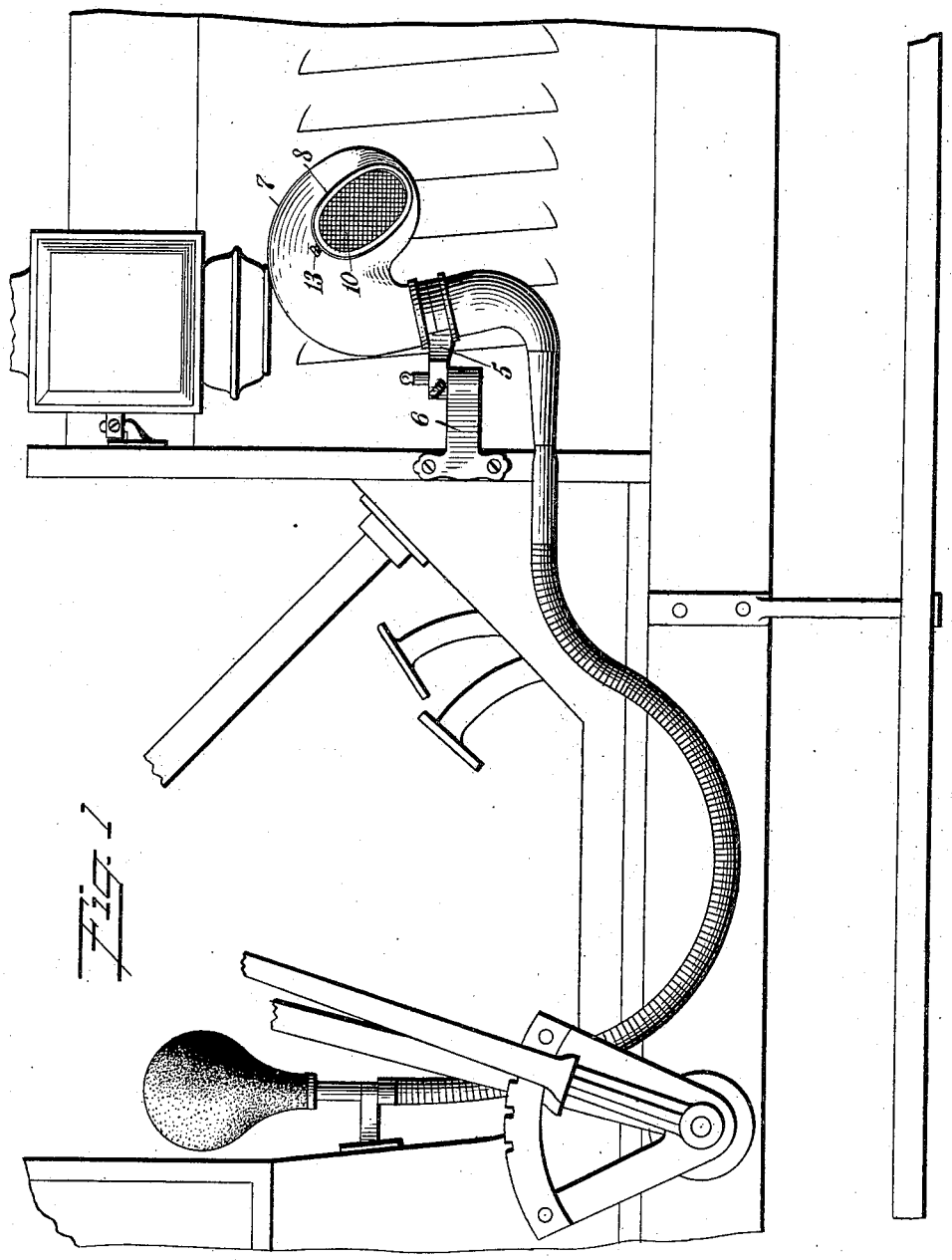
G. BRAF, A. GIRARDI & G. & S. OCCHINTO.

AUTOMOBILE HORN.

APPLICATION FILED NOV. 30, 1909.

981,526. Patented Jan. 10, 1911.

2 SHEETS—SHEET 1.

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2 SHEETS—SHEET 2.

Fig. 2

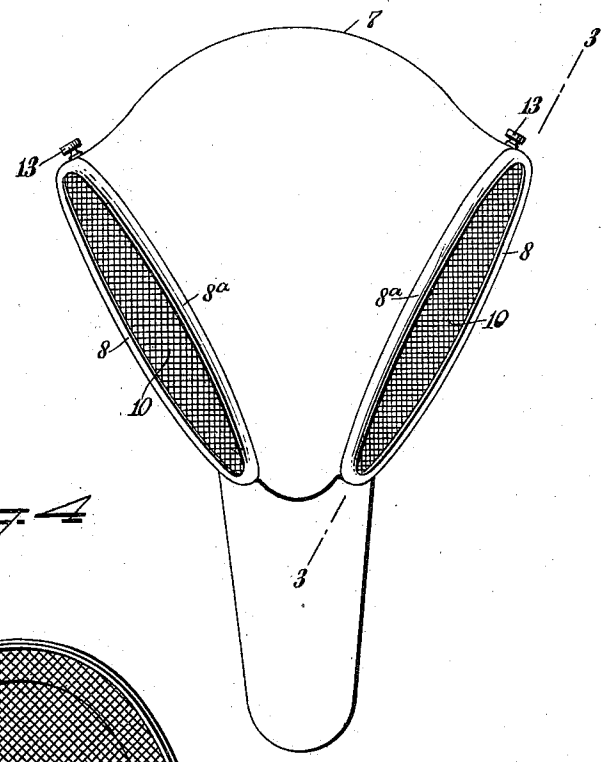
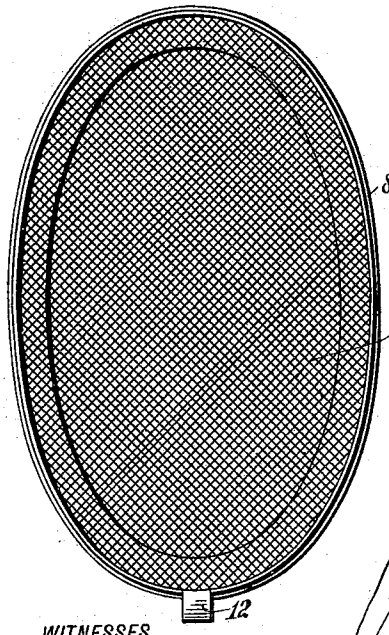



Fig. 4



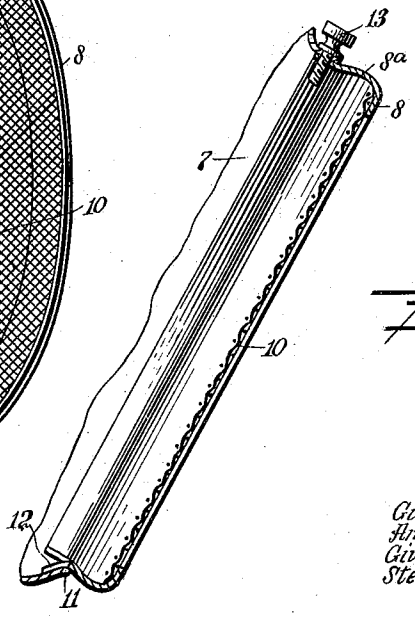




Fig. 3

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# UNITED STATES PATENT OFFICE.

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## AUTOMOBILE-HORN.

981,526. Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed November 30, 1909. Serial No. 530,587.

*To all whom it may concern:*

Be it known that we, GUSTAVE BRAF, ANTONIO GIRARDI, GIUSEPPE OCCHINTO, and STEFANO OCCHINTO, citizens of the United States, and residents of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Automobile-Horn, of which the following is a full, clear, and exact description.

The invention is an improvement in horns for automobiles, and has for its object to produce a horn by which the sound is amplified to a greater extent than in the conventional horn, and the tone improved, in addition to constructing the horn so as to shed and exclude the greater portion of the dust and throw the sound waves to both sides as well as forwardly.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of our improved horn as applied to an automobile; Fig. 2 is a front view of the horn; Fig. 3 is a section on the line 3—3 of Fig. 2; and Fig. 4 is an inner face view of one of the discharge opening covers.

The body or inner end portion of the horn is of the conventional construction, and is shown to be provided intermediate its length with a rearwardly-extending arm 5, which is supported to swing sidewise on a bracket 6. The head or discharge end 7, of the horn is enlarged and inclines downwardly and forwardly and is of bulbous form and relatively narrower at the bottom than at the top as viewed from the front, as shown in Fig. 2. The front of the head is closed and is provided at opposite sides with discharge openings facing slightly forwardly and downwardly, each discharge opening being preferably provided with a removable cover 8, which, as best shown in Fig. 3, is composed of a marginal frame having a covering of fine net or gauze 10 to exclude the dust, the marginal frame of the cover having the outer portion expanded slightly, as indicated at $8^a$, to permit the insertion of the cover within the opening, and with the head of the horn around the discharge opening bearing flat on the upper portion of the cover frame and at the edge only about the lower portion of the frame, as indicated at 11. At this point the frame of the cover is constructed with an outwardly-bent tongue 12 adapted to bear flat against the inner face of and conform to the shape of this portion of the horn, whereby the lower portion of the cover cannot be withdrawn until the upper or opposite portion is first removed. To secure the upper portion of the cover in place, a screw 13 threaded therethrough and passing through the horn, is provided. With the covers in place, they are disposed at such an angle to the direction of travel that substantially no dirt or dust will pass into the horn through the discharge openings. The small quantity that does, however, find its way through the mesh largely falls therethrough to the outside in dropping to the bottom of the horn, and the remainder dropping to and collecting in the bottom of the head where it cannot pass into the horn's mouth, but is easily cleaned out by removing one of the covers.

We have found by experiment that the horn when constructed as shown and described not only excludes the dust but also amplifies the sound to a greater extent than the horn of customary construction, in addition to improving the tone, as well as directing the sound waves to the sides as well as forwardly.

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

1. A horn having an enlarged head closed at the front, with discharge openings at the sides, said openings lying in planes converging downwardly.

2. A horn having an enlarged head provided with discharge openings at the sides, said openings lying in planes converging downwardly and forwardly.

3. A horn having an enlarged head sloping toward the front and sides and provided with a discharge opening at the side, arranged in a plane downwardly, inwardly and forwardly inclined.

4. An automobile horn having discharge openings at the sides, each provided with a screen cover removably arranged, said

screen covers lying in planes converging downwardly and forwardly.

5. A horn having an enlarged head inclining forwardly and downwardly and of approximately pear-shape at the front, with the enlarged portion at the top, said head having discharge openings at the sides, and screen covers removably arranged over the openings and converging forwardly and downwardly.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GUSTAVE BRAF.
ANTONIO GIRARDI.
GIUSEPPE his × mark OCCHINTO.
STEFANO OCCHINTO.

Witnesses:
MICHAEL DE LUCIA,
NICOLA DI LALLA.