No. 878,454. PATENTED FEB. 4, 1908.

J. CAILLET.

APPARATUS FOR COOLING THE BRAKES OF MOTOR ROAD VEHICLES.

APPLICATION FILED SEPT. 10, 1907.

2 SHEETS—SHEET 1.

FIG_2_

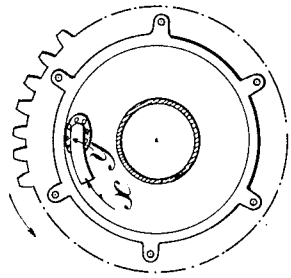
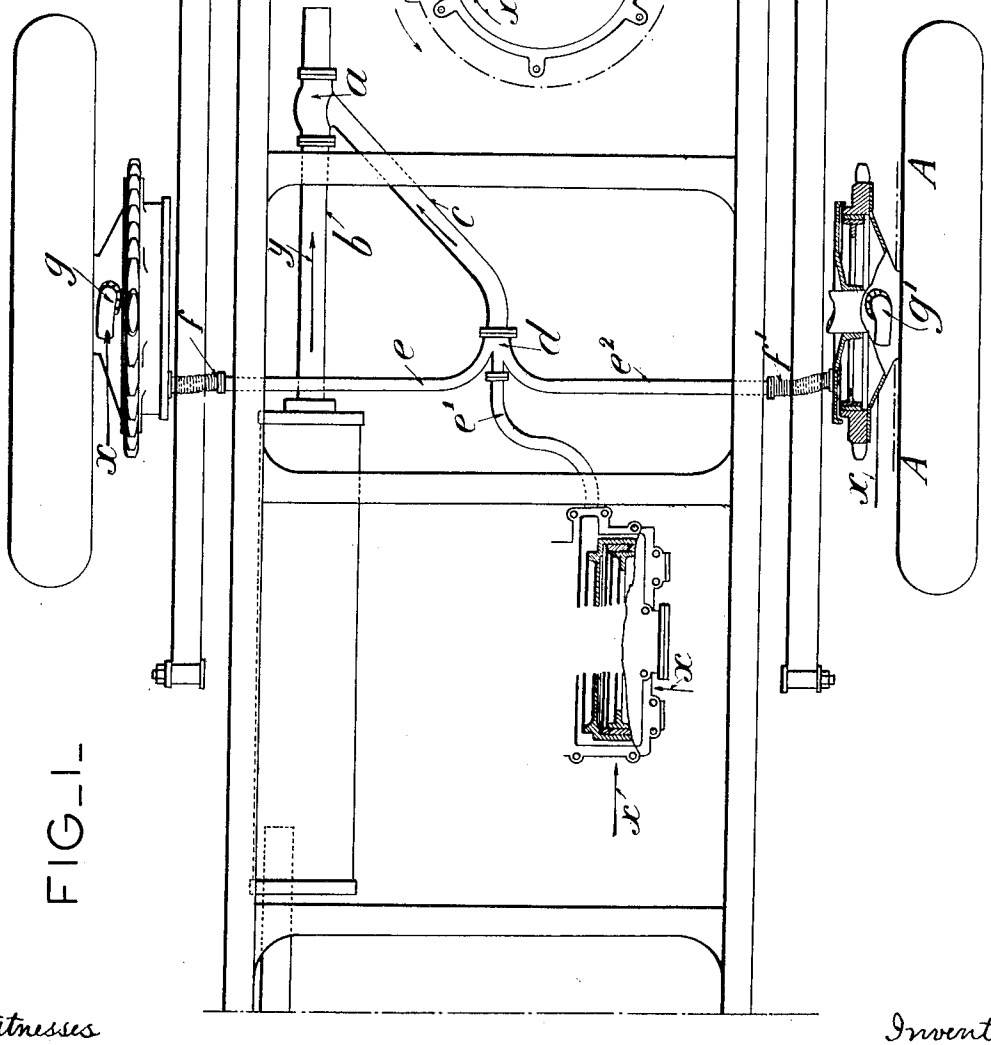


FIG_1_



Witnesses
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Inventor.
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2 SHEETS—SHEET 2.

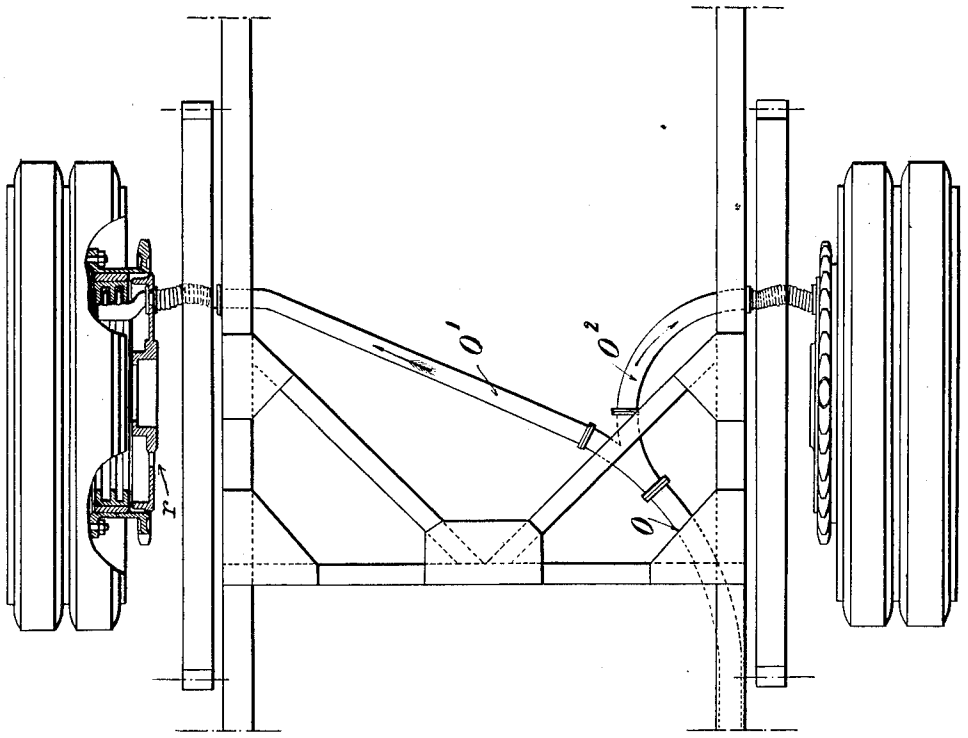
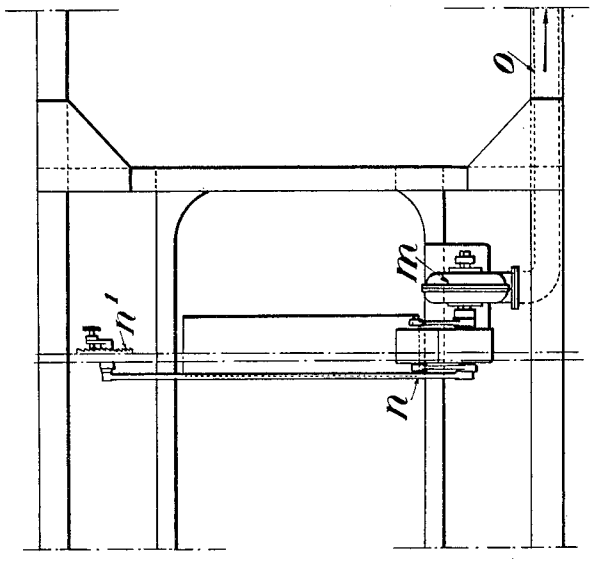


FIG. 3.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR COOLING THE BRAKES OF MOTOR ROAD-VEHICLES.

No. 878,454. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed September 10, 1907. Serial No. 392,126.

To all whom it may concern:

Be it known that I, JULES CAILLET, citizen of France, residing at 66 avenue de la Grande Armée, Paris, in the Republic of France, have invented a certain new and useful Improved Apparatus for Cooling the Brakes of Motor Road-Vehicles, of which the following is a specification.

This invention relates to apparatus for cooling the brakes of motor road vehicles, the method substantially consisting in producing the cooling effect by means of an active circulation of air produced either by an ejector operated by the exhaust gases of the steam or explosion motor of the vehicle or by any known system of pump or blower operated in a continuous or intermittent manner by the vehicle motor which may be driven by any suitable source of power.

An embodiment of the invention is shown in the accompanying drawing in which

Figure 1 shows an arrangement in which an ejector is operated by the waste motor gases. Fig. 2 is a detail sectional view on the line A A of Fig. 1. Fig. 3 shows an arrangement operated by a pump or blower.

Referring to Figs. 1 and 2, the apparatus comprises an ejecting chamber *a* placed in the waste pipe *b*, and a pipe *c* forming an air collector and divided at the point *d* into three or more branches *e*, e^1, and e^2 leading to the brakes. For the rear brakes the movability of the hubs must be considered and the pipes *e* e^2 which are practically rigid with the vehicle frame are provided with flexible metallic connecting pipes *f* and f^1. On the exterior protecting drums of the brakes are placed two fresh air inlets *g* g^1, arranged in such a manner that air is forced to pass thereinto by the rotation of the wheels during forward running as indicated in Fig. 2. In the drawing the arrows *x* indicate the inlet of air and the arrow *y* the exhaust of the motor gases.

The operation of this apparatus is obvious. The waste gases passing through the pipe *b* produce a partial vacuum in the ejector *a* which is immediately supplied with air from the collector *c*, this air being admitted through the various brake drums. Since the entrance of air into said drums is particularly facilitated by the arrangement described its circulation is very rapid and it cools by contact the brake surfaces heated by friction.

Referring to Fig. 3 the apparatus comprises a pump or blower *m* operated in a continuous or intermittent manner by means of the fly wheel of the motor m^1 by mechanism *n* n^1. The air is circulated or forced along through the pipes *o*, o^1, o^2, to the various brake drums. The operation of this form of apparatus is also very simple. The relatively fresh air enters into contact with the brake surfaces which become heated by friction, absorbs heat therefrom and returns to the atmosphere through suitable apertures *r* in the brake drums.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:

1. An arrangement for cooling the brakes of motor road vehicles comprising air pipes leading to the brake drums, flexible pipe sections connecting the air pipes to the drums, air holes provided on the brake drums, and means adapted to cause air to pass through the air tubes, substantially as described and for the purpose set forth.

2. An arrangement for cooling the brakes of motor road vehicles comprising air pipes, *e*, e^1, e^2, flexible pipe sections *f* f^1 connecting one end of the air pipes to the brake drums, an ejecting chamber *a* placed in the path of the exhaust gases, an air collector *c* into which lead the free ends of the air pipes and which leads itself to the ejecting chamber, and fresh air inlets *g* g^1 provided in each of the brake drums, substantially as described and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

JULES CAILLET.

Witnesses:
H. C. COXE,
LOUIS MOSES.