

(No Model.)

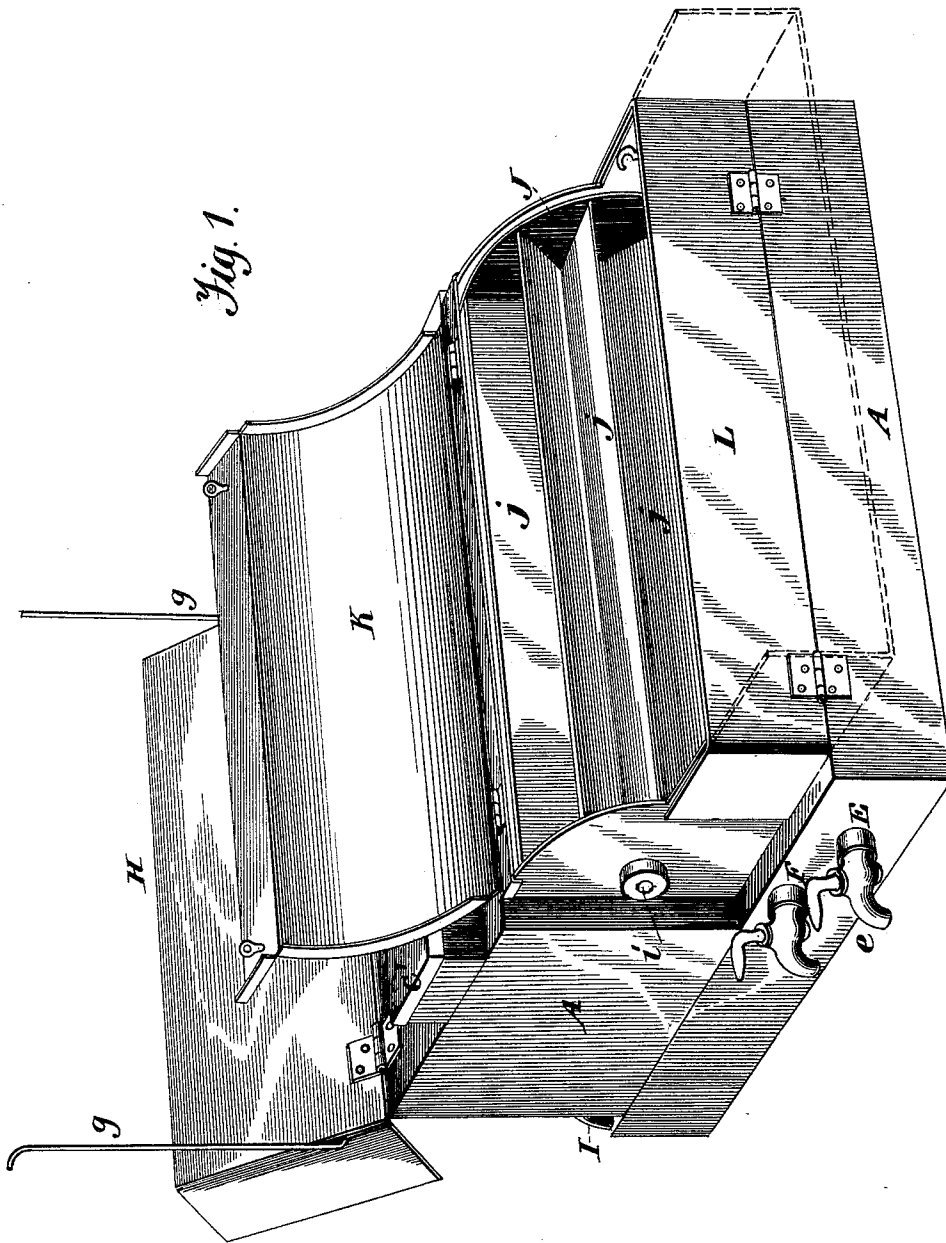
2 Sheets—Sheet 1.

J. E. KEA.

DEVICE FOR COOLING BUILDINGS, &c.

No. 415,296.

Patented Nov. 19, 1889.



Witnesses.
A. Ruppert,
W. L. Mason.

Inventor:
James E. Kea,
by Franklin H. Hough
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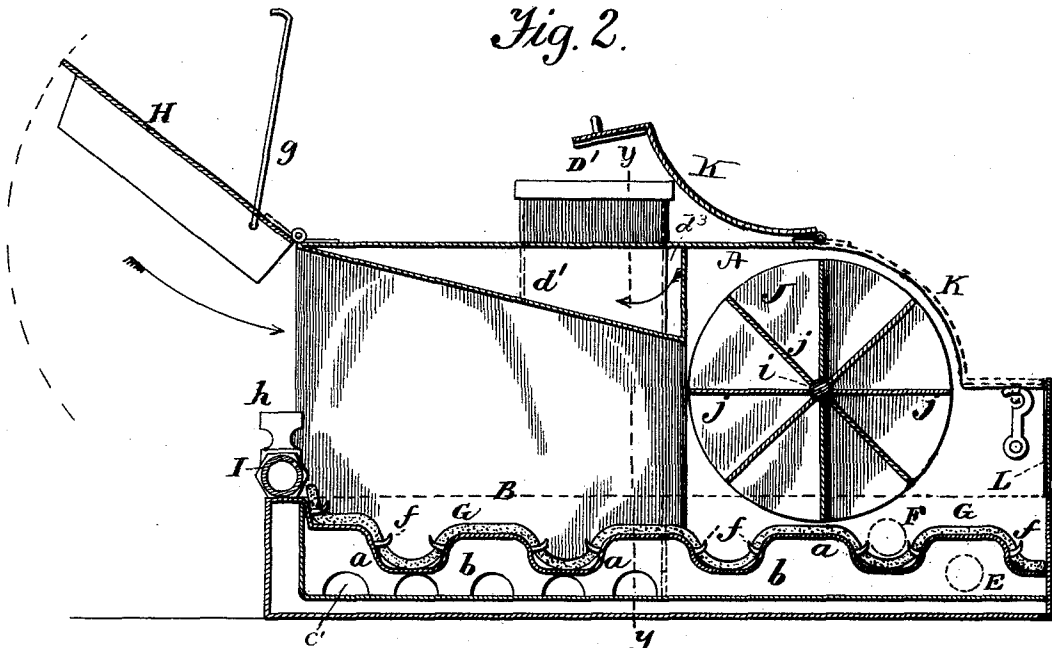


Fig. 2.

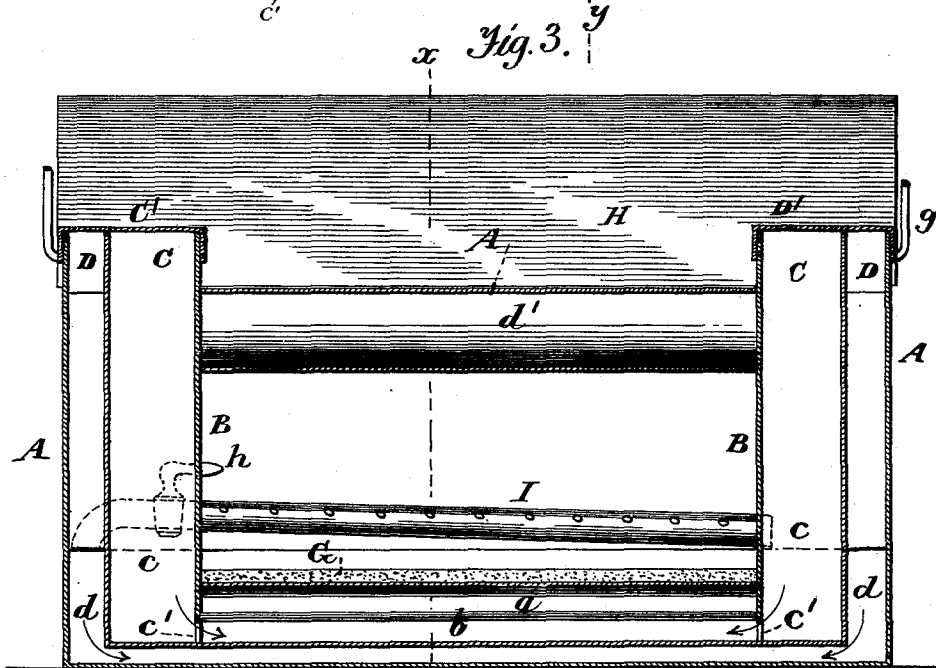


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES EDWIN KEA, OF WILMINGTON, NORTH CAROLINA.

DEVICE FOR COOLING BUILDINGS, &c.

SPECIFICATION forming part of Letters Patent No. 415,296, dated November 19, 1889.

Application filed April 19, 1889. Serial No. 307,718. (No model.)

To all whom it may concern:

Be it known that I, JAMES EDWIN KEA, a citizen of the United States, residing at Wilmington, in the county of New Hanover and State of North Carolina, have invented certain new and useful Improvements in Devices for Cooling Buildings, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in devices for cooling cars and buildings and for collecting the dust and cinders that otherwise would pass into the car, much to the annoyance of the occupants. It is designed to be placed inside of the car opposite any suitable air-inlet—as, for instance, at an open window, or an orifice made therefor in the side or end of the car.

It has for its objects to provide a device of this character which shall be simple, cheap, and which may be readily placed in position or removed from place to place at the will of the user, and in which the air will be simultaneously cooled and relieved of dust and cinders in its passage through the device.

The invention consists in the peculiar combinations and the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of my improved device with the shutter and other parts thrown up. Fig. 2 is a vertical longitudinal section through the same on the line *xx* of Fig. 3. Fig. 3 is a transverse vertical section through the line *yy* of Fig. 2.

Like letters of reference indicate similar parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the outer casing or tank, formed of any suitable material and

of a size to suit the purpose for which it is to be used and the aperture over which it is to be employed. Preferably this casing or tank is formed of galvanized iron or tin; but of course I do not wish to confine myself to the material employed.

B is the inner casing, the bottom of which is corrugated, as shown at *a*, leaving a space between the two bottoms, as indicated at *b*.

C C are capped mouths to the chamber *c*, which chamber, by means of the passages *c'*, communicates with the space beneath the corrugated bottom.

D D are capped mouths to the chambers *d*, which chambers communicate with the space between the two bottoms, and also at the top, as at *d''*, with a chamber *d'* beneath the top of the device.

In practice water is designed to be poured through the openings D and to fill the spaces with which said openings communicate, and ice or cold water and ice is designed to be placed in the openings C. Thus it will be seen that I surround the device with a cooling medium, which serves to materially reduce the temperature of the air passing through the same.

The openings C and D are provided with suitable tight-fitting covers, which are designed to be readily removed when occasion may require. These covers are designated in the drawings by the letters C' and D'.

E is a suitable outlet-pipe to the chamber provided with the ice, and is provided with a suitable faucet, as shown at *e*, through which ice-water may be drawn for drinking purposes when desired.

F is an outlet-pipe provided with a suitable faucet, through which surplus water from the outer chamber may be drawn.

The corrugated bottom is covered with a piece of carpeting G, which is held in place thereon in any suitable manner—for instance, by means of hooks, as *f*, as shown.

The mouth of the device is closed by a hinged shutter or door H, which is provided with suitable arms or hooks *g*, by means of which the shutter or door may be held in its opened position. Across the mouth of this device, at the lower edge thereof, is arranged a transverse pipe I, connected with the water-

tank *d* and provided with a suitable cock *h*, by means of which the passage of water there-through may be regulated as desired. This pipe is perforated along its face adjacent to the inside of the device, and through which the water may pass in the form of spray to moisten the carpet and to cool the air that passes through the device. At the opposite end there is journaled on a suitable shaft *i* a wheel *J*, provided with the transverse blades *j*, said wheel or fan being so journaled on its shaft as to readily be revolved by the air from the exterior of the car coming in contact therewith.

K and *L* are doors at the fan end of the device, through which the cinders and dust may be removed when occasion may require. They are normally open to allow of the outlet of the air.

The operation is apparent. The device being set with its mouth to the inlet of the air, as the air enters it passes through the device and is cooled by its passage through the same, the cinders and dust in the same being stopped in their passage by coming in contact with the blades of the fan-wheel.

What I claim as new is—

1. In a device for the purpose specified, a cooling-chamber having a passage through

the same, a corrugated bottom, and a wheel provided with blades arranged at the outlet end of the passage, substantially as shown and described.

2. The combination, with the casing provided upon its sides with a water-chamber and a passage through the chamber, of the spray-pipe communicating with said chamber and arranged transversely of the casing at the inlet to said passage, substantially as described.

3. In a device for the purpose described, the combination, with the casing provided with a cooling-chamber surrounding the same and with a passage through it, of the spray-pipe communicating with said chamber and arranged transversely of the casing at the inlet of said passage, the carpet over the corrugated bottom, and a wheel at the outlet of the passage provided with blades, substantially as shown and described, and for the purpose specified.

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

JAMES EDWIN KEA.

Witnesses:

WM. K. WALKER,
H. M. FOARD.