

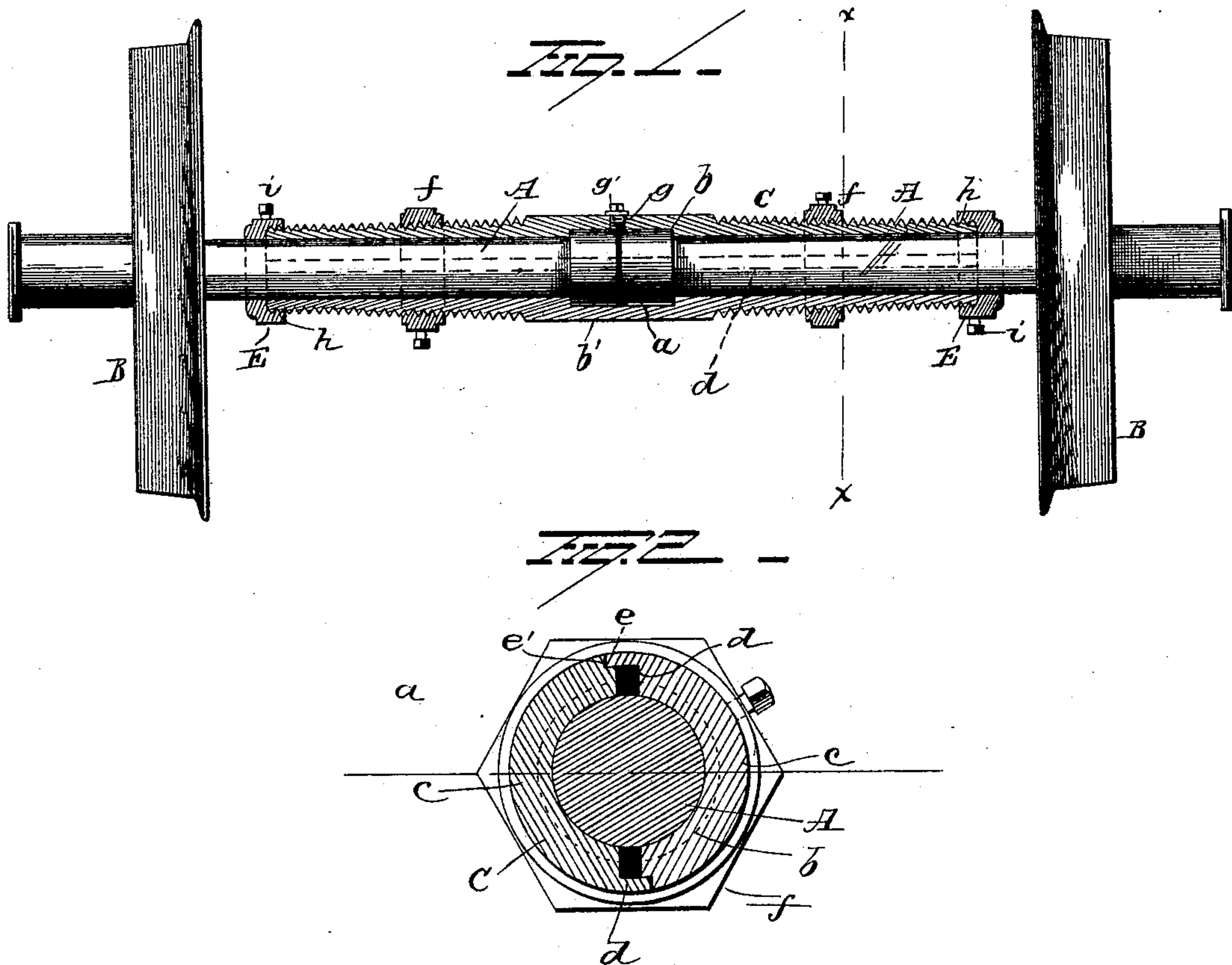
(No Model.)

R. K. SKINNER.

DIVIDED CAR AXLE.

No. 391,203.

Patented Oct. 16, 1888.



Witnesses,
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UNITED STATES PATENT OFFICE.

RICHARD K. SKINNER, OF ELKLAND, PENNSYLVANIA.

DIVIDED CAR-AXLE.

SPECIFICATION forming part of Letters Patent No. 391,203, dated October 16, 1888.

Application filed June 6, 1888. Serial No. 276,191. (No model.)

To all whom it may concern:

Be it known that I, RICHARD K. SKINNER, of Elkland, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Divided 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 car axles, and more particularly to such as are commonly known as "divided car-axles," and has for its object to so construct a divided car-axle that the same may be readily lubricated, and that such lubricant will be prevented from escaping.

A further object is to provide a divided car-axle with a separable sleeve for uniting the two sections of the axle together, and to provide said separable sleeve with packing-strips, whereby tight joints may be effected and the lubricating-oil prevented from escaping through said joints.

A further object is to produce a divided car-axle which shall be simple in construction, effective in operation, and cheap to manufacture.

With these objects in view, my invention consists in certain novel features of construction and peculiar combinations and arrangements of parts, as will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of my improved axle and attached parts. Fig. 2 is a section on the line *x x* of Fig. 1.

A A indicate the two sections of the divided axle, provided at their free outer extremities with wheels B and at their inner ends with enlargements or annular flanges *a*. A sectional sleeve, C, having interior recessed portion, *b*, at its center for the reception of the annular flanges *a*, is placed upon the two sections of the axle and extends nearly the entire length of the axle between the wheels B. The sleeve C is advisably made tapering throughout the greater portion of its length and screw-threaded from near the center to each end, a blank space, *b'*, being left at the center, as shown in Fig. 1.

The sleeve C is composed of two sections, *c c*, having inserted between them strips *d*, of

leather, rubber, or other packing material. One section *c* of the sleeve C is provided with flanges *e*, adapted to fit into recesses *e'* made in the other section *c* of the sleeve, thus covering the packing-strips and serving to protect the same, as shown in Fig. 2. A collar or internally-screw-threaded band, *f*, is screwed upon each end of the sleeve and screwed upon the conical portion thereof until the parts are tightly clamped together, it being of course understood that the packing material *d* shall be of a thickness greater than the depth of the flange and recess of the sections *c* of the sleeve C, so that when said sections are forced together they tightly clamp the packing material. By this construction lubricating-oil will be prevented from escaping from the axle through the joints of the sections *c*. Such lubricating-oil may be introduced to the axle through a perforation, *g*, made in one section *c* of sleeve C, which perforation will be screw-threaded for the reception of a similarly-threaded plug, *g'*, adapted to normally close the perforation.

In order to prevent the escape of lubricant from the ends of sleeve C and to prevent the entrance of dust within said sleeve, I provide a cap, E, at each end of the sleeve, as shown in Fig. 1. The caps E are each provided with a central perforation for the passage of the axle A and a recess, *h*, to receive the cylindrical ends of the sleeve C, the walls of said recess being screw-threaded and adapted to screw upon the sleeve a suitable distance. The caps E will also preferably be provided with a screw-threaded perforation, through which a set-screw, *i*, is adapted to pass and impinge against the sleeve to retain said cap in place.

The recess *h* in the cap E may be made of sufficient depth to permit the cap to be screwed upon the collar to a greater or less extent, as desired, and thus compensate for wear.

Many slight changes might be made in the constructive detail of my invention without departing from the spirit thereof; hence I do not wish to limit myself to the precise details of construction herein set forth; but,

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

1. The combination, with a divided axle, of

a sleeve made in two parts surrounding said axle, collars on said sleeve for retaining the sections thereof together, and the recessed caps secured on the ends of the sleeve and closely embracing the axle, substantially as set forth.

2. The combination, with a divided axle, of a sleeve made in two sections and adapted to surround said axle and tapering from its center toward its ends, packing material inserted between said sections and held in place by flanges on said sections, and collars for retaining said sections together, substantially as set forth.

3. The combination, with a divided car axle, of an externally-screw-threaded sleeve made in two sections and adapted to surround said axle, said sleeve tapering from its center toward its ends and provided with a perforation for the introduction of lubricating-oil, a plug for closing said perforation, and collars for retaining the sections of the sleeve together, substantially as set forth.

4. The combination, with a divided axle having enlarged inner ends, of an externally-screw-threaded sleeve made in two sections and adapted to surround the axle, and having a central recess to receive said enlarged ends of

the divided axle, packing material inserted between said sections of the sleeve, and collars for retaining the sections of said sleeve together, substantially as set forth.

5. The combination, with a divided axle, of a sleeve made in two sections surrounding said axle, packing material inserted between said sections, flanges on one of the sections adapted to cover the packing material and fit into recesses in the other section, and collars to retain said sections of the sleeve together, substantially as set forth.

6. The combination, with a divided axle, of a sleeve made in two sections surrounding said axle, packing material inserted between the sections of the sleeve, collars on said sleeve for retaining the sections thereof together, and recessed caps adapted to screw upon the ends of the sleeve, substantially as set forth.

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

RICHARD K. SKINNER.

Witnesses:

RUSSEL CRANDALL,
A. S. CRANDALL.