

APPLIOATION FILED JULY 14, 1911.

Patented June 10, 1913.

This technical drawing shows a cross-section of a mechanical assembly. It consists of two main rectangular blocks, labeled 'a' on the left and 'b' on the right. A central shaft, labeled 'c', passes through both blocks. The shaft has a central section labeled 'n' and is supported by bearings or guides labeled 'd' and 'i'. The blocks 'a' and 'b' have internal features labeled 'g' and 'h'. The shaft 'c' has a central section labeled 'n' and is supported by bearings or guides labeled 'd' and 'i'. The drawing is a technical illustration of a mechanical assembly, likely a pump or a similar device, showing the internal components and their arrangement.

Witnesses

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AXLE-BEARING.

1,064,659.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN KING, a subject of the King of Great Britain and Ireland, residing at Leeds, in the county of York, England, have invented certain new and useful Improvements in Axle-Bearings Specially Applicable for Corves and Similar Mine-Wagons; and I do hereby 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.

This invention relates to axle bearings and is intended more particularly for use with corves and similar mine wagons.

The object of the invention is to enable the axle to be readily removed and replaced, to reduce the friction, to provide a simple, efficient and inexpensive form of bearing, opposing no obstacle to the ordinary lubrication from below.

The invention is hereunder described with reference to the accompanying drawings; Figure 1 being a vertical section on line A A of Figs. 2 and 3. Figs. 2 and 3 are both plans, the former looking down on the top, and the latter looking upward at the underside of the bearing.

The bearing is made in two parts, which for the sake of distinction may be respectively termed, the pedestal, lettered *a b* in the drawings, and the loose cheek, lettered *c d*.

The pedestal consists of a base plate *a* and a side cheek *b*, herein termed the fixed side cheek, cast in one piece with the base, so as to be integral therewith, and situated to one side of the center line through the base *a*. These side cheeks are normally in contact with the shaft on opposite sides thereof near the horizontal plane of its axial line.

According to this invention, the opposite side of the base has a slide recess formed on its under side, the sides of the slide which are inclined, are indicated by the letter *e*. This slide runs parallel to the axle *f*. The base *d* of the loose side cheek, hereinafter termed the sliding piece *d*, is formed to fit and slide in the slide *e e*, the sides of the sliding piece being beveled or inclined at the same angle as the sides of the recess or slide *e e*.

The base of the pedestal is provided with two bolt holes *g*, through which the bolts securing it to the main longitudinal bars or bearers of the corf or wagon are passed. The sliding piece *d* is also provided with a

bolt hole *g'*; which when the sliding piece is fitted in the slide recess *e e*, is coincident with the bolt hole in the same side of the base *a*, so that the same bolt serves both to secure this side of the base *a* to the wagon or corf, and the loose cheek in position in the slide *e e*, and prevents any movement of the loose cheek about the bolt. The lower ends of the two cheeks, *i. e.* at *h*, are made preferably level with the center of the axle for the greater part of their length; but at one end, viz: at *i* they extend still lower by a distance roughly equal to half the radius of the axle. These extensions *i* are for the purpose of preventing the axle dropping out of its place, when the corf or wagon is lifted. Less frequently both side cheeks may be made to terminate slightly below the level of the center of the axle. The bearing, being open below the axle, will permit free lubrication thereof from below and the lubricant has better access to the side of the axle because projections *i* are at one end of the cheeks only and cover little of the axle surface. It will be evident, that in order to disconnect the axle, it is only necessary to loosen the bolt connection at *g'*, when the loose cheek can be drawn out sidewise.

Bearings consisting of a base plate having a fixed side cheek integral therewith, and a loose side cheek with the base fitting in a slide formed in the base plate at right angles to the axle, or merely resting on this half of the base plate are not new, and no general claim is made to such. These have the disadvantage, that the loose side cheek is merely supported by the holding bolt and can rock about the same, and that with the former it is impossible to withdraw the loose cheek sidewise, which is usually much more convenient than to withdraw it endwise.

To reduce the friction and the amount of lubrication required, and where the additional expense is not prohibitive, the bearing is fitted with one or more antifriction rollers. As illustrated, the bearing is provided with two antifriction rollers *n*, mounted on pins *h*, fitted in recesses formed for them in the two side cheeks. The circumferences of the rollers *n* project just within the curved inner faces of the two side cheeks, so as to take the thrust between the axle and the bearing. The recess for the rollers is carried through the cheeks so as to emerge at the top as shown at *m*, or they may curve outward to the outside faces of the cheeks

near their junction with their bases. In some cases, it is preferred to have only one anti-friction roller support, which is fitted vertically above the center of the axle.

5 No general claim is made to the use of friction rollers in mine axle bearings.

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

10 1. An axle-bearing pedestal having a fixed side-cheek and provided with a guide-way parallel to the axle, in combination with a removable side cheek fitted in said guide-way, these side cheeks being provided
15 at one end with a pair of downward extensions.

2. An axle-bearing pedestal having a fixed side-cheek and provided with a guide-way longitudinal of the bearing, in combination with a side-cheek removable longitudinally in either direction fitted into said guideway and means for fastening the same, the two guide-cheeks forming an axle-receiving recess and extending approximately
20 to the middle line thereof.

25 In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN KING.

Witnesses:

JOHN CLARK JEFFERSON,
FREDERICK WALKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
