

H. G. THOMPSON.

Car Axle-Box.

No. 112,511.

Patented Mar. 7, 1871.

Fig. 1.

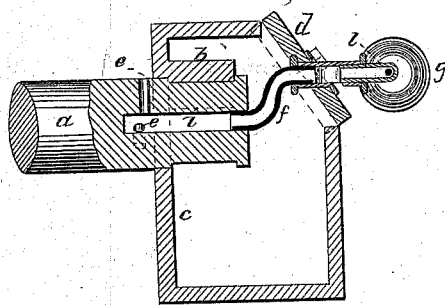
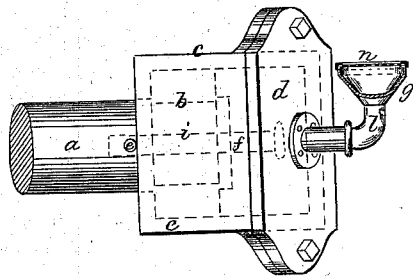


Fig. 2.



Witnesses

Geo. A. Smith
Geo. L. Pinchney

H. G. Thompson
Lemuel W. Powell atty

United States Patent Office.

HENRY G. THOMPSON, OF MILFORD, CONNECTICUT.

Letters Patent No. 112,511, dated March 7, 1871.

IMPROVEMENT IN COOLING JOURNALS OF CAR-AXLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY G. THOMPSON, of Milford, in the county of New Haven and State of Connecticut, have invented and made a new and useful Improvement in Cooling Journals of Car-wheel Axles, and the following is hereby declared to be a correct description of the same.

Before my invention, the journals of paddle-wheel shafts had been made with an opening through them, in which water was caused to circulate, but this device could only be used where a supply of water was easily accessible.

Railroad car-axles have been made hollow, to contain lubricating material, and they have been connected to a vessel to hold water, so that water could run into the axle; but these devices do not operate practically to attain the object sought by me.

I make use of the centrifugal action of the car-wheel and axle to produce a current of air through the hollow axle to keep it cool, and I also inject through the hollow axle a current of air derived from the movement of the car, a nozzle-tube being provided that passes across the journal-box and enters the hole in the axle, and a movable funnel outside the box causes the air to be driven through said tubular nozzle and hollow axle and escape by the lateral passages. By this means the dust cannot get into the journal-box, because the tubular nozzle acts as an injector to blow through the hollow axle, thereby avoiding risk of dust and particles of sand getting into the oil, and the current of air keeps the journal cool.

In the drawing—

Figure 1, is a vertical section of a journal and box of an axle, as made with my improvement, and

Figure 2 is a plan of the same.

The car-wheel axle is provided with journals, as usual. The axle *a* is represented as beneath the

bearing-block *b*; and the box *c*, for the lubricating material, and the cap *d*, are of ordinary construction.

The journal of the axle has a hole, *i*, running centrally through it, with the lateral openings *e e*, for the discharge of air by centrifugal force, producing a current through the hole *i* to keep the axle cool.

The tube *f*, passing through the box *c* or its cap *d*, is provided to supply air to the hole *i* and prevent dust entering the box *c*, and the funnel-shaped injector *g* may also be employed, the same being connected by a bend, *l*, and coupling with the tube *f*, so that it may be reversed, according to the direction in which the car is moving.

A screen of wire is to be applied at the mouth of the funnel at *n*, to prevent sand or foreign substances passing into the tube.

The tube *f* must be smaller than the opening *i*, so as to act as a nozzle in blowing through the hollow axle, and prevent dust or grit returning into the oil receptacle.

I claim as my invention—

1. The tubular nozzle *f*, passing through the journal-box and entering the hole *i*, and acting as an injector to force a current of air through the hollow journal and out at the lateral openings, to keep the journal cool and prevent dust passing into the journal-box, as set forth.

2. A perforated screen, introduced in the air-passage, to exclude foreign substances, in combination with the tubular injector-nozzle *f* and hollow journal, as and for the purposes set forth.

Signed by me this 28th day of September, 1870.
HENRY G. THOMPSON.

Witnesses:

CHAS. H. SMITH,
GEO. T. PINCKNEY.