

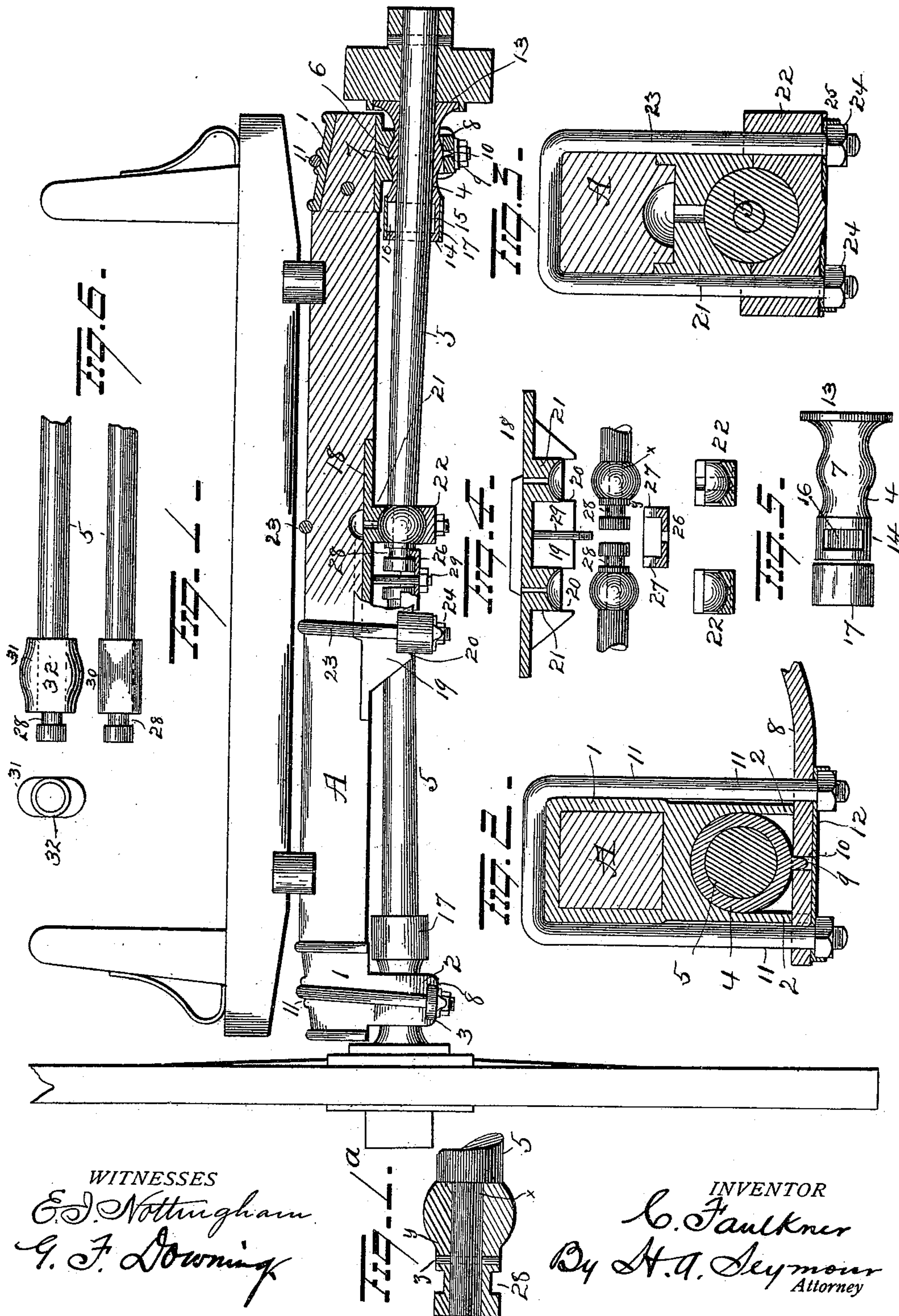
No. 619,946.

Patented Feb. 21, 1899.

C. FAULKNER.
AXLE BEARING.

(Application filed Nov. 7, 1898.)

(No Model.)



WITNESSES

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CLAY FAULKNER, OF McMINNVILLE, TENNESSEE.

AXLE-BEARING.

SPECIFICATION forming part of Letters Patent No. 619,946, dated February 21, 1899.

Application filed November 7, 1898. Serial No. 695,719. (No model.)

To all whom it may concern:

Be it known that I, CLAY FAULKNER, a resident of McMinnville, in the county of Warren and State of Tennessee, have invented certain new and useful Improvements in Axle-Bearings; 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.

My invention relates to an improvement in axle-bearings, and more particularly to an improvement upon the invention for which Letters Patent were granted to me May 10, 1898, numbered 603,627, the object of the invention being to provide bearings for an axle and attachments therefor which shall be so constructed as to constantly supply lubricant to said bearings and which will exclude dust and grit therefrom.

A further object is to provide bearings for a revoluble axle which will be simple in construction, cheap to manufacture, and which will be strong and durable when in use.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, partly in section, illustrating my improvements. Figs. 1^a, 2, 3, 4, and 5 are views of details, and Fig. 6 is a view of a modification.

A represents a bolster or axle-support and is provided at each of its ends with a collar 1, having at each side depending ears 2, and each ear is made with a notch 3 for a purpose hereinafter explained. Between the ears 2 of each collar 1 a bearing-sleeve 4 is disposed for the reception of the axles or spindles 5, and each collar is provided between the depending ears 2 with a recess or depression 6, which is curved concentric with the bearing-sleeve and also curved transversely for the reception of a similarly-shaped enlargement 7 between the ends of said bearing-sleeve. The outer bearing-sleeve of each revoluble axle is thus connected with the axle-support by means of a ball-joint, so that said bearing-sleeve will be permitted to readily adjust itself

to the position which the revoluble axle may assume, and in this manner avoid all possibility of the axle binding in the outer bearing. When the bearing-sleeve shall have assumed the proper positions to permit the free running of the axles, said bearing-sleeves will be secured in such position in a manner which will now be explained.

The inner ends of the braces 8, which connect the axle-support with the hounds, are placed in the notches 3 of the ears 2 and are provided with a hole 10 for the reception of a pin or projection 9 on the curved enlargements 7 on the bearing-sleeves and at each side of the curved portions of the braces. The said braces 8 are provided with holes for the passage of the free ends of yokes 11, which embrace the collars 1, and provided at their free extremities with screw-threads for the reception of suitable nuts, which are secured against turning by means of suitable nut-locks 12, which consist of a plate of soft metal bent upward at its end after the nut is screwed home, said bent-up portion being made to bear against one face of the nut, and hence prevent the accidental turning of said nut. In this manner the bearing-sleeves will be held perfectly rigid after they shall have assumed a proper position to insure the free running of the axles, as above explained. By inserting the ends of the braces 8 in the notches 3 in the ears 2 of the collar 1 there will be no danger of the bearing-sleeves being turned on account of the lateral strain which might be brought to bear thereon by said braces. The outer end of each bearing-sleeve is provided with a flange 13, which is adapted to cooperate with the sand-band on the wheel to exclude sand from the bearings.

The inner end of each bearing-sleeve 4 is provided with an extension 14, preferably integral with the bearing-sleeve and cut out internally, as shown at 15, to form a receptacle for waste adapted to contain lubricant whereby to constantly supply oil to the spindle or axle 5. The extension 14 is provided in its upper face with an opening 16, through which the waste and lubricant can be inserted into the extension 14. Any suitable cover 17 may be provided for the hole in the extension and exclude dust and grit from the bearing.

A plate 18, having downwardly-extending parallel side flanges 19, provided with notches 20 on their lower edges at diametrically opposite points near the end of said flanges, is secured to the bolster A, centrally between the ends thereof, and to this plate 18, between the flanges, are secured bearing-blocks 21, curved on their lower faces, as shown. The end of each spindle is provided with a rod or extension x , projecting therefrom, and a sleeve y , having a circular enlargement thereon, is disposed on said rod, and said rod and sleeve are provided with holes for the reception of a pin z , whereby to secure same in place. The circular enlargement on the sleeve y is disposed in the bearing-block 21. Suitable bearing-blocks 22, having curved upper faces, are disposed in the notches 20 and under the circular enlargement on the sleeve y . The bearing-blocks 22 are provided with holes for the reception of the ends of suitable yokes 23, screw-threaded at their ends for the reception of nuts 24. Suitable nut-locks 25, comprising a strip of soft metal, may be disposed under the nuts 24, whereby when said nuts are screwed home one end of said soft-metal strip may be bent up against one face of the nut and securely hold same against accidental turning.

A box or waste-cup 26 is disposed between the inner bearings of the two axles and made at its ends with curved faces 27 for the accommodation of said axles, the latter being grooved, as at 28, where they rest on the curved faces of the box or waste-cup, whereby to prevent endwise movement of the axles. The box or waste-cup is secured in place between the axle-bearings and between the flanges 19 of plate 18 by means of a bolt 29, which projects downwardly from said plate and passes between the ends of the axles, the lower end of said bolt projecting through the box or cup and provided at its lower extremity with a suitable nut. The box or waste-cup 26 is adapted to contain any suitable waste and lubricant, whereby to constantly supply lubricant to the ends of the spindles and their bearings.

Instead of providing a circular enlargement at the inner end of each spindle I may employ the construction shown in Fig. 6. In this form of my invention I employ a sleeve 30, having rounded or curved ends 31 and parallel flat sides 32, whereby to permit of a great amount of adjustment between the bearing-blocks 21 and 22, whereby to insure the correct position of the spindles.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. The combination with a support and a revoluble axle, of a bearing-sleeve for the axle, secured to said support, the inner end of said sleeve being enlarged whereby to form an annular chamber around the axle, the wall of said chamber having a hole therein, and a cover over said hole, substantially as set forth.

2. The combination with a support and a revoluble axle made in two sections and having grooves near their inner ends, of a box or waste-cup having its ends recessed and disposed in the grooves in the axles and means for securing said box or waste-cup in place.

3. The combination with a support and two revoluble axles, of outer bearings for said axles, inner bearings for the axles, and a lubricant-receptacle disposed between the inner bearings and inclosing the inner ends of the axles, substantially as set forth.

4. The combination with a support, a revoluble axle and a bearing for the outer end of said axle, of an extension on the inner end of said axle, a sleeve secured on said extension, said sleeve having a spherical enlargement at one end and an annular groove near its other end, bearing-blocks to receive said spherical portion of the sleeve and a lubricant-cup into which the inner end of the sleeve projects, said cup having a curved face constituting a bearing for the sleeve in the annular groove therein, substantially as set forth.

5. The combination with a support and a revoluble axle made in two sections, of bearing-sleeves for said axle having lubricant-receptacles therein, enlargements near the inner ends of said axle-sections, bearing-blocks secured to said support and adapted to revolvably secure said enlargements in place and a box or waste-cup also secured to the support and having recessed ends disposed in grooves in the ends of the axle-sections.

6. The combination with a support and a revoluble axle made in two sections, of bearing-sleeves for said axle, a lubricant-receptacle in said bearing-sleeve having an opening therein for the admission of lubricant and a cover for said opening movably mounted on said receptacle, enlargements on the inner end of each axle-section, a plate secured on said support and having downwardly-extending parallel side flanges, bearing-blocks secured to said plate for the reception of the enlargements on the axle, bearing-blocks secured to said support and adapted to secure the enlargements on the axle between said bearing-blocks, and a waste-cup or box into which the inner ends of the sections of axle project and means for securing said waste-cup or box to the support.

7. The combination with a support and two axles, of outer bearings for the axles, a plate secured centrally between the ends of the sup-

port and having depending parallel flanges between which the inner ends of the axles terminate, inner bearings for the axle carried by said flanged plate, and a lubricant-cup disposed between said depending flanges and inclosing the inner ends of the axle, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CLAY FAULKNER.

Witnesses:

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W. F. ELKINS.