

W. J. MANKER.
Car Axle Boxes.

No. 138,265.

Patented April 29, 1873.

Fig. 1

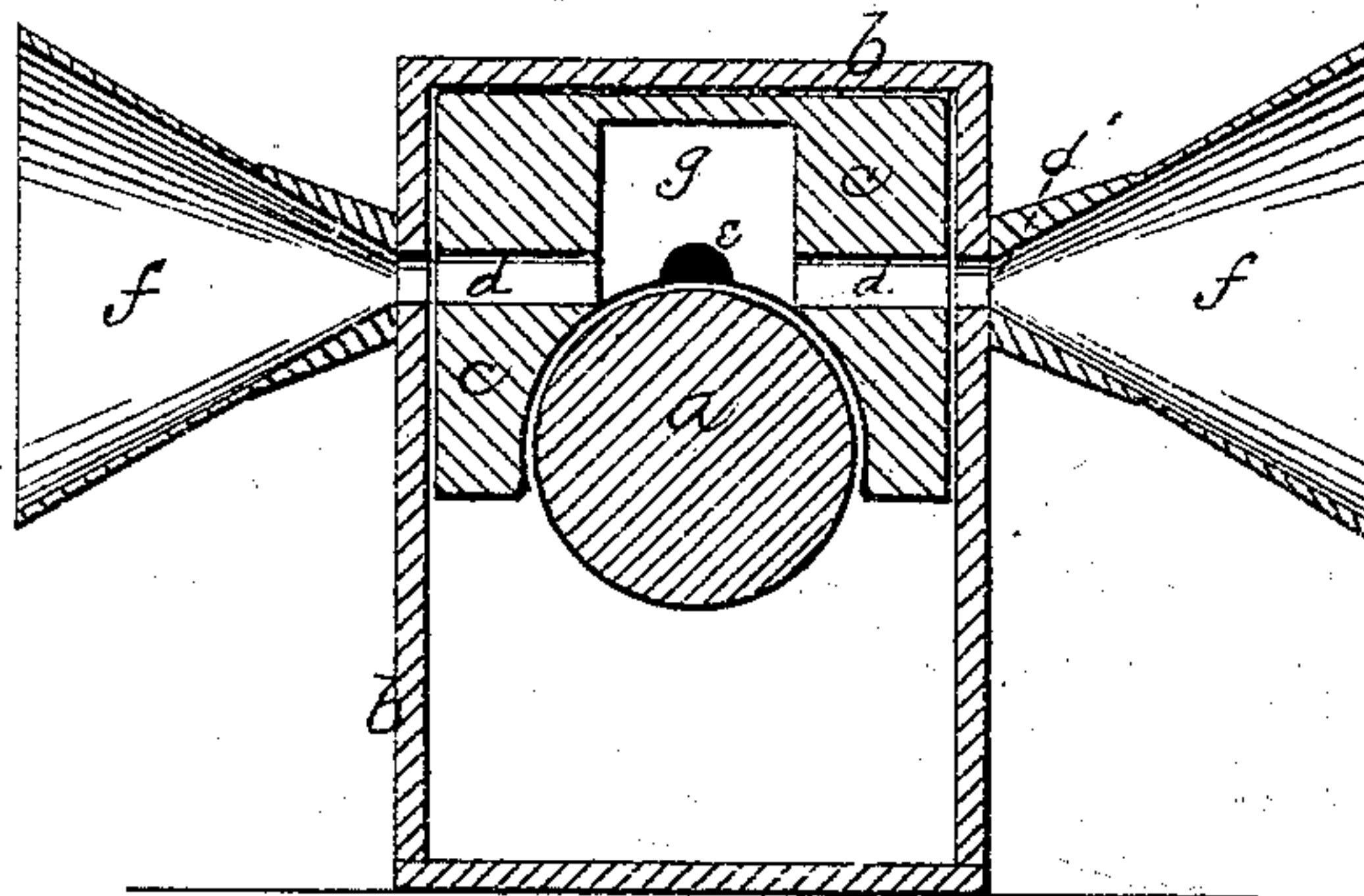
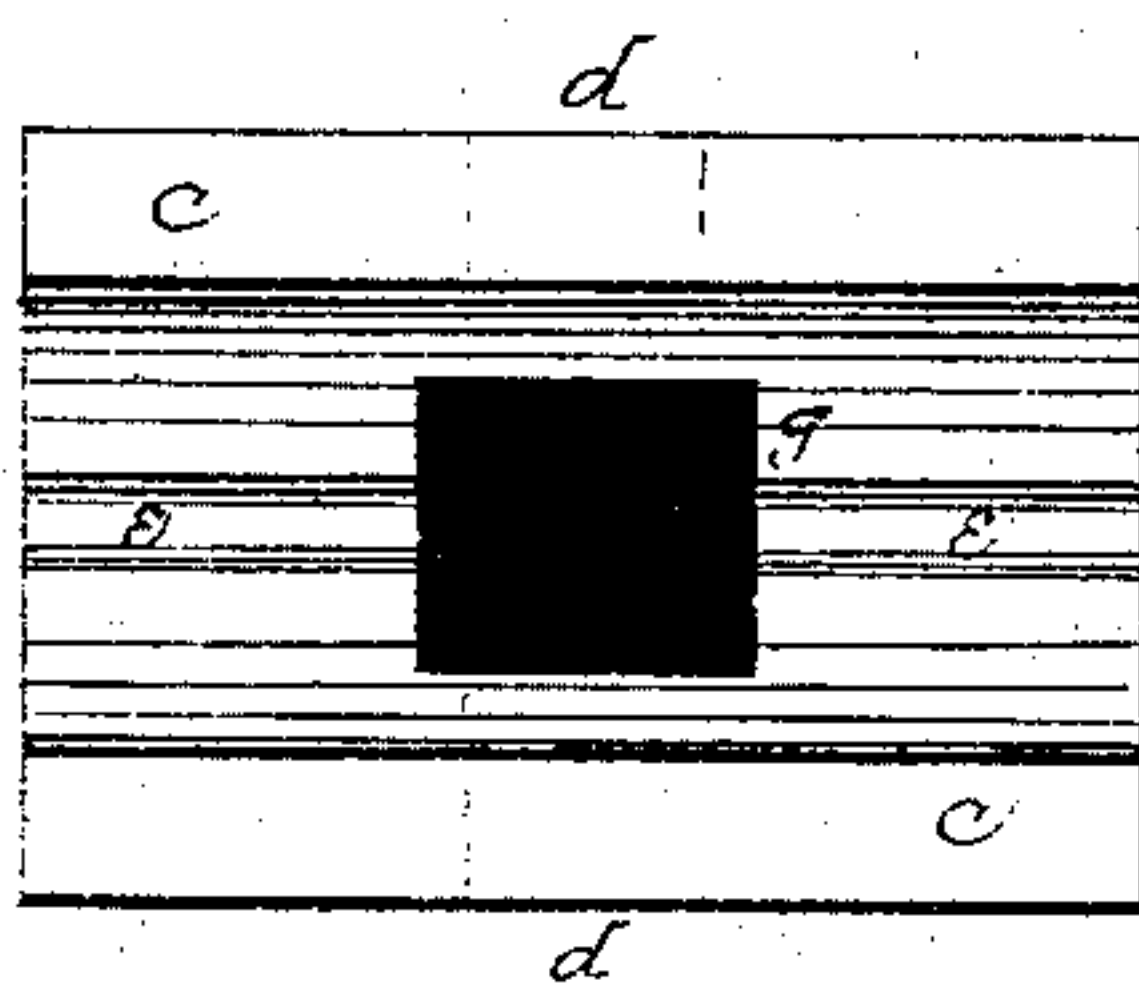


Fig. 2



Witnesses.
H. A. Sinclair
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UNITED STATES PATENT OFFICE.

WILLIAM J. MANKER, OF SEDALIA, MISSOURI.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **138,265**, dated April 29, 1873 ; application filed September 26, 1872.

To all whom it may concern:

Be it known that I, WILLIAM J. MANKER, of Sedalia, Pettis county, State of Missouri, have invented certain Improvements in Car-Axle Boxes, of which the following is a specification:

The object of this invention is to provide a means of cooling the journals of car-axles; and it consists in such a construction of the car-axle box and the bearing-piece that when the car is in motion a constant current of air will be forced upon the journal, as hereinafter more fully described.

In the drawing, Figure 1 is a vertical transverse section of a car-axle box with my improvements, and Fig. 2 is a plan view of the bearing-piece.

In the axle-box *b*, of ordinary construction, is arranged a bearing-piece, *c*, having a semi-cylindrical bearing-surface, which fits upon the journal of the axle *a*. This bearing-piece *c* has a passage-way, *d*, extending transversely through it, and a groove or channel, *e*, extending longitudinally of its semi-cylindrical bearing-surface, both of which communicate with a centrally-located air-chamber, *g*, which opens upon the journal. At each side of the box *b* a funnel, *f*, is attached, which communicates with the interior by means of a small opening, *d'*, corresponding in location, and communicating with the passage-way *d* in the bearing-piece. This passage-way *d* is made wide to allow for any play of the bearing-piece in the box and preserve communication with openings *d'*.

When the car is in motion one of the funnels *f* will catch the air and conduct it through opening *d'* into air-passage *d* and chamber *g*, and along the grooved channel *e*, egress being allowed through the opening and funnel opposite. By this means a constant current of air will be supplied to the entire bearing-surface, and the journal thereby, to a great extent, be prevented from heating.

When the car is at rest the air-chamber *g* and channel *e*, with the outwardly-communicating passage *d*, will tend to cool the journal should the same have become at all heated while in motion.

Wire-gauze covering, or other devices, may be used in connection with the funnels to prevent cinders, &c., from gaining entrance into the axle-box.

I claim as my invention—

1. In a car-axle box, a bearing-piece provided with an air chamber or chambers and communicating passages opening upon the journal, constructed substantially as described, for the purpose specified.

2. The combination of a bearing-piece, provided with chamber or chambers and communicating-passages, with a casing or shell provided with funnels, or equivalents, for catching and conducting the external air into the chambers and passages, substantially as described.

W. J. MANKER.

Witnesses:

BACON MONTGOMERY,
JNO. T. HEARD.