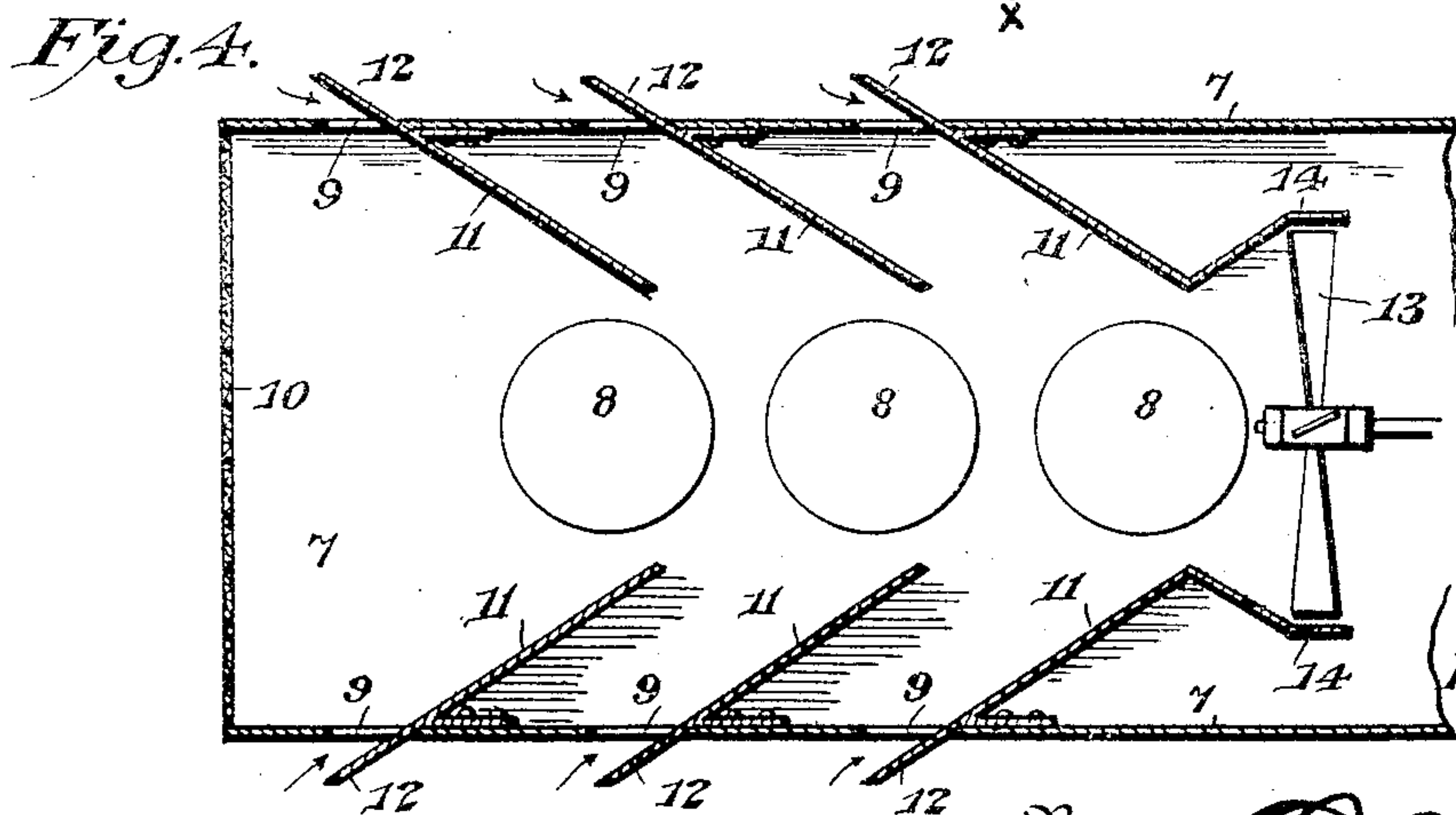
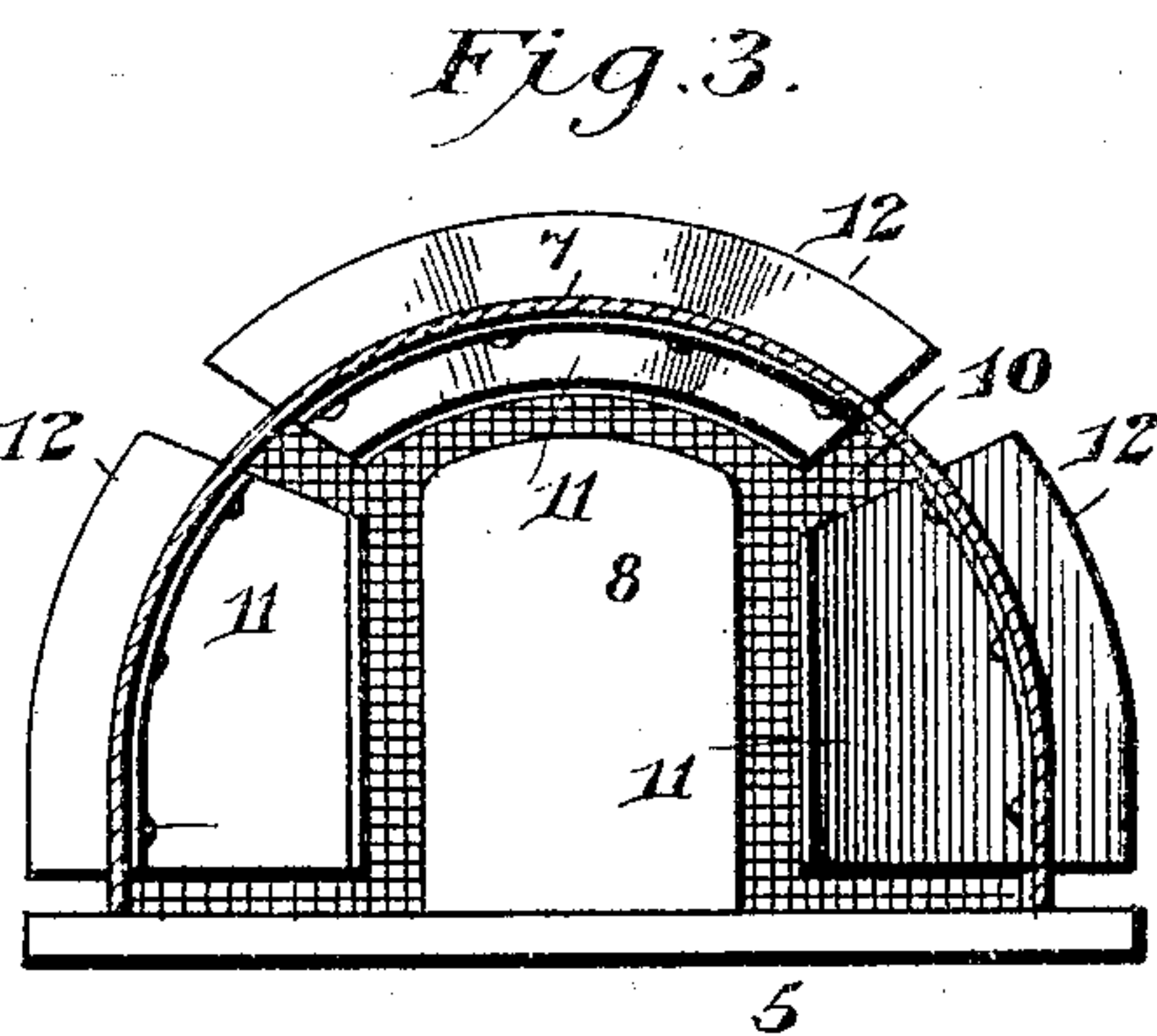
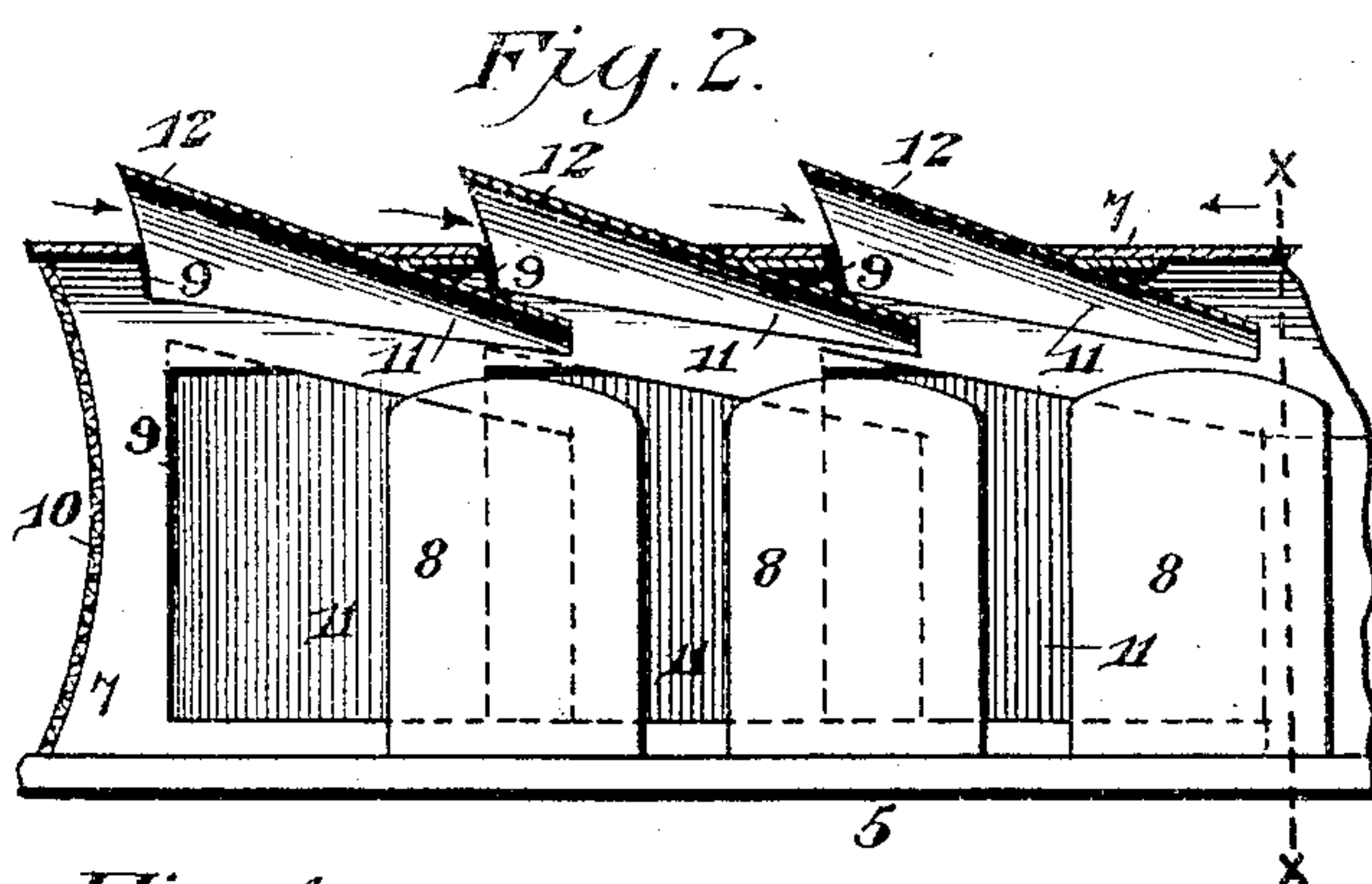
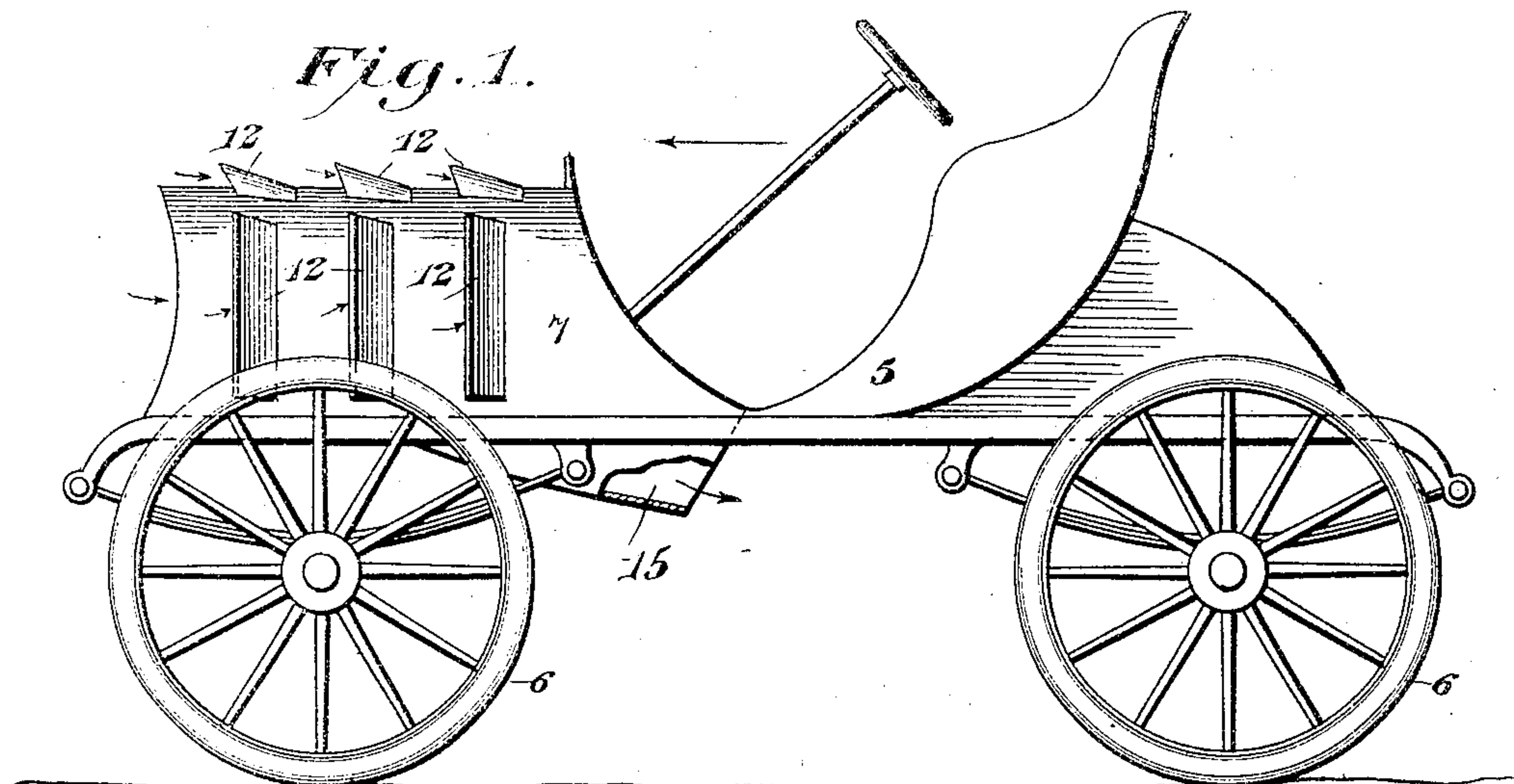


No. 778,455.

PATENTED DEC. 27, 1904.

R. C. LEWIS.
MOTOR VEHICLE.

APPLICATION FILED APR. 19, 1904.



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MOTOR-VEHICLE.

SPECIFICATION forming part of Letters Patent No. 778,455, dated December 27, 1904.

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To all whom it may concern:-

Be it known that I, RALPH C. LEWIS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Motor-Vehicle, of which the following is a specification.

This invention relates to improvements in automobiles or self-propelled vehicles, and more particularly that class in which the motors are located in advance of the seats and are covered by a hood or bonnet, though said invention may perhaps be profitably employed in certain other types of machines.

The object is to provide simple, novel, and efficient means for directing the air about and over the motor-cylinders to keep the same in properly-cooled condition.

One embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a motor-vehicle, showing the improved hood. Fig. 2 is a vertical longitudinal sectional view through said hood. Fig. 3 is a transverse sectional view taken on the line *xx* of Fig. 2. Fig. 4 is a horizontal sectional view.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

In the embodiment illustrated the body of the vehicle is designated generally by the reference-numeral 5 and is mounted on the usual wheels 6. A hood 7 is located on the front portion of the vehicle and covers the usual motor-cylinders, (shown in outline and designated 8,) said cylinders being preferably disposed in tandem relation. The top and side walls of the hood or bonnet 7 are provided with sets of air inlet-openings 9, while the front of the same may be provided with a screen, as 10. Air-deflectors in the form of plates 11 are carried by the hood 7 and may be secured thereto in any suitable manner desired. They are preferably formed of sheet metal, though the material is not an important feature of the invention. Said plates are arranged in sets and inclined inwardly and rearwardly. Their outer ends 12 project beyond the outer face of the hood, while the in-

ner ends of each set are located contiguous to the rear portion of one of the cylinders, but in spaced relation thereto. It will thus be apparent that these deflector-plates converge to form within the hood a contracted passage-way for air and that the various inlet-openings 9 act as feeders to said passage-way. For the purpose of effecting an artificial draft through the passage-way when the vehicle is at a standstill and the motors are running a fan 13 is preferably employed, which is journaled in the rear portion of the hood and is connected in any suitable manner with the motors. This fan is located within a suitable casing 14, which connects with the rear end of the air passage-way in which the cylinders 8 are located, as shown in Fig. 4. The air passing through the hood discharges through a downwardly-extending spout 15, located beneath the body of the vehicle and shown in Fig. 1.

It will be apparent that when the automobile is running in a forwardly direction, as indicated by the large arrow in Fig. 1, air will be caught by the projecting ends of the deflector-plates and directed into the hood about the rear and warmer portions of the cylinders, this air finally escaping through the spout 15. The drafts thus created keep said cylinders in properly-cooled condition and are augmented by the action of the fan 13, which fan is of particular value when the machine is at a standstill, as an artificial draft is then created sufficient to maintain the cylinders at a safe temperature.

It will be apparent from the above description when taken in connection with the drawings that a hood or bonnet as thus constructed affords simple means for cooling the motors, which means will not materially affect or detract from the appearance of the vehicle. Moreover, it obviates the necessity of water-jackets and their necessarily comparatively involved mechanism.

The invention is capable of use on bonnets or hoods of various styles and configurations and with different motors. Consequently a very simple form of hood is herein illustrated, and the motor-cylinders have been shown merely in outline. Furthermore, the particu-

lar shape of the deflectors may be changed, and tubes, for instance, may be employed instead of flat plates extending from the exterior of the hood or bonnet to the heated portions of the cylinder.

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

1. The combination with a vehicle, of a hood mounted thereon, a motor-cylinder located within the hood, and a rearwardly and inwardly inclined deflector having its outer end projecting from the exterior of the hood and its inner end located directly contiguous to, but spaced from the cylinder for directing air against the same.

2. The combination with a vehicle, of a hood mounted thereon and having openings in its opposite side walls, a motor-cylinder located within the hood, and rearwardly and inwardly inclined deflector-plates projecting forwardly outside the head, extending through the openings and terminating at points contiguous to, but spaced from the cylinder.

3. The combination with a vehicle, of a hood mounted thereon and having openings in its top, a rearwardly and downwardly inclined deflector extending above the hood and within the same, and a motor-cylinder located within the hood just below and in spaced relation to the inner end of the deflector.

4. The combination with a motor-vehicle, of a hood mounted thereon and having openings in its side and top walls, rearwardly and inwardly inclined deflectors extending from points exterior of the hood through the rear portions of the openings and within said hood, said deflectors having their inner ends located in substantially the same plane, and a motor-cylinder located between the inner ends of said deflectors directly contiguous thereto but spaced therefrom.

5. The combination with a motor-vehicle, of a hood mounted thereon, a plurality of convergently-disposed rearwardly-inclined deflector-plates carried by and extending within the hood, and a motor-cylinder located between the convergent ends of the plates.

6. The combination with a motor-vehicle, of a hood mounted thereon, a plurality of sets of

convergently-disposed rearwardly-inclined deflectors carried by and extending within the hood, said sets being disposed one behind the other, and a plurality of motor-cylinders arranged in tandem within the hood between the convergent ends of the deflectors.

7. In a motor-vehicle, the combination with a hood, of a motor located therein, deflectors for directing the air toward and against the sides of the motor, and a fan for creating a blast through the hood.

8. In a motor-vehicle, the combination with a hood, of a plurality of motor-cylinders located within the hood and disposed in tandem relation, air-deflector plates extending at an inclination inwardly toward the several motor-cylinders, and an exhaust-fan for creating a current of air through the hood.

9. The combination with a motor-vehicle, of a hood mounted thereon, said hood having an open front and openings in its side walls, a motor located within the hood, and forwardly-projecting deflectors extending beyond the side walls of the hood outwardly, inwardly and rearwardly through the openings to points contiguous to, but spaced from the motor, said deflectors directing the air passing through the open front and through the side openings to said motor.

10. The combination with a motor-vehicle having a hood provided with an open front, of a downwardly and rearwardly extending discharge-spout communicating with the rear portion of the hood, a fan for delivering air through said spout, a plurality of motors disposed in tandem within the hood, and a plurality of sets of deflectors extending forwardly outside the hood and inwardly and rearwardly inside the same to points contiguous to the walls of the motor, said deflectors directing the air against said motor, and said deflected air being conveyed rearwardly through the hood and through the discharge-spout thereof.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RALPH C. LEWIS.

Witnesses:

MAMIE MEANS,

SAMUEL A. MERRILL.