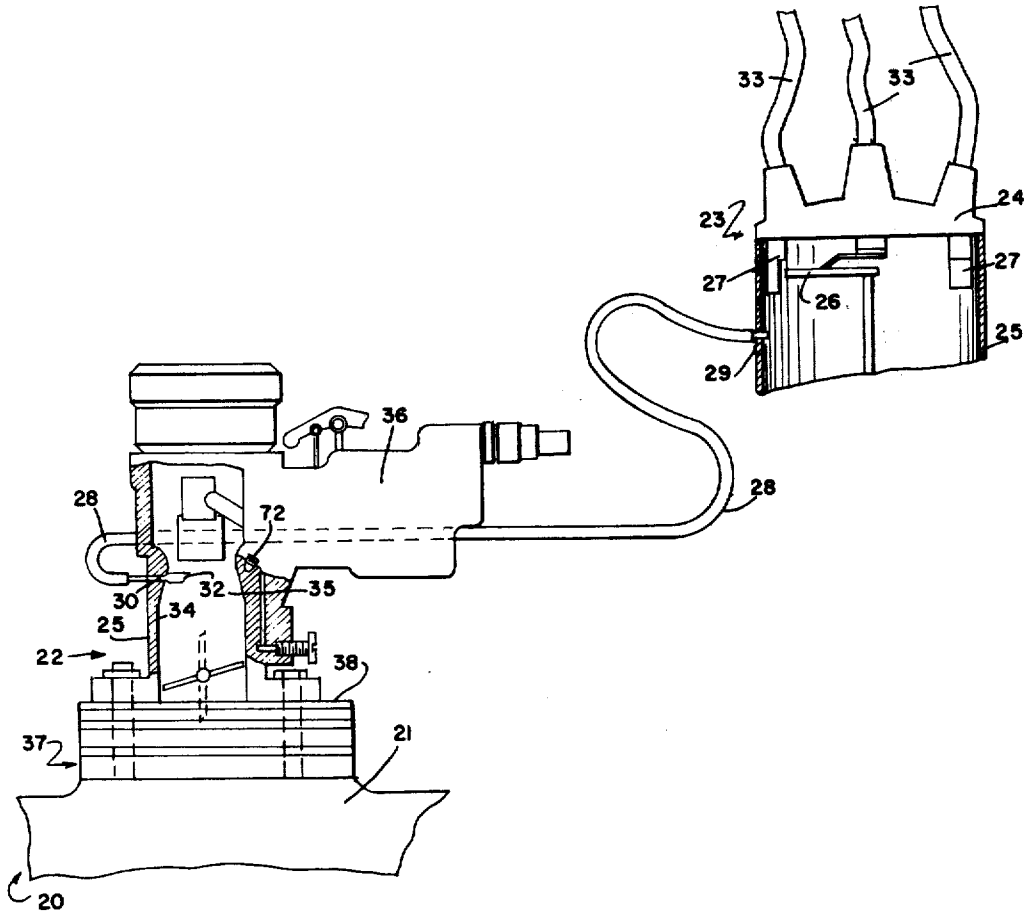
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Primary Examiner—Charles J. Myhre
Assistant Examiner—David D. Reynolds
Attorney, Agent, or Firm—Sherman Levy

[57] **ABSTRACT**

A carburetor system for an internal combustion engine wherein there is provided a distributor and a carburetor, there being a means operatively connecting the distributor and carburetor together. A means is provided for heating and acting on the fuel air mixture so that the fuel air mixture entering the internal combustion engine will be in the most advantageous form whereby increased mileage of a vehicle will be assured, as well as providing for other advantages, such as reduced polution and the like.

7 Claims, 9 Drawing Figures



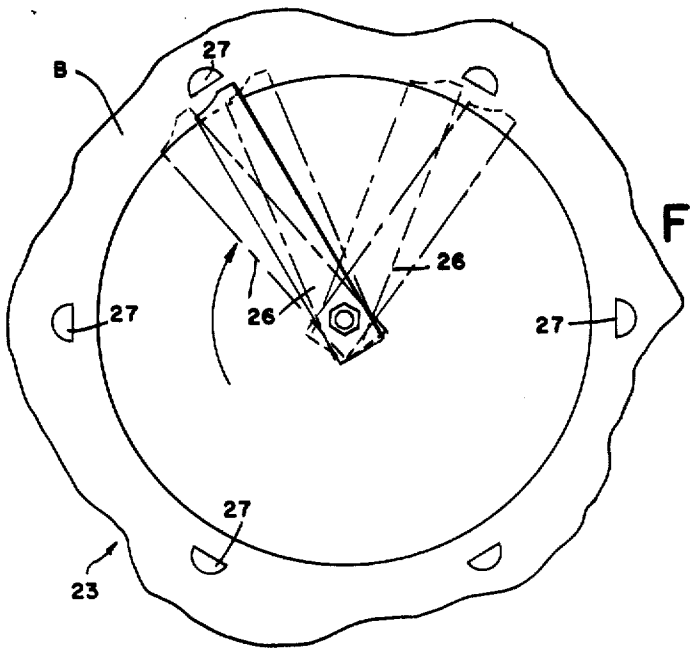


FIG. 1

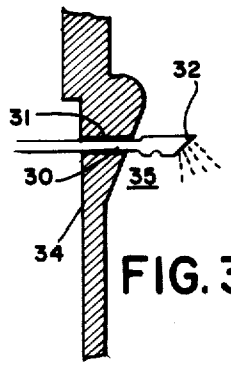


FIG. 3

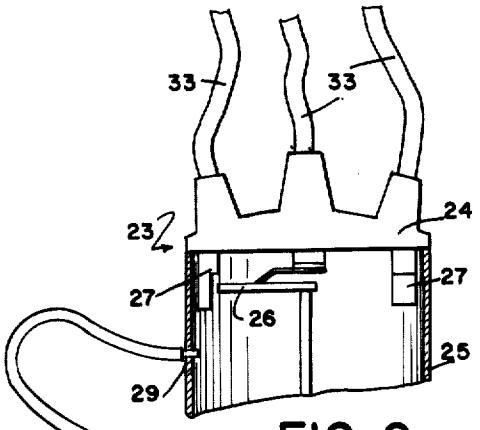


FIG. 2

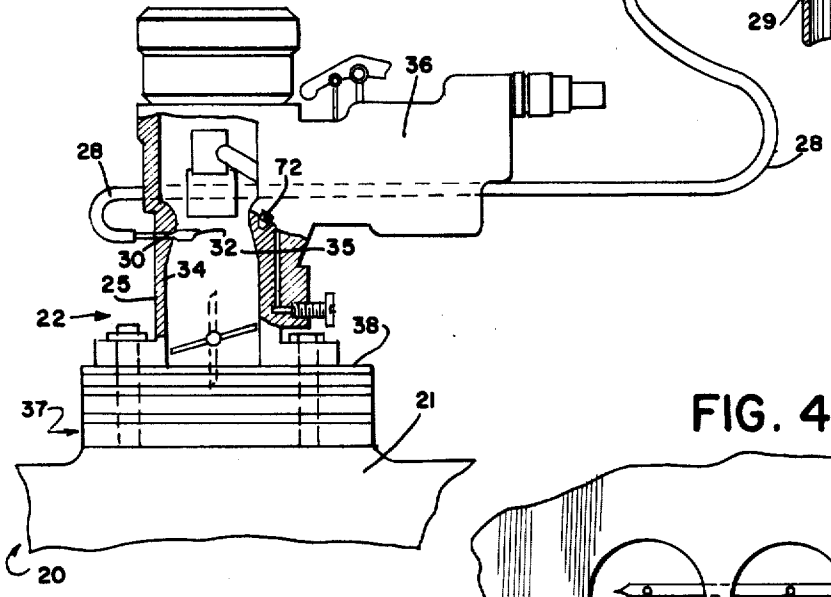
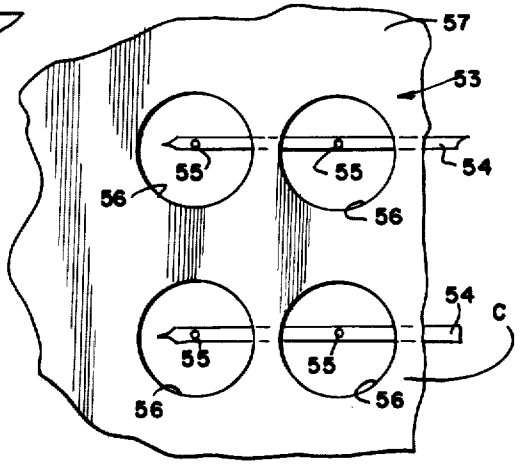


FIG. 4



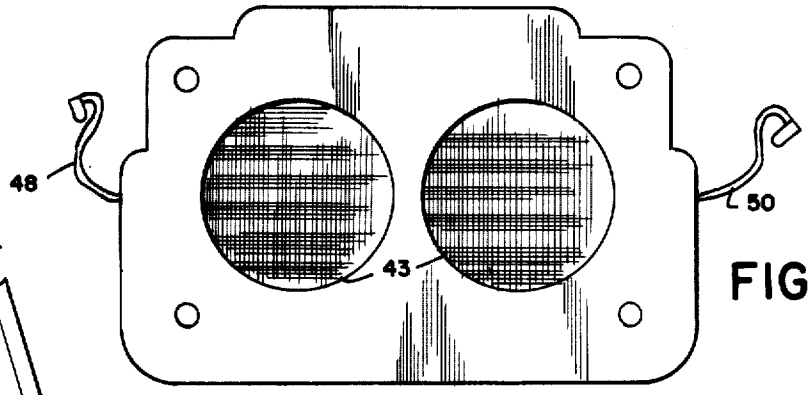


FIG. 5

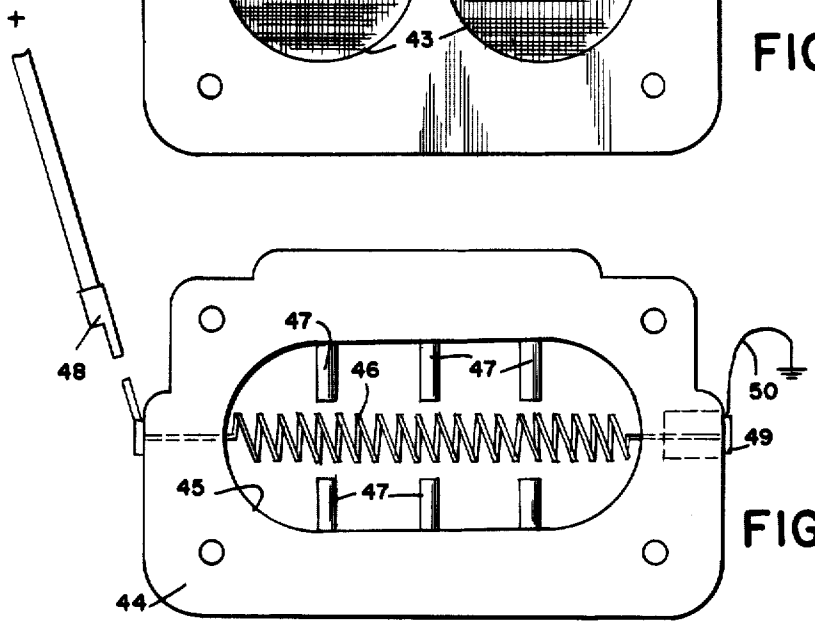


FIG. 6

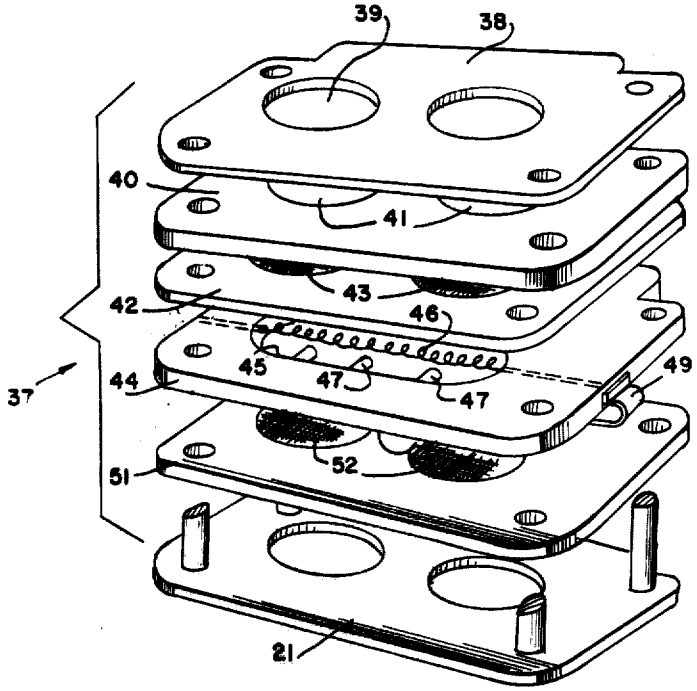


FIG. 7

FIG. 8

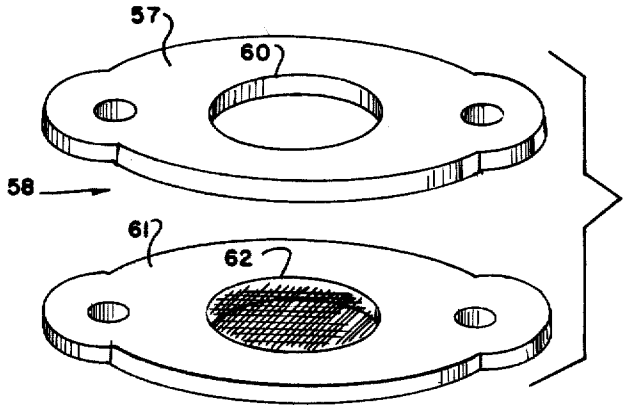
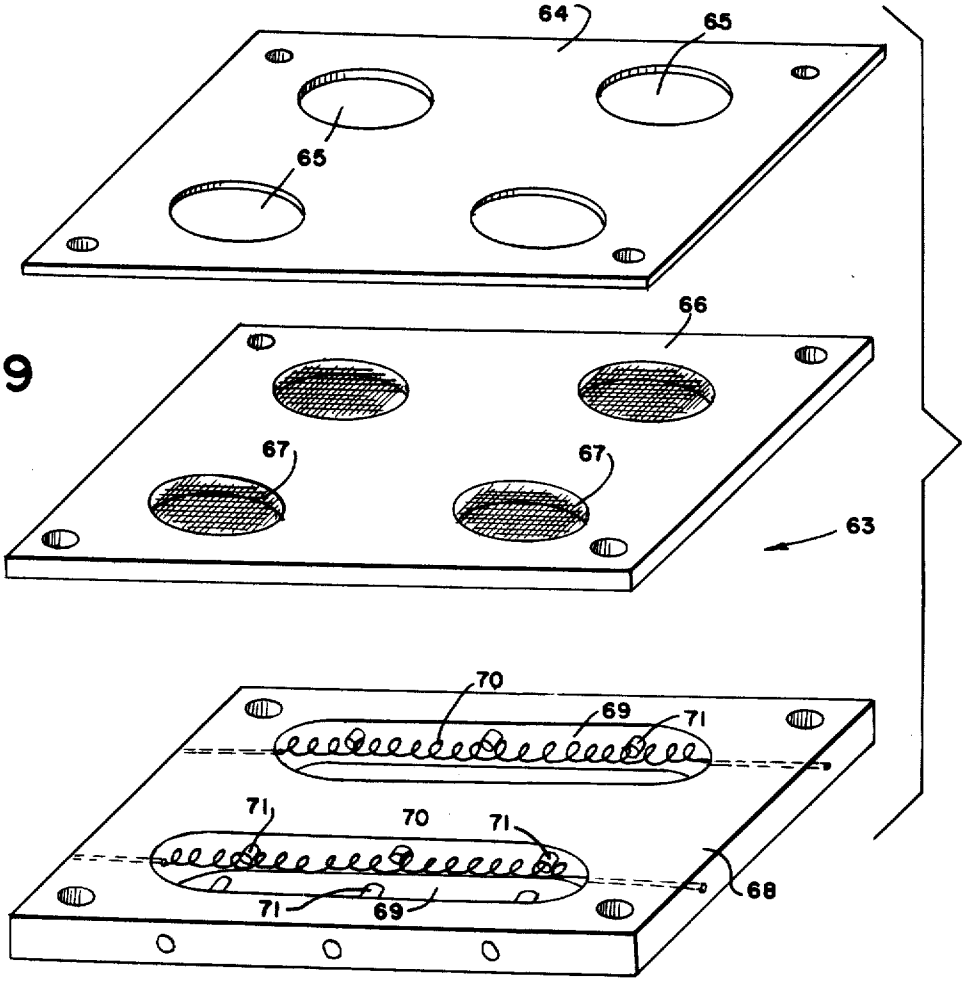


FIG. 9



CARBURETOR SYSTEM

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to internal combustion engines, and more particularly to a carburetor system for an internal combustion engine.

2. Summary of the Invention

A carburetor system is provided for an internal combustion engine wherein there is provided a means for operatively connecting the distributor housing to the carburetor so that the fuel air mixture will be ionized. In addition, a means is provided for supplying electrical energy to the vicinity of the carburetor so that the fuel air mixture that is supplied to the internal combustion engine through the intake manifold will be in such a form or condition whereby maximum mileage of a vehicle will be assured, and wherein other advantages will accrue, such as reduced air polution and the like.

The primary object of the present invention is to provide a carburetor system for a vehicle combustion engine which will assure or provide for increased mileage of a vehicle equipped with the carburetor, and wherein air polution resulting from exhaust fumes and the like will be minimized.

Still another object of the present invention is to provide a carburetor system that is ruggedly constructed and relatively simple and inexpensive to install and manufacture and which is efficient in use.

Other objects and advantages will become apparent in the following specification when considered in the light of the attached drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view, illustrating a portion of the distributor and showing the rotor that is adapted to make contact with different points on the distributor.

FIG. 2 is an elevational view, showing the connection between the distributor housing and the carburetor.

FIG. 3 is an enlarged fragmentary elevational view, showing the connection of the injector to the carburetor.

FIG. 4 is an enlarged plan view illustrating a hookup for a four barrel carburetor.

FIG. 5 is a plan view illustrating one of the members forming the base of the carburetor of the present invention.

FIG. 6 is a plan view of another member or plate that is used in the base of the carburetor.

FIG. 7 is a perspective view with parts separated for clarification of illustration, and showing certain of the members that constitute or form the base of the carburetor.

FIG. 8 is a perspective view illustrating a base assembly for a single barrel carburetor.

FIG. 9 is a perspective view showing certain of the elements that are adapted to be used for forming the base of a four barrel carburetor.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail, wherein like reference characters indicate like parts throughout the several Figures, the reference numeral **20** indicates a portion of an internal combustion engine, such as the engine of an automobile or other vehicle and the numeral **21** indicates in FIG. **2** the intake manifold for the

engine **20**. The numeral **22** indicates a carburetor, while in FIG. **2** the numeral **23** indicates a distributor. As shown in the drawings, the distributor **23** includes a cap **24** having the usual members **33** connected thereto, and the distributor **23** further includes a housing **25** that has a rotor button **26** movably mounted therein, and the rotor button **26** is adapted to coact with the plurality of spaced apart contacts **27**, FIG. **1**.

There is further provided a means for conveying ionized air from within the distributor **23** to the carburetor **22**, and this means comprises a hose or conduit **28** that has one end connected as at **29** to the distributor housing **25**. The other end of the conduit **28** has an injector **30** connected thereto, and the injector **30** extends to an aperture or opening **31** in the wall **34** of the carburetor **22**, FIG. **3**. An end portion of the injector **30** is adapted to be flattened or crimped as at **32** so that an air foil effect will be produced. The numeral **35** indicates the venturi section of the carburetor, and the numeral **36** indicates the float chamber of the carburetor. The injector **30** is in the form of a metal or tube that is inserted in the venturi section, and the tube **30** is connected to the hose **28**, as shown in the drawings.

As shown in the drawings, there is provided on the lower portion of the carburetor **22** a base that is indicated generally by the numeral **37**, and FIG. **7** illustrates one form of the base **37** wherein there is provided an upper gasket **38** that has apertures or openings **39** therein. Positioned below the gasket **38** is a spacer **40** that apertures **41** therein, and arranged below the spacer **40** is a grid plate **42** that has wire grids **43** therein for a purpose to be later described. The numeral **44** indicates an EMF plate that is positioned below the grid plate **42**, and FIG. **6** shows in detail an EMF plate **44** which is shown to have an elongated slot or cutout **45**, there being a resistor coil **46** extending through the slot **45**. The numeral **47** indicates magnets that are arranged on opposite sides of the resistor coil **46**. The numeral **48** indicates the conductor that is electrically connected as shown in FIG. **6**, and a lug **49** is connected to the opposite end of the plate **44** whereby this member can be grounded as at **50**. The numeral **51** indicates a grid plate that is mounted below the EMF plate **44**, and the grid plate **51** has a plurality of circular openings with wire grids **51** suitably mounted therein. The grid plate **51** is adapted to be arranged above the usual intake manifold **21**.

Referring to FIG. **4** of the drawings, the numeral **53** indicates a portion of a four barrel carburetor that may have ionized air introduced as at **55** from the hoses or sections **54** that can be connected to the distributor, whereby the ionized air can be introduced into the barrel portions **56** of the members **57**.

Attention is directed to FIG. **8** of the drawings, wherein the number **58** indicates a portion of a base assembly for a carburetor that is adapted to be used in a single barrel carburetor wherein a member **59** has a single opening **60** that is adapted to register with or be aligned with the wire grid **62** in the lower member **61**. The unit of FIG. **6** goes under lower member **61** in same configuration and form as **58** of FIG. **8**.

Attention is directed to FIG. **9**, wherein there are illustrated certain of the parts that are adapted to be used for the base of a carburetor such as a four barrel carburetor wherein the numeral **63** indicates certain of these elements in FIG. **9** that comprise an upper member **64** that has a plurality of apertures **65** therein, and

arranged below the member **64** is a plate or member **66** that has wire grids **67** therein. Positioned below the grid plate **66** is an EMF plate **68** that has a pair of elongated slots **69** therein, and resistor coils **70** extend through the slots **69**, there being a plurality of magnets **71** arranged on opposite sides of each of the resistor coils **70**.

In FIG. **1** the numeral **72** indicates a jet that is connected to the carburetor as shown.

From the foregoing, it will be seen that there has been provided an improved carburetor system, and in use with the parts arranged as shown in the drawings, ionized air is supplied or conveyed from the distributor **23** to the carburetor **22** by a member such as the hose or line **28**. At the same time, electrical and magnetic energy is applied to the base **37** so that the air fuel mixture entering the engine through the intake manifold **21** will be in such a condition that the maximum efficiency and mileage is assured, and wherein the fuel will be burned in such a manner that the exhaust polution will be minimized.

The parts can be made of any suitable material and in different shapes or sizes, as desired or required.

It will be noted that there is provided a rotor button **26** which has its associated parts modified for the purpose of elongating or drawing out the high voltage spark from the rotor button to the spark plug wire terminal inside the distributor cap. The rotor button has been modified so that the mechanical cantrifugal advance and the vacuum advance of the distributor with the modification of the rotor button produce increased ionization within the distributor cap. As the rotor button **26** increases in speed within the distributor cap, the spark will jump an air gap so as to ionize the gases which are present. Thus the ionization within the distributor cap can be a mixture of ions of these gases such as ionized nitrogen, carbon dioxide, and the like. It has been discovered that when these ions are present in the air, they enhance the energizing of the gasoline hydrocarbon molecules within the carburetor. Thus, the distributor provides a means for supplying ions from the distributor cap and placing these ions in the environment of the venturi **35** within the one barrel, two barrel, four barrel or other multi barrel carburetor, so as to enhance the energizing effect by providing additional ions.

As to the distributor cap, various existing distributor caps can be modified for the purpose of taking ionized air from within the distributor because ions are produced within the distributor cap regardless of how many terminal points are located in the distributor cap. Usually there is one terminal point for each cylinder.

The present invention can be supplied as new equipment for internal combustion engines, or it can be such that existing equipment can be modified in accordance with the present invention.

The modification of the distributor cap includes drilling a hole approximately half-way between the bottom of the distributor cap and the inside top of the distributor cap as indicated by the numeral **29** and then placing a plastic tube **28** which is moisture proof and insulated and which may have a length of approximately one-half of an inch. From this point a flexible neoprene hose can connect to the carburetor. In the case of a single barrel carburetor, there is one connection, and in the case of a two barrel carburetor, there are two connections so that a Tee is adapted to be placed in the hose to form a double connection. The procedure applies to a four barrel carburetor. On a four barrel carburetor a brass tube insert is arranged in the venturi and runs continuously through one venturi to the second venturi with a hole such as approximately **40/1000** inch diameter hole drilled into the ⅛-inch diameter of the brass tube, as shown in FIG. **4**. Thus, the configuration or means is provided in the brass tube to suck or draw the ions from the environment or vicinity of the distributor cap.

As to the carburetor, within all carburetors of the venturi type, there is a venturi section, as indicated by the numeral **35**, and such carburetors are generally found in all manufactured standard internal combustion engines. Carburetor venturi sections are generally located in the center of the carburetor, and there is a top and a bottom to the venturi section. By drilling a hole such as the hole **31** into the venturi section of the various carburetors, such as a one two or a four barrel carburetor, and inserting a metal tube **30** into the venturi section, there is a suction on this tube **30** by the air and gas movement around the tube. On the case of the one and two barrel carburetors, a **45°** configuration is provided as indicated by the numeral **32** at the end of the tube that extends into the venturi section approximately one-eighth to one-half of an inch. In the case of a four barrel carburetor, the brass tube can extend completely through one venturi and protrude into the second venturi approximately ½ to **1** inch. In this case, the end must be sealed off by crimping or squeezing, and a approximately **40/1000** inch hole in diameter drilled in the bottom of the tube in the center of each of the venturi sections. Thus, there will be provided two pass-through tubes and only two connections to make via the tee that leads to the distributor cap. Because tubes are generally round and offer very little air foil, in order to give air foil to the tube in the four-barrel carburetor venturi, it is desirable to squeeze the tube lightly in the area of the **40/1000** inch hole in the bottom of the tube to elongate the cross section of the tube and by this means, air foil and greater suction will occur nearer the orifice of the tube.

Where the tubes protrude into the venturi, the locations of these tubes are not so critical, as it is noted that further down the venturi towards the base of the carburetor the vacuum in the venturi increases. Ions can be injected into the carburetor at its base or can be injected into the space between the upper and lower grids of the present invention or into the intake manifold. In certain instances, the ions may be placed near the top of the venturi section of the carburetor for the purpose of allowing the ions to meet with the partially ionized air that enters the carburetor and with the gasoline, before it is completely atomized into aerosol particles. As is known, an ion is an electrically charged atom. Ionized air can be positively or negatively charged atoms and because the engine mass is utilized as a ground from the battery, it is to be noted that in most cases, the engine mass represents a negative earth ground. Thus, with the ionization of air placed in the environment of the venturi, there is a difference in engine performance as electromotive forces are beginning to have their influence on the fuel-air mixture. Because the carburetor is attached to the manifold, it becomes part of the engine mass, therefore, the carburetor is considered a negative earth ground. Where ions are present, there is some absorption of the electromotive forces into the mass and the repulsion of electromotive forces from

the mass. These ions pass through the venturi further mixing with the air and the mass particles.

Continuing further into the venturi towards the base of the carburetor, it will be noted that carburetors have a throttle base and this is sometimes referred to as a throttle base plate. In the general area of the carburetor, it will be noted that the suction and the atomization of the gasoline into aerosol particles generally range in size from **90** to **120** microns. At this point, there is approximately **20** to **21** inches of mercury (vacuum) representing a vacuum (**21** inches of vacuum) and the aerosol particles and the air mixture and the ions are all mixed and the process of energizing at this point is beginning to make notable change in the molecules of the hydrocarbon gases. Thus, at this point, with air-gas mixture, the same passes around the throttle plate which extends below the base of the carburetor when the throttle is wide open.

Thus, it is necessary to have a spacer in the same configuration as the carburetor gasket to go between the base of the carburetor and the top grid of the present invention, so that the throttle plates when wide open will not come in contact with the screen grid which is directly below the spacer.

In most carburetors manufactured, the throttle plate extends below the base. The present invention will fit all existing carburetors, and the present invention can be built into the base of new production carburetors, and the throttle body base if this is desired. The ion pick-up at the rear of the carburetor can be programmed into the venturi section at the time of the carburetor manufacture and assembly.

As shown in FIG. **7**, at the base of the carburetor at the top, there is the gasket **38** that prevents air leakage between the carburetor and the spacer **40.** Then there is the spacer **40** having the same configuration as the carburetor base gasket. The spacer **40** has a thickness that is determined by how far the throttle plates extend below the base of the carburetor when the throttle is wide open and this will allow clearance between the throttle plate and the top grid of the device. The spacer **40** prevents the throttle plates in the base of the carburetor from coming in contact with the top grid when the throttle is wide open, and the clearance between the throttle plate and the top grid may be one-eighth of an inch. The top grids have various performance characteristics which various types of mesh provide. The grids may have a stainless steel construction with approximately **40** threads to the inch in each direction and with the wire size being ten one-thousandths of an inch in diameter, and stainless steel has been found to make good performing grids. These grids at the present give the ultimate in gasoline atomization because when the aerosol particles of **90** to **120** micron size mix with the air and the ions from the distributor and the ionized air from the engine compartment, this gaseous matter passes through the first grid, the top grid being directly under the spacer as indicated by the numeral **42** with the grid elements **43** therein, and the aerosol particles of gasoline are broken up into a finer micron size. This is important because the finer the particle, the more air and outside gases of oxygen can attach themselves to the particles and make the particles burn more efficiently, so as to allow greater heat energy release. Directly related to these grids and underneath this top grid is the resistor **46** that is operated by electromotive forces such as **12** volts at **10** amps DC current, and the voltage of this current can vary, depending on the type of battery being used in the vehicle, such as a **6, 12** or **24** volt battery that is commonly used.

The present invention utilizes a carburetor electromotive force field, and the component parts that make up this arrangement consist of a spacer, grid, and a resistor with opposing magnets, such as the magnets **47.** There is also provided a ground connection **50,** a terminal connection **48,** where the input energy from the accessory side of the ignition switch supplies input voltage and amperes to the EMF and bottom grid. The purpose of the carburetor electromotive force field is to break the aerosol particles of fossil fuel to smaller micron size, mix these small particles with ions from the distributor cap, subject this mixture to kinetic energy, magnetic radiation, and electromotive forces and further encapsulate them within the space between the top and bottom grids, and further gasify the gases before they leave the bottom grip which assures still more micron size reduction. The gaseous matter leaving this area through its bottom portion is a very unstable lighter than air gas which is highly detonable.

While previous devices have used screens in the base of carburetors in conjunction with various types of catalysts, these are not the same as the present invention, although the present invention can use various materials, such as tungsten, vanadium and nickel, and such hydrocatalysts can work with the present invention. In particular, the present invention is such that the hydrocarbon molecules are subjected to ions, kinetic energy, magnetic radiation and electromotive forces, and by the combination of this energy, the desired results are produced.

As to the base of the carburetor, the base of the carburetor connected to the top of the manifold may consist of various combination of spacers, stainless steel grids, tungsten grids, electromotive force members, and stainless plates.

As to the grids, a combination of metal grids such as brass, bronze, copper, inconel, molybdenum, nichrome, nickel, palladium, platinum, silver, stainless steel, tantalum, titanium, tungsten, and colombium zirconium combination, can be used in a single or double thickness or the like. It will be noted that hydrocarbon fossil fuels, depending on the specific gravity of the fuel, determine the side of the molecules. Thus, when the molecule is in the influence of the carburetor electromotive force field and ions, this molecule can be expanded and energized allowing an internal combustion engine to operate on other fossil fuels besides gasoline such as kerosene, diesel oil, mineral spirits, or a mixture or combination thereof.

With further reference to the jets, it will be noted that all carburetors have jets, and it is the function of a jet to determine the rate of flow of gasoline through a carburetor. In actual practice, jets are numbered by the diameter of the hole in the jet, and the number is made in reference to a thousandths of an inch. For example, a number **63** jet is larger than a **55** jet, although the jets' outer configuration is the same size and thread, so that the only difference between these two jets is eight one-thousandths of an inch. It has been discovered that the carburetor electromotive force field of the present invention under the base of the carburetor installed on an engine can operate on a smaller sized jet and still allow sufficient power and fuel air mixture ratio to obtain the power range within the operation limits of the engine.

In other words, it is impossible to put a rate of flow of gasoline through a smaller jet in volume at the same pressure as a larger jet. Therefore, this alone is an energy-saving and conservation of gasoline feature. Without the smaller jets in the carburetor and the carburetor electromotive force field installed, the user will get additional power from the engine. With smaller jets and the present invention, additional power derived from the gasoline is forfeited, and the engine is placed back or close to its original programmed power curve to allow the operator of the vehicle to still have control with power reserve for passing. In the case of a carburetor without removable jets in order to restrict the volume of gasoline flow through the carburetor, it is necessary to plug these jets with solder or like material and redrill these jets to a smaller size orifice or aperture.

As to barometric pressure, according to the barometric pressure and humidity, pressure and humidity has an effect on the carburetor electromotive force field. Pressure and humidity determine the rate of energizing the hydrocarbon molecule. Low pressure and high humidity make for a smoother running engine. High pressure and high humidity makes a notable change which can be distinguished by the operator of the vehicle. It is believed that a low temperature, medium humidity, and high or low pressure arrangement gives more heat energy release from the hydrocarbon molecule with the carburetor electromotive force field utilized.

As to the resistor and magnets, this part of the device is located between a top and bottom grid, as shown in the drawings, and it occupies this space for several reasons. First, to add kinetic energy to the hydrocarbon molecule, and second it serves to heat the top and bottom grids, and third, it provides a means of confining the magnetic radiation from the resistor. The magnets such as the magnets **47** and the magnets **71** placed in the resistor which are opposing each other prevent a magnetic blowout of the radiation force field. It also with the magnetic radiation force field confined in a space where the velocity of gases pass through, these gases are subject to radiation, heat (kinetic energy), and turbulence. There is a means for an electrical connection on one side of the resistor and a means for an electrical connection on the ground side of the resistor, as indicated by the numeral **48, 49** or **50.** The electrical requirements can range from **6** to **24** volts at a rate of **10** amperes. The space of this part encompasses the full base of the carburetor configuration whether it be a one barrel, a two barrel or four barrel carburetor, or a plurality thereof. Power is supplied to the resistor by way of a **16** gauge or larger wire connected to the accessory side of the ignition switch, as indicated by the numeral **48** in FIG **6.** Good starting procedure of an engine installed with the present invention, will consist of turning on the ignition switch, wait approximately **10** seconds, pumping the accelerator several times, and crank the engine. It will be noted that the engine will start and run and perform immediately, and respond the same as a warmed up engine. With this cranking procedure, even on cold days, a cold engine start on the third cylinder will be accomplished.

In conclusion, the present invention will function on poorly tuned engines or engines requiring mechanical attention, and will also improve the efficiency of well tuned engines, so that increased gas mileage will result whether regular or high test gasoline or fuel is being used. Further, the present invention will permit the use of other types of fuel, such as **50—50** kerosene and regular gasoline mixture, as well as the use of diesel oil. It is to be noted that increased energy utilization is provided, between **25** and **30** percent with the use of the present invention.

The various components such as the hoses are made of plastic, neoprene or the like to keep the parts insulated from metalso that ions will not be attracted and discharged on the nearest surface before reaching the carburetor venturi.

While a preferred embodiment in accordance with the present invention has been illustrated and described, it is understood that various modifications may be resorted to without departing from the spirit and the scope of the appended claims.

We claim:

1. In an internal combustion engine, an intake manifold, a carburetor connected to said intake manifold, a distributor, and means for conveying ionized air from the distributor to said carburetor.

2. The structure as defined in claim **1,** wherein said means comprises a hose having one end connected to said distributor, and a tube connecting the other end of the hose to the carburetor.

3. The structure as defined in claim **2,** wherein said carburetor includes a base, and electrical resistance means in said base.

4. The structure as defined in claim **3,** wherein said electrical resistance means comprises a resistor coil, and magnets contiguous to said coil.

5. The structure as defined in claim **4,** wherein said base includes a gasket, spacer, and plates having wire mesh grids therein.

6. In an internal combustion engine, including an intake manifold, a carburetor and a distributor, said distributor including a cap and a housing, the rotor button rotatably mounted in said distributor, a plurality of contacts for selective coaction with said rotor button, means for conveying ionized air from the distributor to the carburetor, said carburetor including a venturi section, said carburetor including a base provided with an apertured gasket, an apertured spacer below said gasket, a grid plate below said spacer having wire grids therein, an electromotive force plate below said grid plate, and said electromotive force plate having a slot therein provided with a resistor coil extending therethrough, a plurality of magnets mounted in said electromotive force plate on opposite sides of said resistor coil, electrical connections on said electromotive force plate, a grid plate below said electromotive force plate, and said last named grid plate having wire grids therein, and jet means connected to said carburetor.

7. The structure as defined in claim **6,** wherein the means for conveying ionized air from the distributor to the carburetor includes a line having one end operatively connected to the distributor, and a tube connecting one end of the line to the venturi section of the carburetor.

* * * * *