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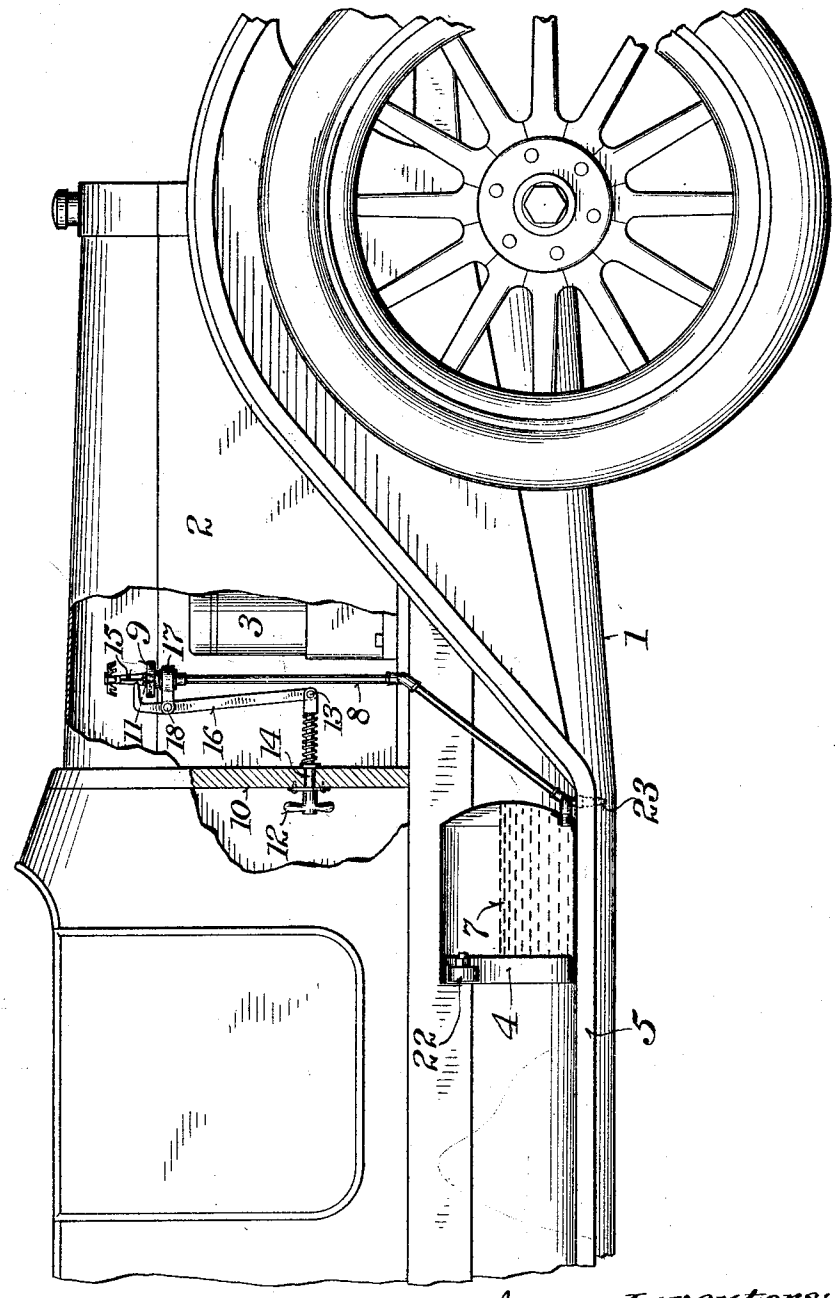
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J. B. & O. R. ERWIN.

PROCESS OF AUTOMATICALLY EXTINGUISHING FIRES.

APPLICATION FILED MAR. 20, 1914.

1,130,719. **Patented Mar. 9, 1915.**



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UNITED STATES PATENT OFFICE.

JAMES B. ERWIN AND ORLANDO R. ERWIN, OF MILWAUKEE, WISCONSIN.

PROCESS OF AUTOMATICALLY EXTINGUISHING FIRES.

1,130,719. Specification of Letters Patent. Patented Mar. 9, 1915.

Application filed March 20, 1914. Serial No. 825,958.

To all whom it may concern:

Be it known that we, JAMES B. ERWIN and ORLANDO R. ERWIN, citizens of the United States, residing at the city of Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Process of Automatically Extinguishing Fires, of which the following is a specification.

Our invention relates to improvements in processes of automatically extinguishing gasolene or other liquid fires in automobiles and other motor driven vehicles, and it pertains more especially among other things, first, to a system of devices for storing a quantity of carbon-tetrachlorid or other equivalent liquid which is substantially devoid of moisture, in a suitable receptacle in such vehicle, in such a manner that it will be automatically released and discharged upon a heated surface of the motor or its inclosure as soon as the heat in such inclosure has reached a predetermined temperature, whereby such liquid is almost instantaneously converted, by the heat from such surface, into a fire extinguishing gas, and the fires in such vehicle are extinguished.

While our process is equally adapted to be used with a variety of motor driven vehicles, the same is hereinafter shown and described as used in connection with an automobile.

Our process is further explained by reference to the accompanying drawing which represents a front portion of an ordinary automobile, part in section, provided with a system of devices by which our process is carried out. By the accompanying drawing, the fire extinguishing agent is shown as located on a lower plane than the motor, and when so located the fire extinguishing liquid is adapted to be discharged from its containing receptacle by pneumatic or other pressure.

The accompanying drawing represents a side view of an automobile, part broken away, provided with the fire extinguishing system with which our process herein described is carried out.

The several parts of our system are referred to by reference numerals.

1, is a drip-pan of ordinary construction which is located below the motor, 2, is a hood which is also of ordinary construction, and the same is adapted to cover the motor on all sides, except the bottom, whereby, a fire extinguishing gas generated in said hood, is confined to the seat of combustion around said motor.

3 represents a motor by which the vehicle is driven, and the same is adapted to be operated by gasolene or other combustible liquid.

4 is a receptacle for the fire extinguishing agent. The receptacle 4 is preferably located below the motor and may be supported as shown on the foot-board 5. The receptacle 4 is preferably provided with an air pump connection 23, through which it is supplied with air in the ordinary manner. The air forced into the receptacle 4, accumulates upon the surface of the fire extinguishing agent 7, whereby, when a fire occurs, the fire extinguishing agent is automatically and quickly forced from said receptacle by the expansive pressure of the air therein, through the duct 8, and the discharge nozzle 9, upon the heated surface of the motor or its inclosure, whereby such liquid is quickly converted into a fire extinguishing gas, which completely fills the hood and floods the motor, whereby all fires in the automobile are quickly extinguished. The nozzle 9, is adapted to be both manually and automatically opened. It is manually operated by drawing upon the handle 12. The handle 12 is connected with the valve 11, through the rod 14, pivotal bolt 13 and lever 16. The lever 16 is pivotally supported from a stationary bracket 17 by the pivotal bolt 18, and the end 16′ of said lever opposite said pivotal bolt 13 is adapted as the handle is drawn outwardly or away from the dash-board 10 to contact with the fusible strut 15, whereby said fusible strut 15 is broken and the valve 11 is released, when the fire extinguishing liquid is quickly discharged upon the heated surfaces by which it is converted into a fire extinguishing gas, whereby, the fire in the motor inclosure is extinguished. In view of the fact that a fire may sometimes occur without being noticed by the operator, we have provided automatic means for releasing said valve 11, and to accomplish such object, the coöperating parts of the strut are connected together by a fusible alloy, whereby, as soon as the heat in the motor inclosure has reached a predetermined temperature, the members of such strut which are, as stated, connected together by a fusible alloy, will become separated, whereby the valve 11, will be automatically released, when the fire extinguishing liquid

will be free to escape as previously described. The receptacle 4 is preferably provided with an ordinary pressure gage 22, by which to determine when the desired pressure upon the fire extinguishing agent has been reached.

While alcohol, kerosene, gasolene and a variety of other kinds of liquid fuel may be used for generating power for brevity of description, we have hereinafter referred to the liquid employed as a combustible power liquid.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The process of extinguishing fires in internal combustion motor hoods, consisting in storing in the vicinity thereof a fire extinguishing liquid capable of rapid volatilization under the influence of heat to produce a fire extinguishing gas, utilizing the heat of a fire to release such liquid, discharging the same upon the preheated motor surfaces and utilizing the heat of such surface and of the fire to vaporize such liquid and fill the hood with said fire extinguishing gas.

2. The process of extinguishing fires upon and about inclosed, normally heated surfaces, consisting in storing an inelastic, gas producing, fire extinguishing liquid in a suitable receptacle under pressure of an elastic fluid, utilizing the heat of a fire to release said liquid and cause its discharge upon the said normally heated surfaces and utilizing the heat of the fire and of said surfaces to convert said liquid into a fire extinguishing gas blanket enveloping said inclosed motor surfaces.

3. The herein described process of extinguishing fires in a vehicle carrying a normally heated motor, consisting in storing a fire extinguishing liquid in a suitable receptacle upon said vehicle, utilizing the heat of the fire to release said liquid to permit its discharge directly upon said heated motor and thereby converting said liquid into a fire extinguishing gas whereby the fire is extinguished.

In testimony whereof we affix our signatures in the presence of two witnesses.

JAMES B. ERWIN.
ORLANDO R. ERWIN.

Witnesses:
ALICE J. MCKERIHAN,
IRMA D. BREMER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."