G. MOORE.

VEHICLE AXLE-BOXES.

No. 184,410. Patented Nov. 14, 1876.

Fig. 2.

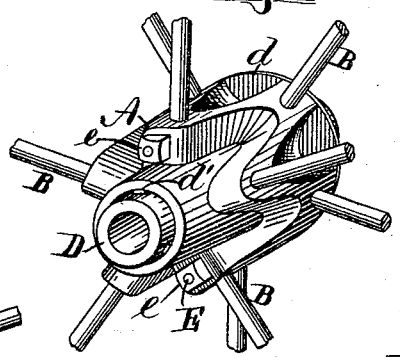


Fig. 6.

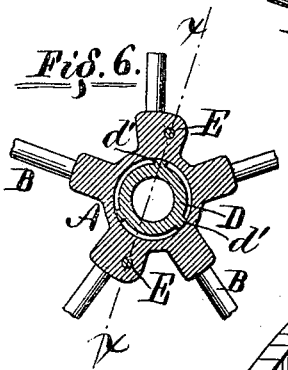


Fig. 5.

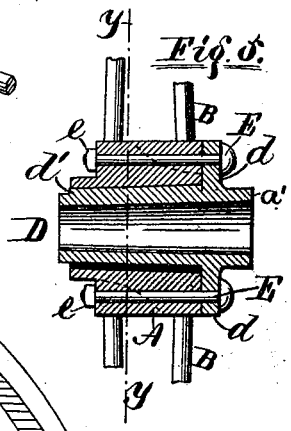


Fig. 1.

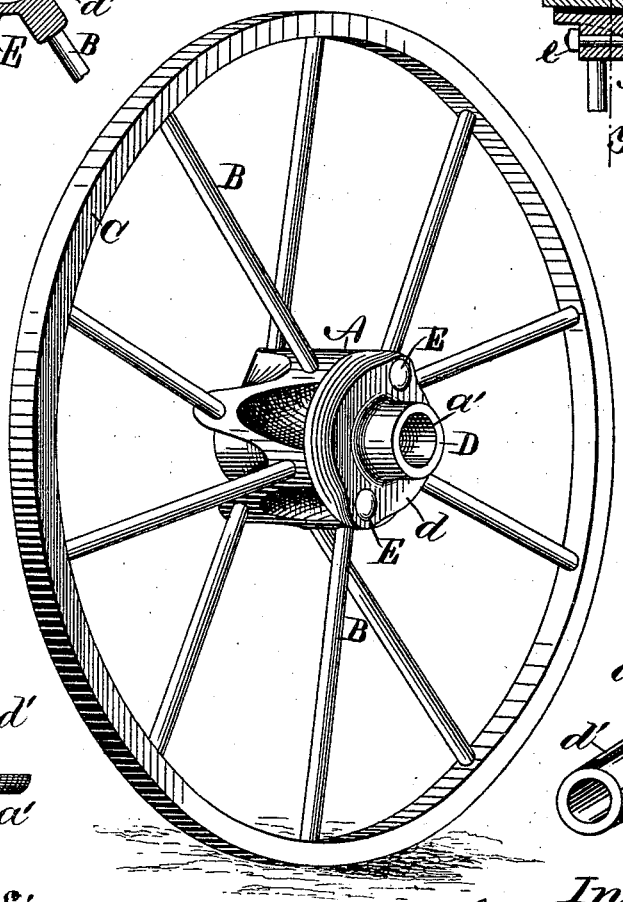


Fig. 4.

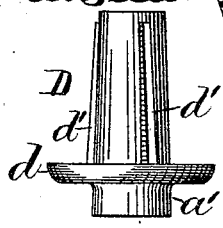
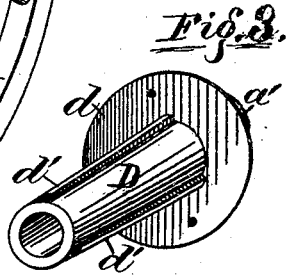


Fig. 3.



Witnesses:

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By W. B. Richards

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UNITED STATES PATENT OFFICE.

GILPIN MOORE, OF MOLINE, ILLINOIS, ASSIGNOR TO DEERE & CO., OF SAME PLACE.

IMPROVEMENT IN VEHICLE AXLE-BOXES.

Specification forming part of Letters Patent No. **184,410**, dated November 14, 1876; application filed August 16, 1876.

To all whom it may concern:

Be it known that I, GILPIN MOORE, of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Metallic Pipe-Boxing for Metallic Hubs; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

The nature of my invention relates to improvements in metallic boxing of metallic wheel-hubs; and the invention consists, first, in making, as a new article of manufacture, a cast-iron pipe-box, with a chilled bearing-surface for the journal on which it is to rotate, and suitable provision for securing to metallic wheel-hubs; second, in the use of a cast-iron pipe-box for metallic hubs, secured to said hubs by means of bolts, which pass through a flange on the box and longitudinally through the shell of the hub; third, in the use of feathers or splines on metallic pipe-boxing, and by means of which said boxing may be readily and easily lined or centered, and adjusted in the metallic hub; fourth, in constructing cast-iron pipe-boxes for metallic hubs with a projecting end for a bearing-surface against the shoulder of the axle-journal, and to clear the heads of the bolts which secure the box in place, from said shoulders, all as hereinafter fully described.

In the accompanying drawing, Figure 1 is a perspective view of a wheel, having a metallic hub, embodying my invention. Fig. 2 is a perspective view of the hub of Fig. 1, showing opposite end in front to that shown at Fig. 1, spokes partly broken away. Fig. 3 is a perspective view of the box alone. Fig. 4 is a side elevation of Fig. 3. Fig. 5 is a longitudinal sectional view of the hub and box in the line *x x* in Fig. 6. Fig. 6 is a transverse sectional view in the line *y y* in Fig. 5.

The same parts are indicated by the same letters throughout the drawings.

Letter A represents an ordinary cast-iron hub, in which are secured wrought-iron spokes B, to which are attached the wheel-rim C. D is a tubular cast-iron box, its interior surface chilled and hardened in casting, and its exterior surface has a projecting annular flange, *d*, near its larger end, and projecting longitudinal splines or wings *d'*, as shown plainly at Figs. 5 and 6 of the drawings.

By dressing the splines *d'* the box D may be readily and properly adjusted and aligned in the central opening through the hub A, where it is secured by means of bolts E and nuts *e*, the bolts E passing through holes in the flange *d* and holes longitudinally through the shell of the hub A. The end *a'* of the box A projects beyond the flange *d* and forms a protection for the heads of the bolts E.

For gang-plows, cultivator-plows, and like implements, iron wheels are found preferable, and the herein-described improvements furnish a ready and simple method of boxing them with durable, and, at the same time, easily removable, boxes, and which may be removed and new ones substituted, when worn, or when desired for any reason, by simply removing the bolts, without changing or disturbing any other portion of the wheel.

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

1. A vehicle-wheel, having the cast-iron hub A, in combination with the metallic pipe-box B, having a flange, *d*, through which it is connected to the hub by means of bolts E, substantially in the manner and for the purposes described.

2. The cast-iron hub A, in combination with metallic pipe-box B, having the flange *d* and splines *d'*, whereby it is adjusted and aligned in the said hub, substantially in the manner and for the purpose described.

3. The cast-iron pipe-box D, having splines *d'* and flange *d*, combined to operate with the metallic hub A, substantially as and for the purpose specified.

4. The cast-iron pipe-box D, having its end *a'* projecting beyond the flange *d*, substantially as described, and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GILPIN MOORE.

Witnesses:
J. W. ATKINSON,
A. M. BEAL.