(No Model.)

C. FAULKNER.

AXLE BEARING.

No. 603,627. Patented May 10, 1898.

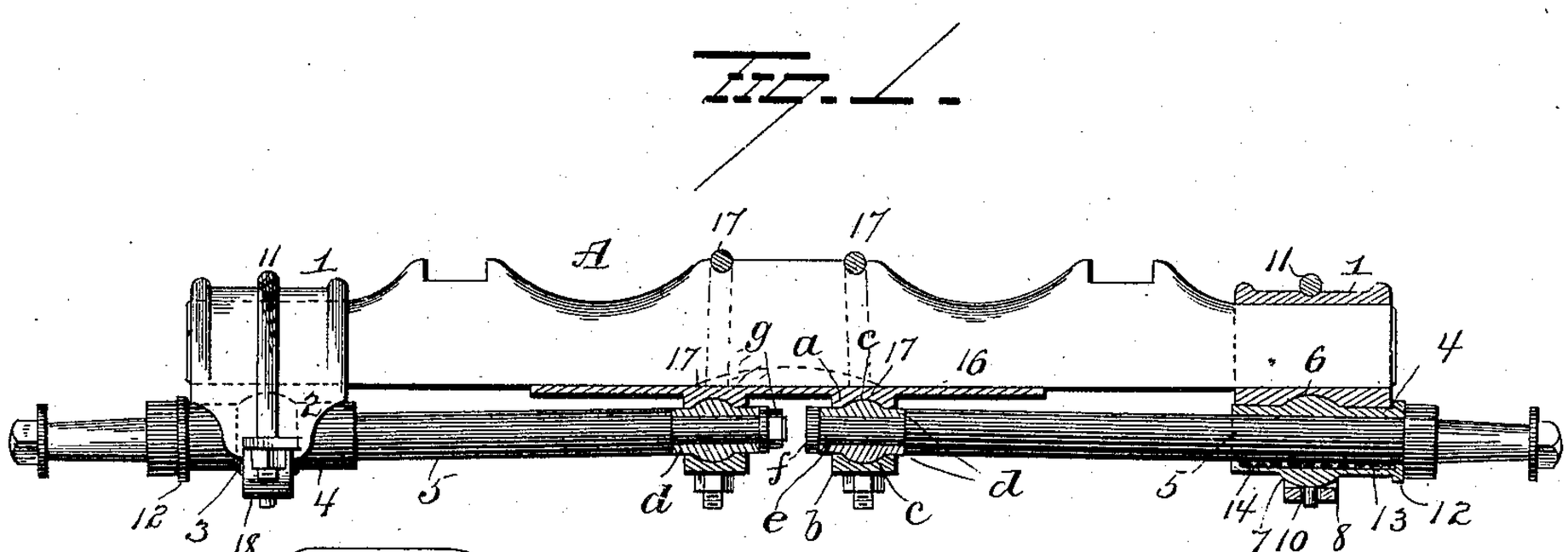


Fig. 2.

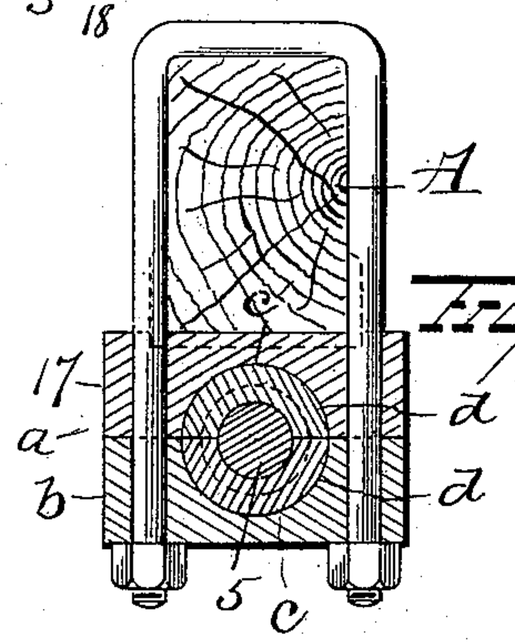


Fig. 3.

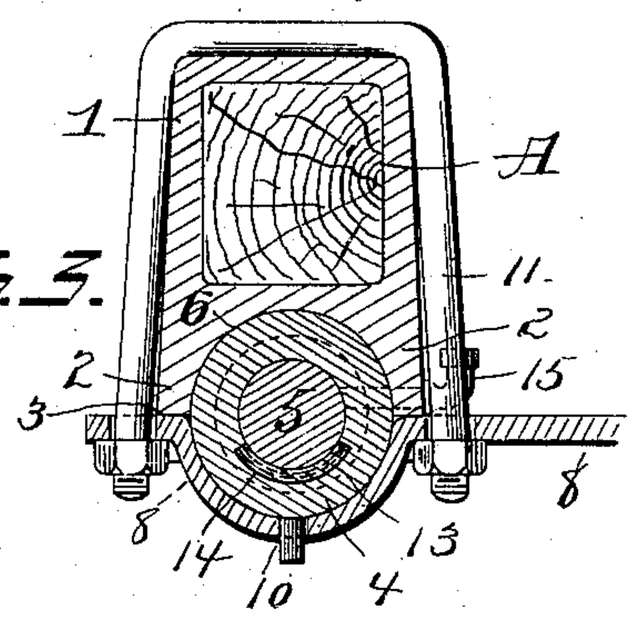


Fig. 4

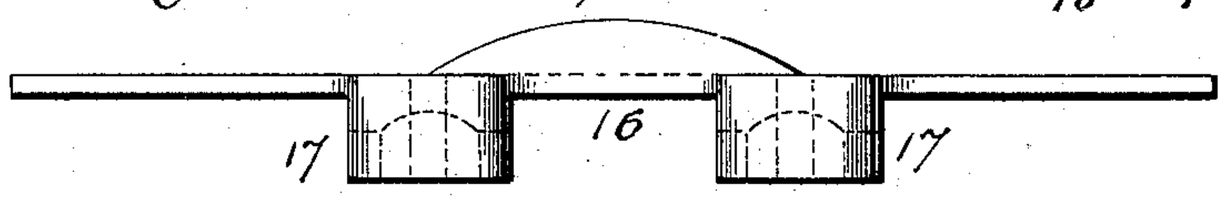
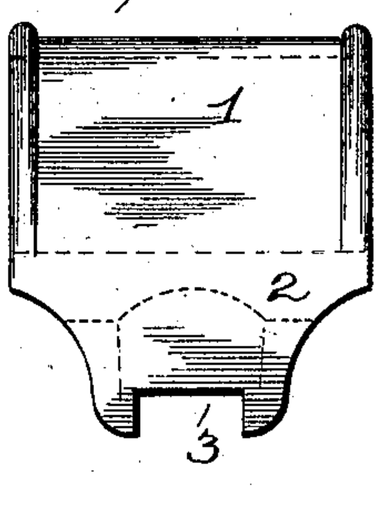


Fig. 5.



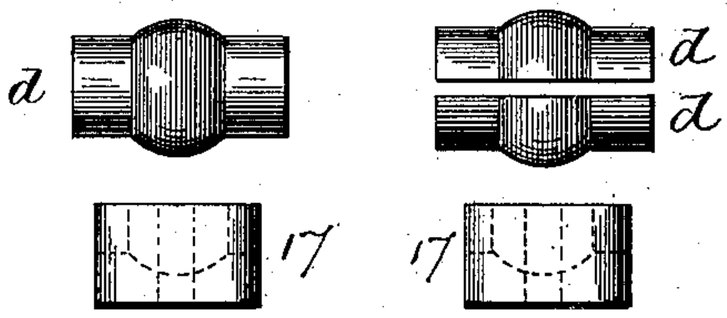
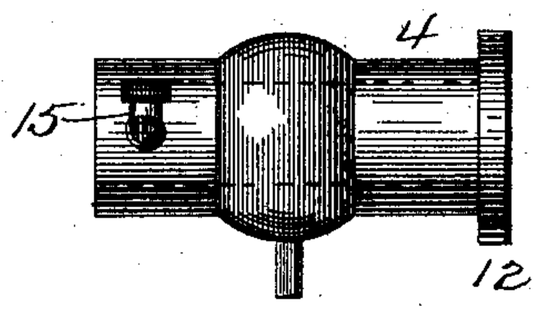


Fig. 6.



WITNESSES
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UNITED STATES PATENT OFFICE.

CLAY FAULKNER, OF McMINNVILLE, TENNESSEE.

AXLE-BEARING.

SPECIFICATION forming part of Letters Patent No. 603,627, dated May 10, 1898.

Application filed December 17, 1897. Serial No. 662,315. (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 revoluble axles or spindles for vehicles, and more particularly to the construction and arrangement of the bearings therefor, the object of the invention being to so construct the bearings that they can be made to readily adjust themselves to the positions which the axles or spindles may assume and so that when in use said bearings will be held rigidly and displacement thereof effectually prevented.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation, partly in section, illustrating my invention. Figs. 2, 3, 4, 5 and 6 are detail views.

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 centrally 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-sleeves 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 of the ears 2 and bent to conform to the curved enlargements on the bearing-sleeves. This curved portion of each brace is made with a small hole 10 for the reception of a pin or projection on the curved enlargements 7 on the bearing-sleeves and at each side of the curved portions of the braces. The latter 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. 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 in notches in the ears of the collars 1 there will be no danger of the bearing-sleeves being turned on account of lateral strain which might be brought to bear thereon by said braces. The outer end of each outer bearing-sleeve is provided with a flange 12, which is adapted to coöperate with the sand-band on the wheel to exclude sand from the bearings. Each bearing-sleeve 4 is also provided internally with a recess 13 for the reception of absorbent material 14, to which oil is fed by means of lubricant-feeding tubes 15.

A plate 16 is secured to the under face of the bolster or support A centrally between the ends thereof, and to this plate bearings 17 for the inner ends of the two revoluble axles are secured. Each bearing 16 comprises two blocks *a b*, each having holes near the ends for the passage of the arms of yokes 17, which embrace the bolster or support, and the free ends of said arms of the yokes are screw-threaded for the reception of suitable nuts. The inner faces of the blocks *a b* are made with recesses *c*, which are curved both longitudinally and transversely for the reception of a spherical enlargement on a bearing-sleeve *d*, disposed between said blocks, whereby to form ball-joints for said bearing-sleeves of the inner ends of the revoluble axles, so as to permit them to adjust themselves to the po-

sitions of the axles in the same manner as above explained in connection with the outer bearing-sleeves. The inner ends of the axles are made with recesses *e* in proximity to their inner extremities for the reception of the bearing-sleeves *d*, (which latter are preferably made in separable sections,) and thus longitudinal movement of the axles will be prevented. By means of this construction I am enabled to dispense with the use of nuts at the inner ends of the axles, the enlargement *f* (formed by recessing the axles as above explained) serving the purpose of a nut.

Instead of making the inner bearing-sleeves in two parts, as above explained, they may be made each of a single piece, in which case the inner ends of the axles will be provided with nuts, as shown at *g*, Fig. 1.

My improvements are simple in construction, comparatively cheap to manufacture, and are effectual in all respects in the performance of their functions.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein set forth.

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 revoluble axles extending from a point at or near the longitudinal center of the vehicle outward in opposite directions, of bearing-sleeves having ball-and-socket connection with the support, in which the axles turn.

2. The combination with a support and an axle, of a collar secured to the end of the support and having depending ears, a bearing-sleeve having an adjustable bearing between said ears, a pin projecting from said bearing-sleeve, a brace secured to said collar and having a hole for the reception of said pin, substantially as set forth.

3. The combination with a support and an axle, of a collar secured to the end of said support, ears depending from said collar and having notches in their free ends, a bearing-sleeve having an adjustable bearing between said ears, a brace having its end disposed in the notches in the ears, and a yoke securing said brace to the collar, substantially as set forth.

4. The combination with a support and an axle, of a collar on said support provided with depending ears and having a curved recess between said ears, a bearing-sleeve for the axle, a curved enlargement between the ends of said bearing-sleeve and having a bearing in said curved recess in the collar, a brace secured to the ends of said ears and having a hole and a pin projecting from said curved enlargement and entering said hole in the brace, substantially as set forth.

5. The combination with a support and a revoluble axle, of separable blocks secured to the support near its center, each block having a curved recess in its inner face, and a bearing-sleeve for the inner end of the axle, having a spherical enlargement disposed in said recessed blocks, substantially as set forth.

6. The combination with a support and a revoluble axle having an annular recess at or near its inner end, of recessed blocks secured to the support and a sectional bearing-sleeve having a spherical enlargement to coöperate with the recessed blocks to form a ball-and-socket joint, said sectional bearing-sleeve being disposed in the annular recess in the axle, substantially as set forth.

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

CLAY FAULKNER.

Witnesses:
TRUEMAN LANGDON,
B. T. MCCALLUM.