

No. 637,383.

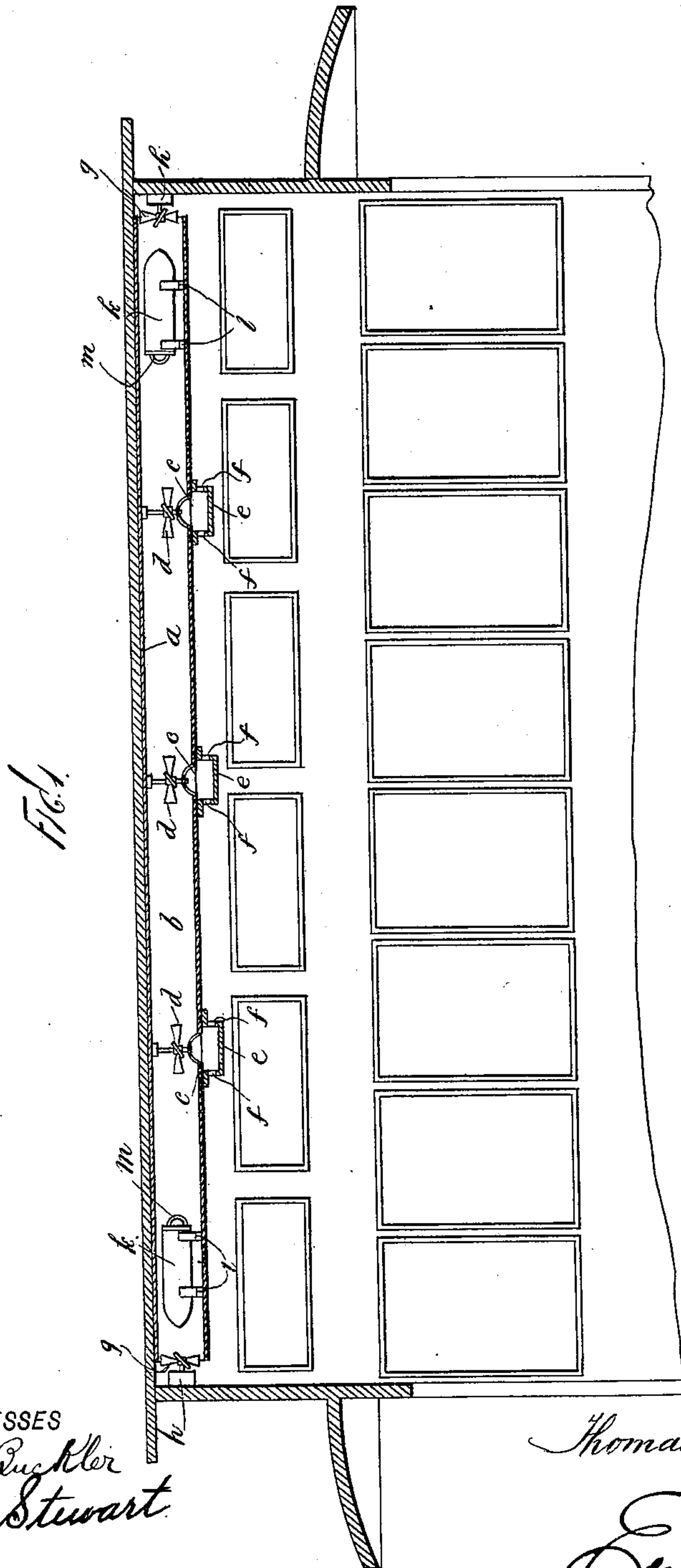
Patented Nov. 21, 1899.

T. H. GORE.  
AIR COOLING DEVICE.

(Application filed Apr. 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES  
John Buckler  
F. A. Stewart

INVENTOR  
Thomas Henry Gore  
BY  
Edwin J. L. L.  
ATTORNEYS

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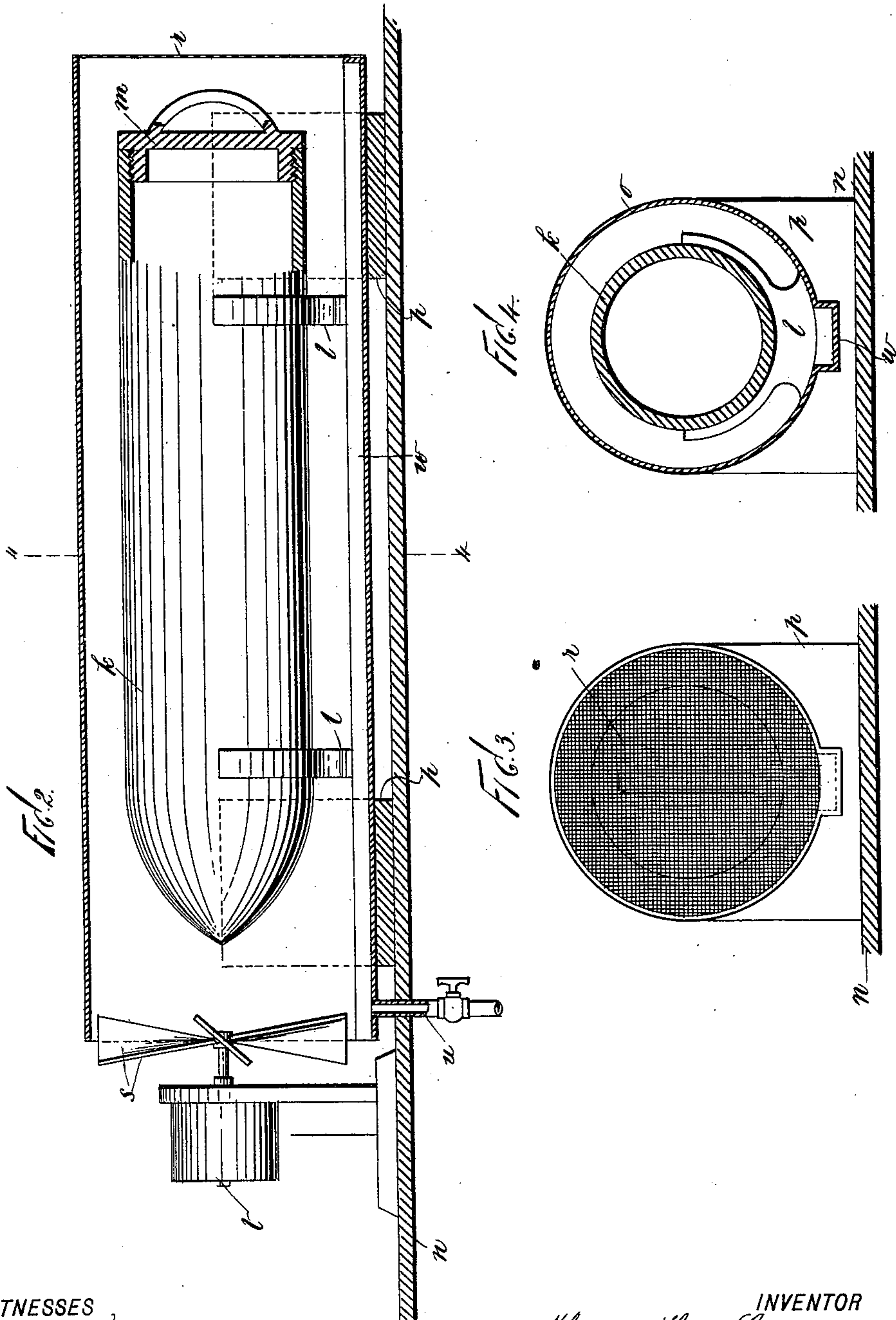
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WITNESSES  
*John Rughler,*  
*F. A. Stewart*

INVENTOR  
*Thomas Henry Gore,*  
BY  
*Edgar T. Little*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

THOMAS HENRY GORE, OF WEST HOBOKEN, NEW JERSEY.

## AIR-COOLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 637,383, dated November 21, 1899.

Application filed April 18, 1899. Serial No. 713,454. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HENRY GORE, a citizen of the United States, residing at West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Air-Cooling Devices, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to air-cooling devices for use in railway-cars, hotels, restaurants, public halls, dwellings, and other and similar places; and the object thereof is to provide an improved device of this class which is simple in construction and operation and comparatively inexpensive and which may be employed wherever devices of this class are required.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a sectional side view of an ordinary tramway-car provided with my improved air-cooling device or devices; Fig. 2, a similar view showing a modified form of construction; Fig. 3, an end view looking in the direction of the arrow *xx* of Fig. 2, and Fig. 4 a section on the line 4 4 of Fig. 2.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same letters of reference in each of the views, and in said drawings, reference being made to Fig. 1, I have shown an ordinary tramway-car, at the top of which is placed a longitudinal casing *a*, forming a longitudinal chamber *b*, and in the bottom of said casing is formed a plurality of openings *c*, above each of which is arranged a horizontal fan *d*, and below each of the openings *c* is a guard *e*, and in the operation of the device, as hereinafter described, the air passes downwardly through the opening *c* and is deflected outward by the guards *e* through the air ports or passages *f* at the ends of or around said guards. Each end of the casing *a* is open, and mounted therein is a fan *g*, which is in operative connection with and operated by an electric motor *h*, and within each end of said casing is placed a receptacle *k*, provided with suitable supports *l*, and the receptacles *k* are preferably car-

tridge-shaped in form, the conical ends being directed outwardly. The receptacles *k* are designed to receive any suitable refrigerating material and are provided with removable ends or caps *m*, and any suitable means may be provided for removing the receptacles *k* from the chamber *a*. As hereinbefore stated, the casing *a* is open at both ends and air is admitted to the car through the usual ventilators at the side of the top thereof, and in the movement of the car in either direction the air is forced through the casing *a* by the fan *g* at the end of said casing which is in the direction in which the car is moving, and the said air passes around the receptacle *k* and down through the opening *c* into the car. In this operation the air is cooled in its contact with the receptacle *k*, and the fans *d* are also set in motion and assist in forcing the air from the chamber *b* down into the car through the openings *c*.

It will be understood that both of the fans *g* may be put into operation, if desired, and the air forced into the chamber *a* at both ends thereof.

The construction shown in Figs. 2 to 4, inclusive, is designed for use in hotels, restaurants, and similar places, and in these figures I have shown at *n* a support which may consist of a shelf, bracket, or any other device, and mounted thereon is an oblong casing *o*, in which the receptacle *k* is placed. The casing *o* is preferably mounted in brackets or other bearings *p*, which rest on the support *n*, and one end of said casing is provided with a pivoted screen *r*, and the other end of said casing is open, and mounted therein is a fan *s* in connection with and operated by an electric motor *t*, which rests upon the support *n*. At the bottom of one end of the casing *o* is a drain-pipe *u*, which communicates with a longitudinal groove *w* in the bottom of said casing, the object of this construction being to carry away any water of condensation that may gather in the bottom of the casing *o* by reason of the operation of the air passing over the receptacle *k*, which is filled with refrigerating material.

As shown in the drawings, the end piece or cap *m*, which closes the end of the receptacle *k*, is detachably connected with said receptacle by means of a screw-threaded flange



formed thereon, and the entire receptacle *k* and the brackets *l* by which it is supported may be slid out of the casing *o* for the purpose of refilling whenever desired. In this form of construction the air is forced through the casing *o* by the fan *s* and passes out through the screen *r*, and the operation of the apparatus is the same as that hereinbefore described.

The casing of the chamber *a* (shown in Fig. 1) is preferably circular in cross-section except at the bottom, but may be of any desired form, and changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

In the form of construction shown in Figs. 1 to 4, inclusive, the air is forced through the casing *o* and passes out through the screen *r*.

By means of my improved air-cooling device the air in a chamber, hall, dining-room, or other compartment may be kept in circulation and cooled to any desired extent, it being understood that a number of the said devices may be employed wherever required.

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

1. A device of the class described, comprising an oblong casing, supports placed therein, an oblong receptacle mounted therein on said supports and conical and pointed at one end and provided with a detachable cap or head at the other end, said casing being open at the ends and provided with a fan by which the air is forced thereinto and therethrough, substantially as shown and described.

2. A device of the class described, comprising an oblong casing, suitable supports therein, an oblong receptacle mounted in said cas-

ing on said supports, one end of which is conical and pointed, and the other detachable, and a fan mounted in said casing, said casing being also provided in the bottom thereof with a longitudinal groove, and a drip-pipe connected therewith, substantially as shown and described.

3. The combination with a car provided with an oblong chamber in the top thereof having ports or passages which communicate with the interior of the car, and which is open at one or both ends, of an oblong receptacle mounted on supports in said chamber and adapted to receive refrigerating material, and conical and pointed at one end and provided with a detachable head at the other end, substantially as shown and described.

4. The combination with a car provided with an oblong chamber in the top thereof having ports or passages which communicate with the interior of the car, and which is open at one or both ends and provided with supports, of an oblong receptacle mounted in said chamber on said supports, and adapted to receive refrigerating material, said chamber being also provided at one end with a fan, and said receptacle being conical and pointed at the end adjacent to the fan, and provided at the opposite end with a detachable cap or head, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 17th day of April, 1899.

THOMAS HENRY GORE.

Witnesses:

F. A. STEWART,

A. C. McLOUGHLIN.