

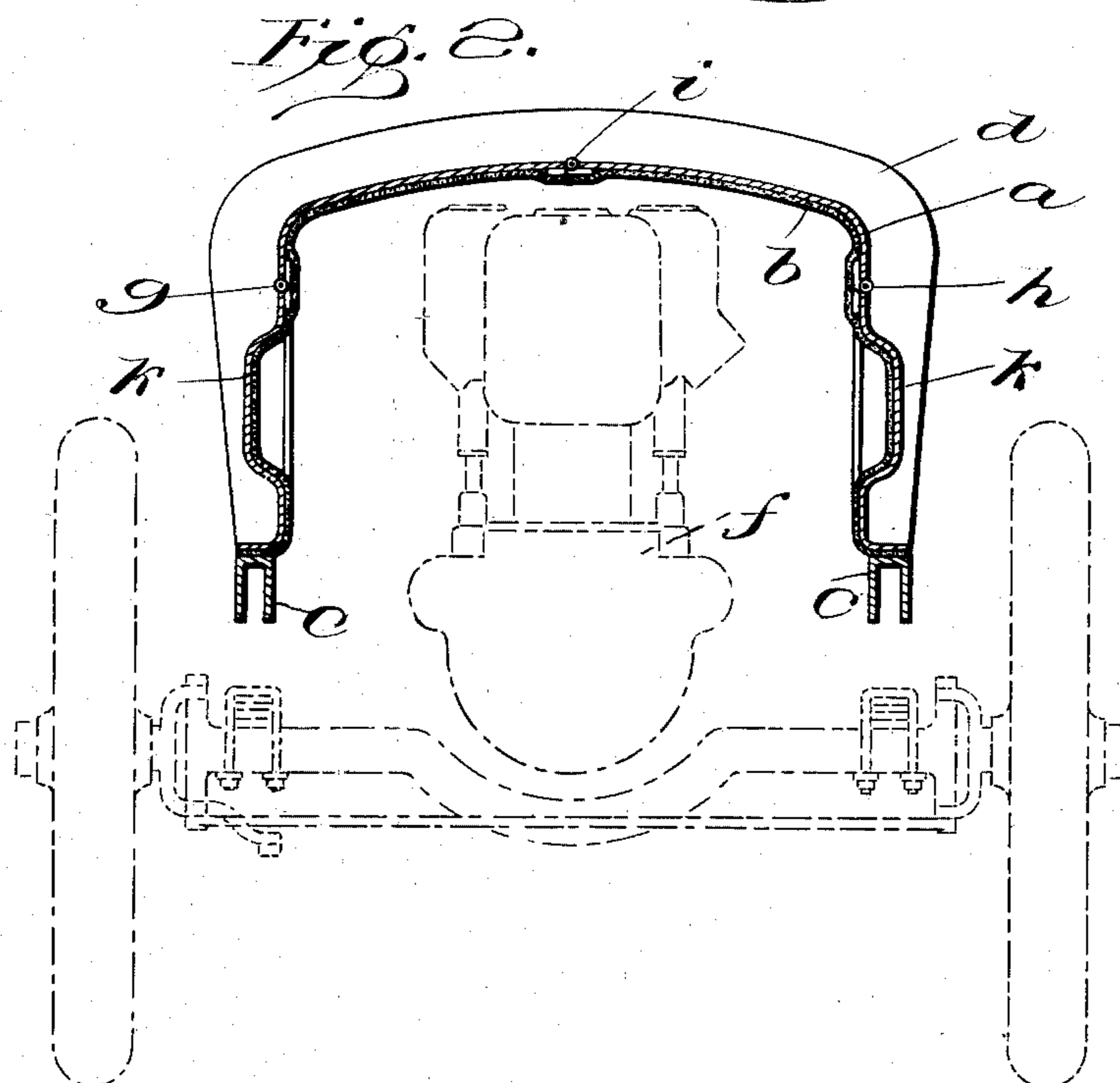
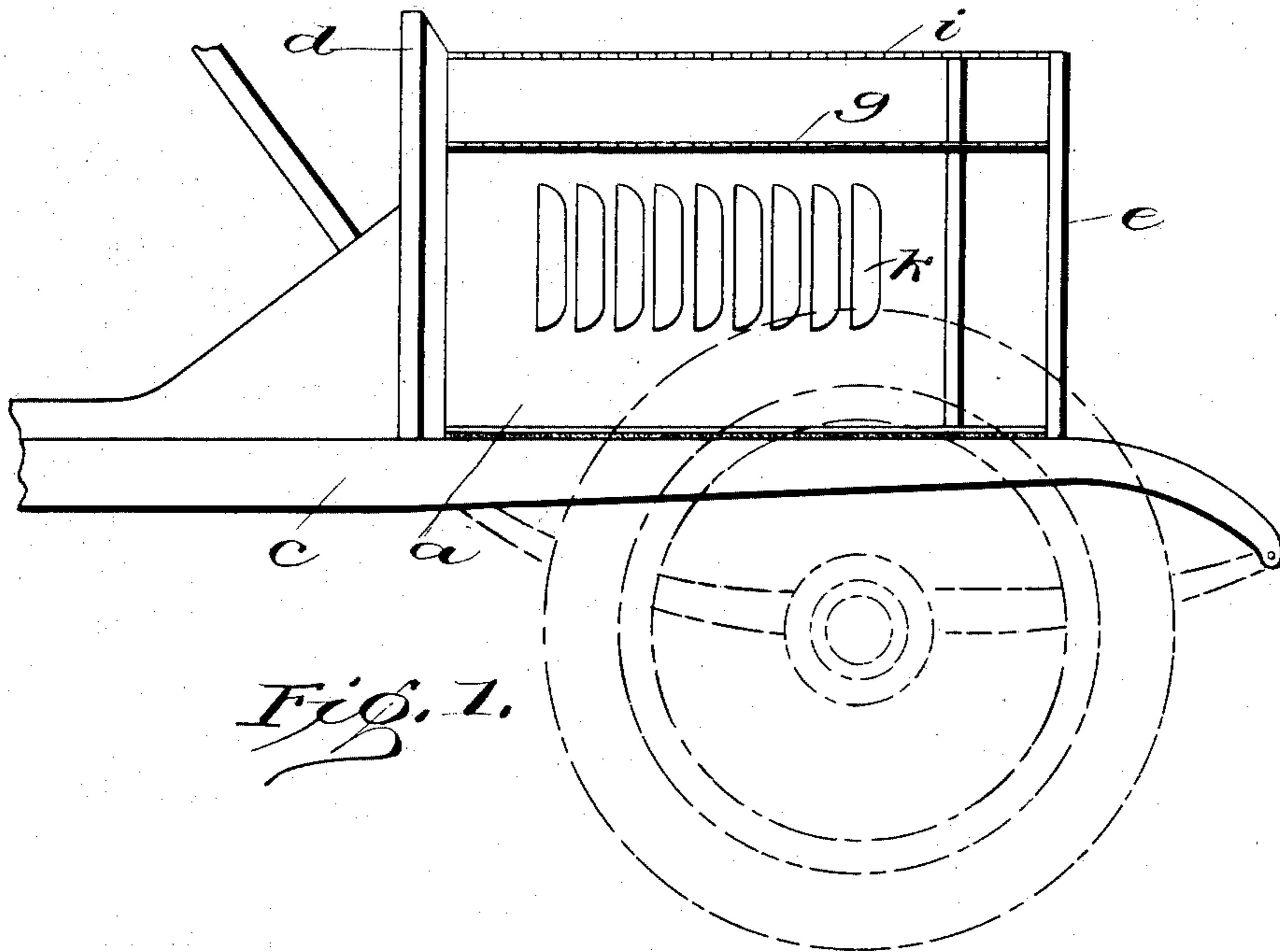
No. 864,702.

PATENTED AUG. 27, 1907.

J. SHERWIN.

BONNET FOR MOTOR VEHICLES.

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BONNET FOR MOTOR-VEHICLES.

No. 864,702.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed March 3, 1906. Serial No. 303,999.

To all whom it may concern:

Be it known that I, JOHN SHERWIN, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Insulated Bonnets, of which the following is a full, clear, and exact description, whereby any one skilled in the art may make and use the same.

The invention relates to automobiles and more particularly to that part of such a structure commonly known as the "bonnet" or inclosing casing for the engine and various mechanical parts.

Ordinarily, the engine which develops considerable heat, is arranged within a compartment and inclosed to a greater or less extent by a metallic or other inclosing casing and, in many instances, as in the case of a hydrocarbon engine, apparatus is provided for securing a forced circulation of air to dissipate the heat from said casing. In present constructions, the engine is generally mounted at the fore part of the vehicle structure and in advance of a dash, while a radiator is carried at the extreme front. In such constructions the "bonnet" extends from the dash to the cooling device.

The objects of the invention are to provide a "bonnet" of the character described which will be completely insulated against the direct transmittal of heat or cold.

A further object of the invention is to provide a "bonnet" of the character described so interlined with insulating material as to preclude the possibility of overheating of the metallic bonnet and the consequent liability of its dressing or varnish becoming blistered or discolored.

Referring to the drawings:—Figure 1 is a somewhat diagramic view of the forward end of a vehicle. Fig. 2 is a cross-sectional view through the "bonnet".

While it has been common practice in the various arts to insulate compartments carrying heated apparatus and to provide insulation to prevent fire, the "bonnet" or covers which inclose engines of automobiles, have not been insulated and have been formed usually from sheet metal arranged in sections adapted to be turned back to expose the working parts of the engine or driving mechanism. In the common practice now employed such a sheet metal "bonnet" usually forms an inclosing casing at the forward end of the vehicle and overlies the engine cylinders and radiators provided for cooling the fluid which is usually employed to reduce the heat of the engine induced by the fire of the highly explosive gaseous mixtures. In ordinary practice such a metallic "bonnet" extends from the dash to or over the radiating coil at the forward end of the vehicle; and it is a general practice to employ a forced circulation of air through the coil and compartment for

dissipating such heat as radiates from the jacketed cylinders. It is not uncommon for this radiated heat to reach such temperatures as will blister the finish applied to the outer surface of the "bonnet", and, in almost every case, the heat is sufficient to cause deterioration of the finish to such an extent as to change its color and destroy the usual artistic beauties of the finish of the vehicle. In addition to this, great difficulty is experienced in the use of gasoline vehicles by freezing of the fluid which is circulated to cool the motors when the machine is standing during extreme weather. By using the insulating material within the "bonnet", heat is maintained for a much longer period of time, and the liability of freezing is materially reduced. In the same manner the insulating material applied to the "bonnet" prevents overheating of the engine when running and subjected to high temperatures of the sun in summer or in tropical climates.

In carrying out the invention there is applied to the entire inner surface of the "bonnet" a lining of insulating material *b*. This material is firmly cemented to the metallic "bonnet" and covers every portion of it. The preferred method of applying insulation is to cement it in woven or fabric form to the surface; or, obviously, it may be applied by riveting or any other approved method of securing one material to another. The "bonnet" as *a*, as shown herein, is of the usual hinge form mounted upon the forward end of the chassis frame *c* between the dash *d* and the radiator *e*. This "bonnet" covers the engine *f* which as indicated, is of the liquid hydrocarbon type.

Hinges *g*, *h* and *i* are provided, which extend the entire length of the "bonnet" and permit raising it from either or both sides to permit access to the compartment within which the engine is mounted.

Of course, it is understood that the chassis frame, a portion of which is shown, extends rearwardly and is spring supported over a rear axle as well as over the axle *i* indicated as the forward axle; and said chassis supports the various parts of the driving mechanism of the vehicle as well as the body.

The form of "bonnet" herein illustrated, is provided with louvers *k*, providing air passages to ventilate the motor compartment.

It will be seen from the above description that there are material advantages resulting from the use of a completely interlined "bonnet". First, the temperatures resulting from the use of the engine under normal conditions, may be maintained and the ventilating and heat dissipating practice, including the fan-blower and circulated water, will be fully effective under the given designs. Second, temperatures to prevent freezing will be maintained within the compartment under atmospheric conditions of low temperatures for a con-

siderable time, even though the engine is not in operation, as the heat radiated from the engine will not be quickly dissipated. Third, the insulation of the "bonnet" will prevent overheating of the apparatus when
5 the machine is run under atmospheric conditions of high temperatures, and the sun's rays will transmit comparatively little heat to the interior of the compartment.

10 What I claim as my invention and desire to secure by Letters Patent is:—

1. As an article of manufacture, a "bonnet" for automobiles consisting of a metallic casing having an insulated

material applied to and completely covering its inner surface and intimately united therewith.

2. As an article of manufacture, a "bonnet" for automobiles composed of metal having movable sections, the whole structure interlined with an insulating material intimately united therewith. 15

3. As an article of manufacture, a "bonnet" for automobiles comprising a metal casing having hinged sections, and with its entire inner surface covered with an asbestos lining intimately united therewith. 20

JOHN SHERWIN.

Witnesses:

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