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L. HALL.
CAR AXLE.

APPLICATION FILED MAY 4, 1907.

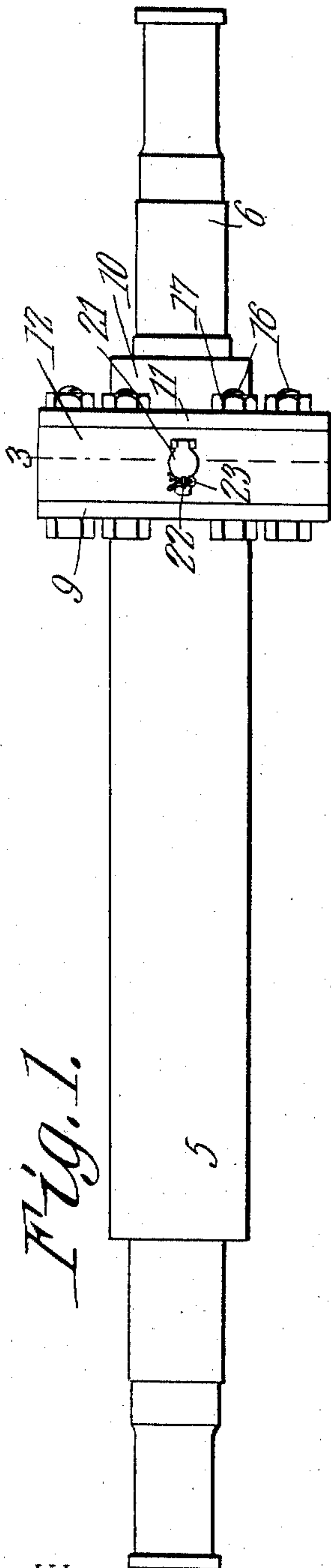


Fig. 1.

WITNESSES:

E. H. Blum
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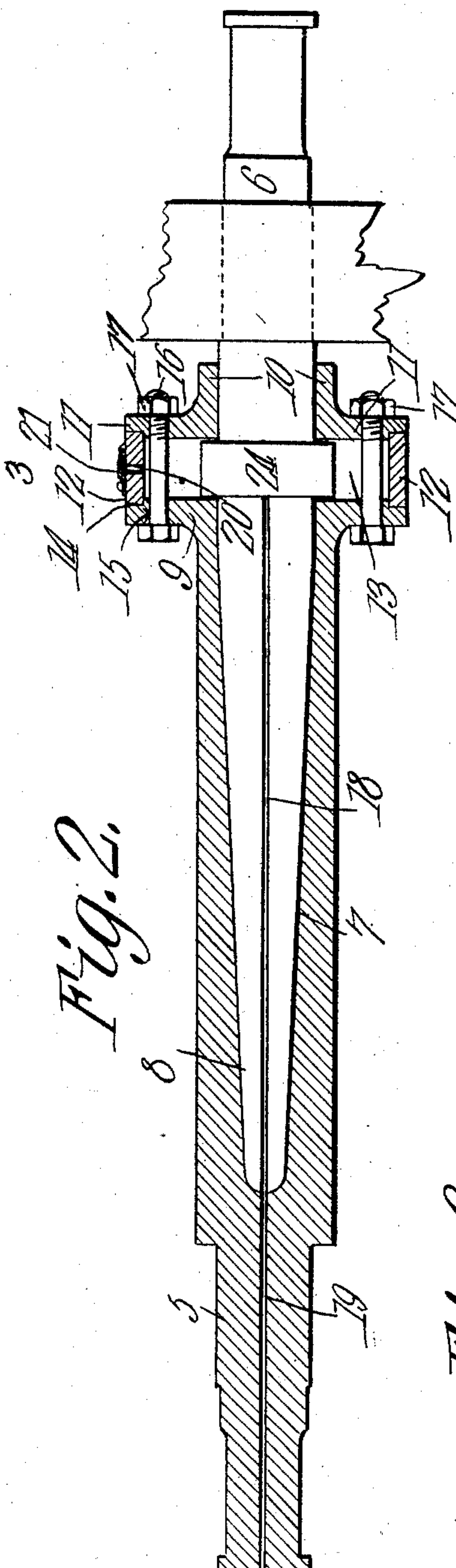


Fig. 2.

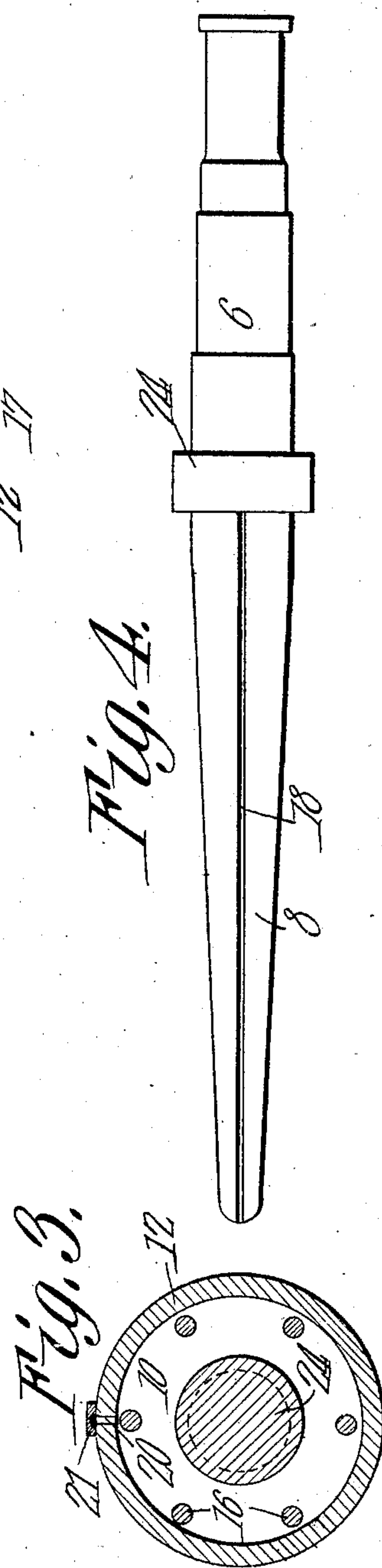


Fig. 3.

Fig. 4.

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LANGLEY HALL, OF ASTORIA, OREGON.

CAR-AXLE.

No. 868,553.

Specification of Letters Patent.

Patented Oct. 15, 1907.

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To all whom it may concern:

Be it known that I, LANGLEY HALL, a citizen of the United States, residing at Astoria, in the county of Clatsop and State of Oregon, have invented a new and useful Car-Axle, of which the following is a specification.

This invention relates to lubricating axles for railway trucks, cars and other rolling stock and has for its object to provide a sectional axle in which the axle sections are free to revolve independently of each other thereby to prevent undue friction on the car wheels when traveling around curves.

A further object of the invention is to provide means for lubricating the axle sections, and means for limiting the longitudinal movement of said sections.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a front elevation of a sectional car axle constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a side elevation of the inner section of the axle detached.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved axle forming the subject matter of the present invention is preferably constructed in two sections 5 and 6, the outer section 5 being formed with a tapering longitudinal bore or socket 7 for the reception of the correspondingly tapered end 8 of the axle, as shown. The outer section 5 is provided with an annular flange 9 which extends laterally from the exterior wall of said section, and spaced from said flange and loosely mounted on the inner section 6 of the axle is a collar 10 provided with a similar flange 11, said flanges being spaced apart by an intermediate band or ring 12 thereby to form a chamber 13 for the reception of a quantity of oil or other lubricant. The flanges 9 and 11 are formed with annular seating recesses 14 adapted to receive the band or ring 12, there being aligned openings 15 formed in the flanges for the reception of bolts or similar fastening devices 16 which extend transversely through the chamber 13 for engagement with clamping nuts 17, as shown.

As a means for feeding the oil or other lubricant from the chamber 13 to the socket 7 the tapering end of the inner axle section 6 is formed with a longitudinal groove or channel 18, there being an air-vent or opening 19 formed in the end of the outer axle section 5 and communicating with the groove 18, thereby to permit the oil to flow from the chamber into said groove.

The oil or other lubricant is introduced into the chamber 13 through a feed opening 20, the latter being normally closed by a pivoted lid or cap-piece 21 having an opening formed in one end thereof for the reception of an eye or staple 22 carried by the band 12 and which receives a key or cotter-pin 23 so as to effectually retain the cap 21 in closed position.

As a means for preventing longitudinal movement of the axle sections, the inner section 6 is formed with an annular collar or shoulder 24 which is preferably spaced inwardly from the walls of the chamber 13 so that the fastening devices 16 may be adjusted to clamp the ring 12 between the flanges 9 and 11 without effecting the collar.

It will thus be seen that when oil or other lubricant is introduced into the chamber 13 the latter will flow through the groove 18 and thus thoroughly lubricate the axle sections, the latter at the same time being effectually housed and protected so as to prevent the entrance of sand and dust to the bearing.

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

1. An axle including telescopic sections one of which is provided with an annular flange and having a vent opening formed in one end thereof, a collar loosely mounted on the adjacent section and provided with a similar flange, a band interposed between the flanges and forming an oil chamber, fastening devices extending through said flanges, and a collar secured to the inner section and disposed between said flanges, there being a longitudinal groove formed in the inner axle and communicating with the air vent.

2. An axle including telescopic sections one of which is provided with an annular flange, a collar loosely mounted on the adjacent section and provided with a similar flange, there being seating recesses formed in said flanges, a band engaging the seating recesses and forming an oil chamber between the same, clamping devices extending through the flanges for locking the band in the seating recesses, and a collar rigidly secured to the inner section and extending between the walls of the oil chamber at said flanges.

3. An axle including telescopic sections one of which is

provided with an annular flange, a collar loosely mounted on the opposite section and provided with a similar flange spaced from the adjacent flange to form an intermediate oil chamber, a band interposed between said flanges, and
5 having a feed opening formed therein, clamping devices extending through the flanges for locking the band in position, and a closure for the feed opening, there being an air-vent formed in one end of the outer member and a longitudinal lubricating groove formed in the inner mem-

ber and communicating with the air-vent and lubricating 10 chamber, respectively.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LANGLEY HALL.

Witnesses:

THOMAS QUINN,
JOHN CHITWOOD.