

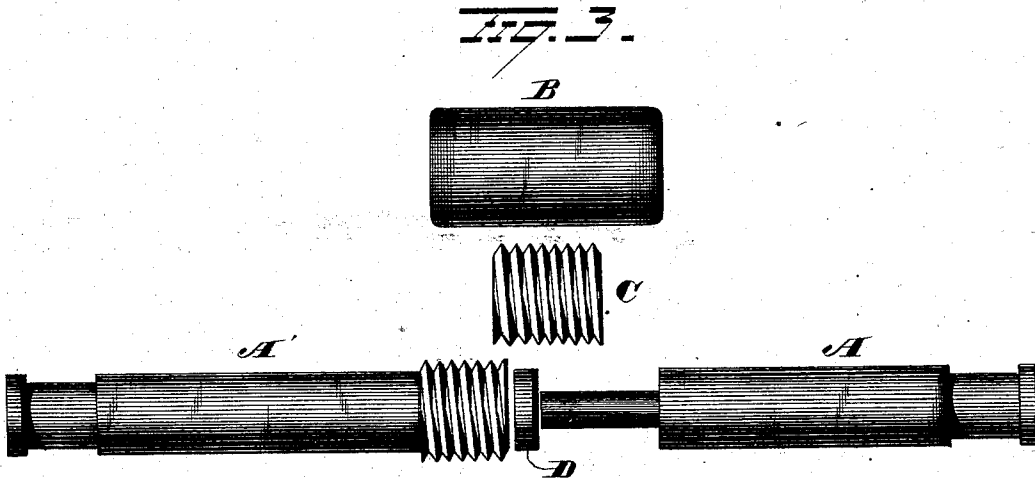
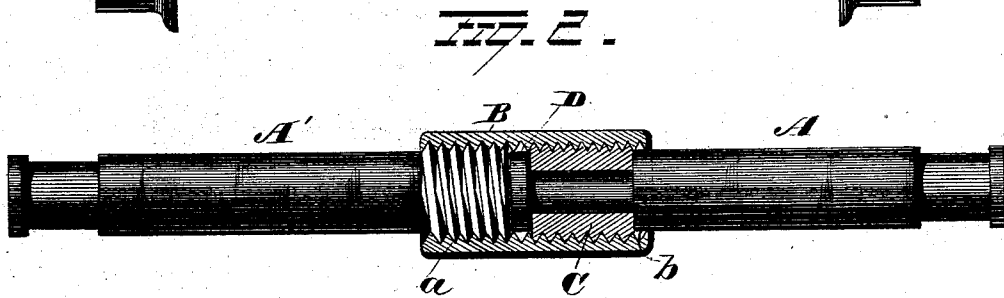
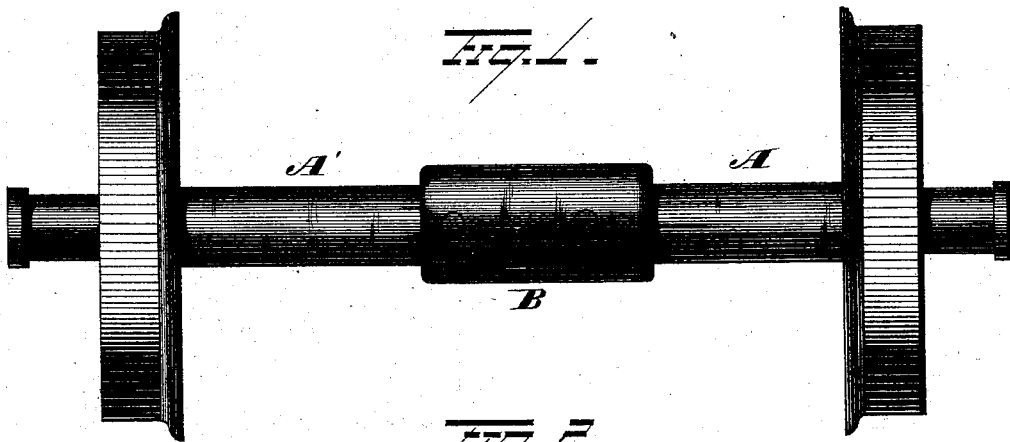
(No Model.)

W. S. EBERMAN.

CAR AXLE.

No. 282,507.

Patented Aug. 7, 1883.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM S. EBERMAN, OF SANDY LAKE, PENNSYLVANIA.

## CAR-AXLE.

SPECIFICATION forming part of Letters Patent No. 282,507, dated August 7, 1883.

Application filed May 19, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. EBERMAN, of Sandy Lake, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Car Axles; 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 railroad-car axles, the object of the same being to provide means whereby one wheel is enabled to turn independently of the other; and with this end in view my invention consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved axle. Fig. 2 is a longitudinal view of the same, and Fig. 3 is a view showing the parts detached.

This axle is composed of the sections A and A', of same or unequal lengths, the outer ends of which are reduced in size and adapted to be rigidly secured within the wheel-hubs. The inner end of the section A' is screw-threaded, and is adapted to register with the female screw-threaded end *a* of the coupling or casing B, into which latter it is screwed a sufficient distance, and locked therein by suitable keys. The inner end of the section A, which is introduced into the opposite end of the casing or coupling B, is provided with the annular shoulder *b*, which latter bears against the outer end of the screw-threaded sleeve C. This end of the section A is considerably reduced in size and fits snugly within the sleeve C, and the extreme end thereof, which is smaller than the portion of the axle within the sleeve, is adapted to receive the collar D, which latter is considerably larger than the bore of the sleeve C. After the reduced end of the section A of the axle has been passed into the sleeve C the collar D is placed on the projecting end thereof and secured therein by upsetting the end of the axle, or by suitable keys. This operation secures the sleeve on the axle and prevents it from moving longitudinally thereon, but leaves it free to revolve on the axle, or the section of the axle to revolve

init. This sleeve is externally screw-threaded, and is adapted to be secured in the casing or coupling similar to the section A' of the axle, with the end of the section A abutting against the inner end of the section A'. When the parts are thus secured together, the section A', with its attached wheel, is free to move in the sleeve C independently of the section A', and the section A', with the coupling B and sleeve C, is free to move independently of the section A.

This axle can be lengthened to compensate for the wearing of the flange by putting between the adjacent ends of the sections of the axle a washer of any kind or material which will be sufficient to separate the adjacent ends the desired distance.

This construction of parts firmly unites the two sections of the axle and prevents them from displacement, but leaves the wheels free to move independently of each other, and consequently enables one turn at a greater rate of speed than the other while turning curves.

This device is simple in construction, durable in use, and can be manufactured at a small initial cost.

It is evident that slight changes in the construction and relative arrangement of the several parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact construction shown and described, but consider myself at liberty to make such 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 female screw-threaded coupling and a screw-threaded sleeve secured within the coupling, of a divided axle, one section of which is screw-threaded to rigidly engage the coupling, while the other section is loosely secured within the sleeve, substantially as set forth.
2. The combination, with a female screw-threaded coupling and a screw-threaded sleeve rigidly secured within the coupling, of a divided axle, one section of which is screw-threaded and registers with one end of the coupling, while the opposite section is reduced in size

and secured within the sleeve by a collar secured to the extreme inner end of the said section of axle, substantially as set forth.

3. The combination, with the coupling B, sleeve C, and section A' of the axle, of the section A, provided with the shoulder *b*, and the collar D, secured to the extreme inner end of the said section A, substantially as set forth.

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

WILLIAM S. EBERMAN.

Witnesses:

E. G. EBERMAN,  
J. H. HENRY.