

A. ENGLAND.
 SUCTION AIR STRAINER.
 APPLICATION FILED JULY 1, 1907.

985,792.

Patented Mar. 7, 1911.

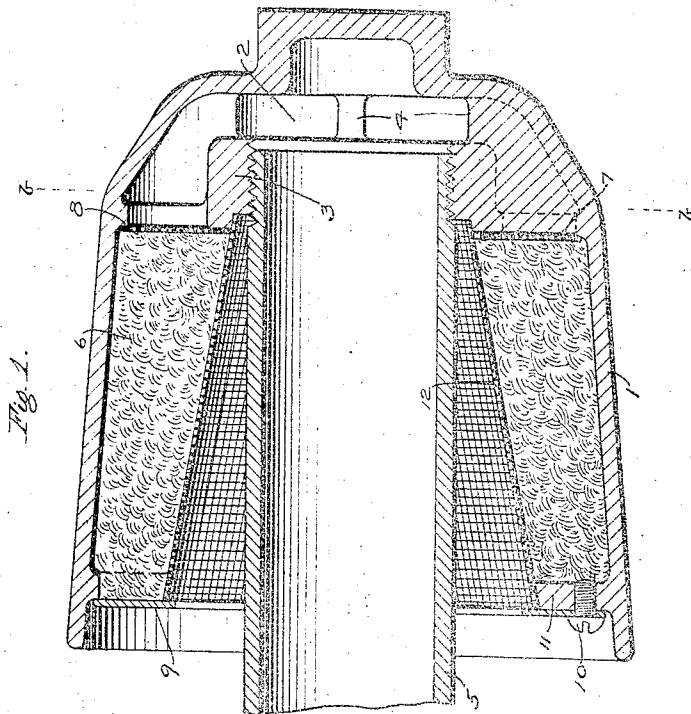


Fig. 1.

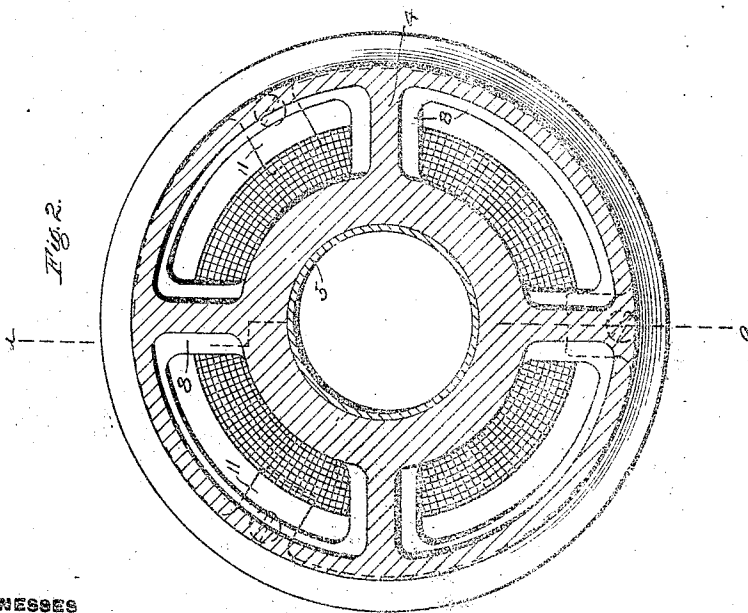


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

ALEXANDER ENGLAND, OF WILKINSBURG, PENNSYLVANIA, ASSIGNOR TO THE WESTINGHOUSE AIR BRAKE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SUCTION AIR-STRAINER.

985,792.

Specification of Letters Patent.

Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that I, ALEXANDER ENGLAND, a citizen of the United States, residing at Wilksburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Suction Air-Strainers, of which the following is a specification.

This invention relates to suction air strainers for air compressors, and particularly air compressors as applied to steam railway and electric traction and pressure brake equipments.

Suction air strainers, as ordinarily constructed, have the air suction inlet exposed to the weather, so that the same is liable to become clogged with ice or snow, thus interfering with the supply of air to the compressor. It has been proposed to provide a protecting cap adapted to envelop the suction inlet, and containing a filter material to catch dust or other substance which may be in the air.

The principal object of my invention is to provide an improved device of the above character, wherein the filter material presents a large air inlet surface, and which is compact, easily constructed and of few parts.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of one form of my invention taken substantially on line *a-a* of Fig. 2, and Fig. 2 a transverse sectional view taken on line *b-b* of Fig. 1.

According to the form of my invention shown in the drawing, a casing 1 is provided, the outer end of which is closed, forming an air chamber 2 to contain the air suction inlet. For this purpose, a nut 3 may be provided within the casing 1, near its closed end, which may be held in position by integral webs 4 connected to the casing 1. An air suction pipe 5, for supplying air to the compressor, has screw threaded engagement with the nut 3. Filter material 6, which may be curled hair or other suitable material, is preferably arranged within the casing and located rearward of the mouth of said inlet pipe 5. The filter material is held in place transversely by an upper ring 7 of perforated sheet brass or other foraminous material, permitting air flow therethrough, and

may be held in place by ledges 8 projecting inwardly from the walls of the casing and the webs 4. A lower ring 9 of sheet metal, to hold the filter material in place, is secured by screws 10 to lugs 11 projecting inwardly from the casing. Longitudinally, the filter material is maintained in place by a preferably tapering cylinder 12 of perforated sheet brass or other foraminous material, and may be secured in place by the lower ring 9. By this construction a longitudinal air chamber is formed, thereby presenting a large suction inlet surface of the filter material.

It will now be apparent that by my construction a casing of small diameter may be employed, while permitting a large flow of air therethrough.

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

1. An air strainer for air compressors, comprising a casing having a closed end adjacent the suction inlet and the opposite end open to the atmosphere, filter material contained therein, and a centrally arranged annular passage from which air is drawn through the filter material to the suction inlet.

2. An air strainer for air compressors, comprising a casing having a closed end forming an air chamber about the suction inlet and the opposite end open to the atmosphere, filter material arranged lengthwise in said casing, rearward of said suction inlet and having an annular longitudinally arranged passage from which air is drawn through the filter material.

3. An air strainer for air compressors, comprising a casing having a closed end forming an air chamber about the suction inlet, filter material arranged lengthwise in said casing, rearward of said suction inlet and a cone of foraminous material for holding the filter material in place and forming a centrally arranged air chamber, communicating with the atmosphere.

4. An air strainer for air compressors comprising a suction pipe, a cap member inverted over and secured to the inlet end of said pipe, thereby forming an air chamber

at the closed end of the cap member adjacent
the suction inlet, with the opposite end open
to the atmosphere, filter material arranged
in said cap member, and a retaining wall of
5 foraminious material for said filter material
through which air is taken from the atmos-
phere.

In testimony whereof I have hereunto set
my hand.

ALEXANDER ENGLAND.

Witnesses:

R. F. EMERY,
WM. M. CADY.