D. WORSTELL & H. PIRRUNG.

Improvement in Hub and Bearing for Car-Wheels.

No. 128,348. Patented June 25, 1872.

Fig. 3.

Fig 1

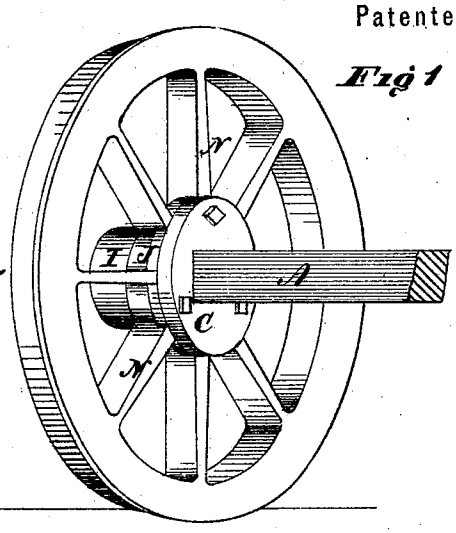


Fig. 2.

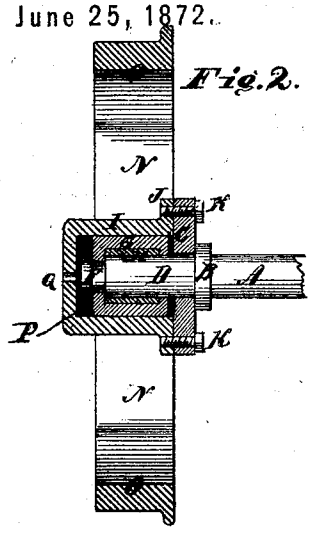


Fig. 6.

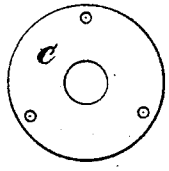


Fig. 4.

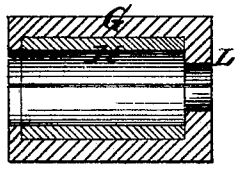


Fig. 5.

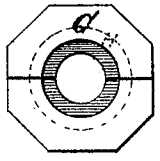


Fig. 7.

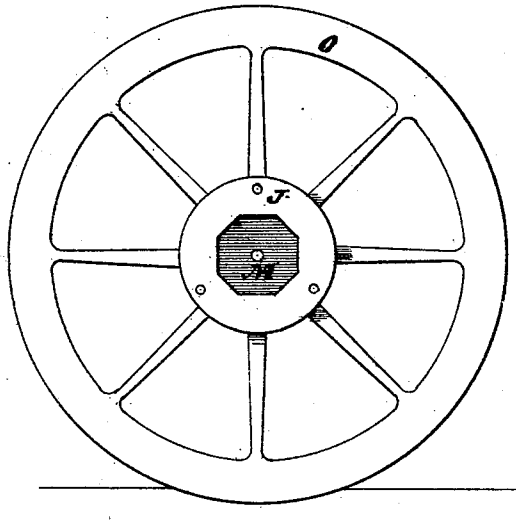
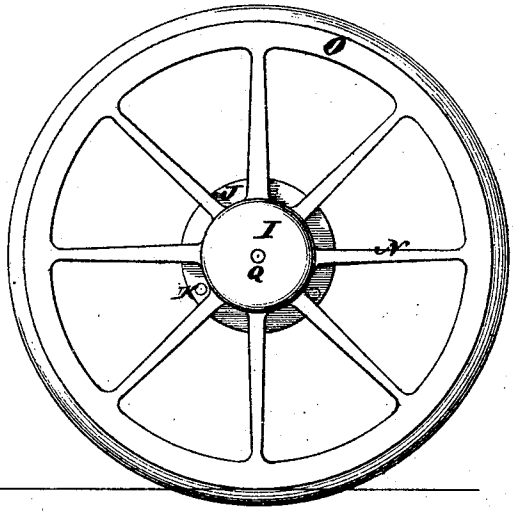


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID WORSTELL AND HENRY PIRRUNG, OF LAWRENCE COUNTY, OHIO.

IMPROVEMENT IN HUBS AND BEARINGS FOR CAR-WHEELS.

Specification forming part of Letters Patent No. 128,348, dated June 25, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that we, DAVID WORSTELL and HENRY PIRRUNG, both of Lawrence county, in the State of Ohio, have jointly invented a new and useful Wheel with Movable Box for Coal-Cars and other vehicles; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing making a part of this specification.

Figure 1 is a perspective view. Fig. 2 is a vertical section. Fig. 3 is a view of the axle. Fig. 4 is a longitudinal section of the box. Fig. 5 is a transverse section of the box. Fig. 6 is a side view of the loose flange. Fig. 7 is a view of the inner side of the wheel. Fig. 8 is a view of the outer side of the wheel.

This invention consists in the combination of an axle, a bearing-box, and hub of peculiar construction, the combination of the parts constituting the novelty of the invention, as will be fully described hereinafter.

A, Figs. 1, 2, and 3, represent the axle, which is provided at each end with a spindle, D, having a recess, E, and collar or shoulder, F. It may also, if desired, be provided with the flange or collar B, as shown in Figs. 2 and 3; but this may be omitted if desired, as shown in Fig. 1. O represents the rim of the wheel, which is cast with the spokes N and hub I. This hub is provided with a flange, J, and is closed at one end with the exception of the oil-hole Q, Figs. 2 and 8, but is open at the other, as indicated in Figs. 1, 2, and 7. The interior chamber of the hub is preferably made rectangular in form for the reception of the bearing-box G, but it may be made of any other proper form. This box is preferably cast of iron, in two parts, it being divided longitudinally, as shown in Figs. 4 and 5, and it is provided at each end with openings for the reception of the axle end, the opening at one end being adapted to receive the larger portion of the spindle D, and the opening at the other the recess E, as shown in Fig. 2. H represents a lining of Babbitt or other similar soft metal, which is placed in the hollow of the box as a bearing for the spindle. C represents a collar, which surrounds the spindle and closes the open end of the hub, it being secured in place by means of bolts K, Fig. 2.

The parts are put together as follows: The collar C being first slipped upon the spindle, the parts of box G are put in place about the latter, and the hub is then slipped over the box. The flange C is then secured to the flange J, and the parts are securely united together.

The operation is as follows: By means of the collar C the bearing-box is securely held in the hub and is compelled to revolve with the wheel. Longitudinal motion of the axle to any extent independently of the wheel is prevented by the flange F, which bears against the end of box G, and by the flange B or the corresponding shoulder upon the axle, which bears against the collar C. Through the hole Q oil or grease is poured into the chamber P, and the oil, having no place of escape except between the spindle and the collar C, lubricates the whole bearing before it works out. The box being lined with Babbitt-metal has less friction than if made of iron alone. The parts are readily detached from each other when it is desired to replace the worn metal lining H.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the axle A, having the spindle D with recess E and collar F, bearing-boxes G, and hub I, the parts being constructed and arranged as described, for the purpose set forth.

DAVID WORSTELL.
HENRY PIRRUNG.

Signed in presence of—
WM. H. LEETE,
B. H. GARVEY.