R. P. GILLETT.

Axle-Lubricator.

No. 52,561. Patented Feb. 13. 1866.

Fig. 1.

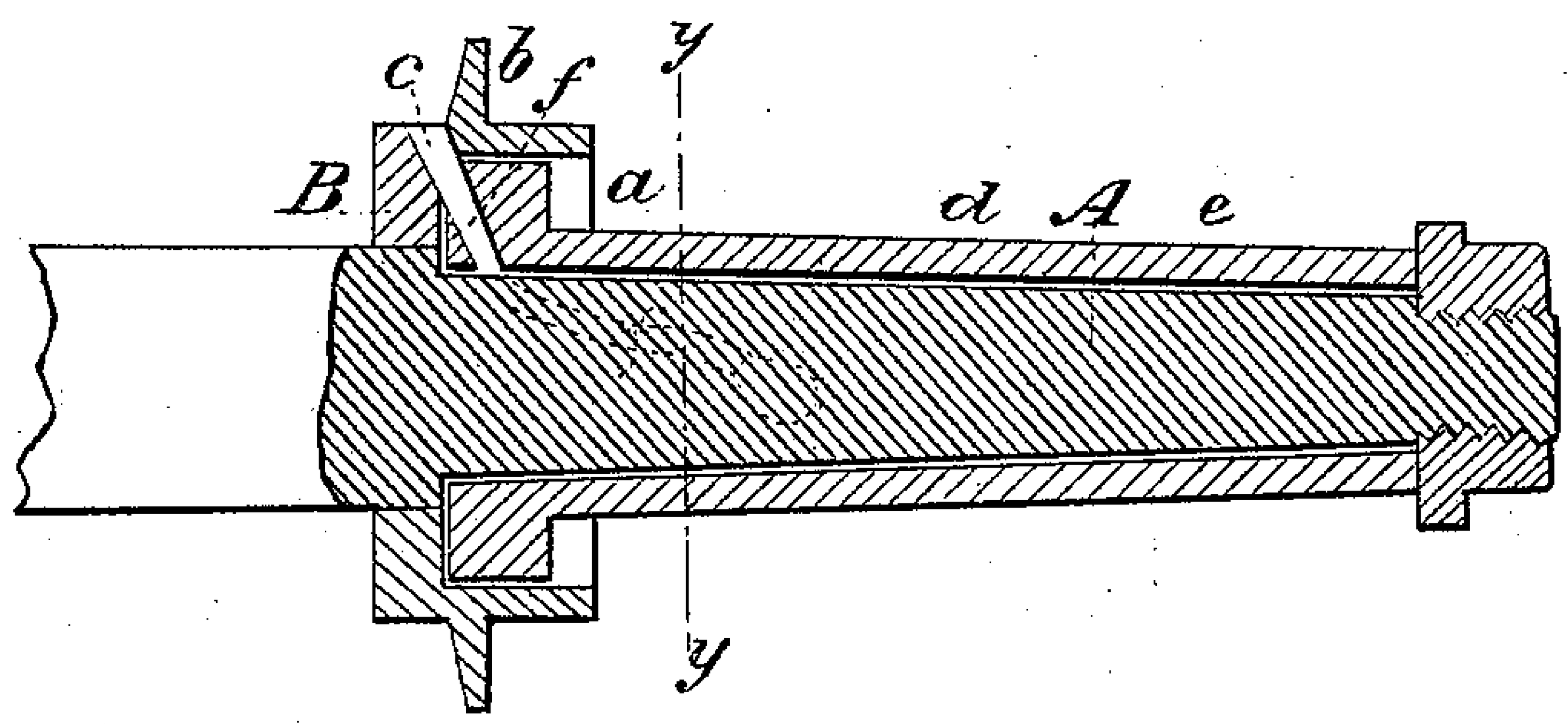


Fig. 2.

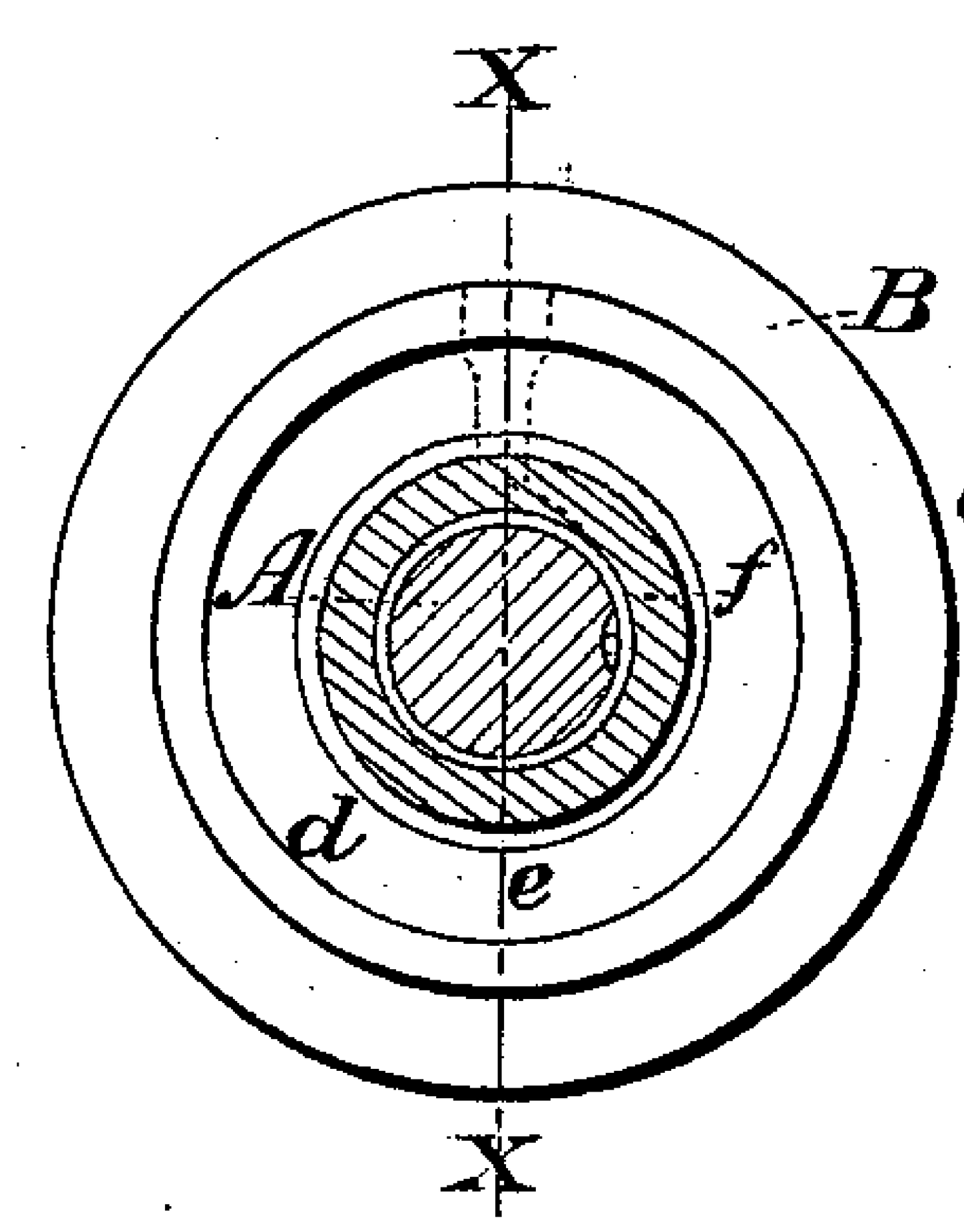
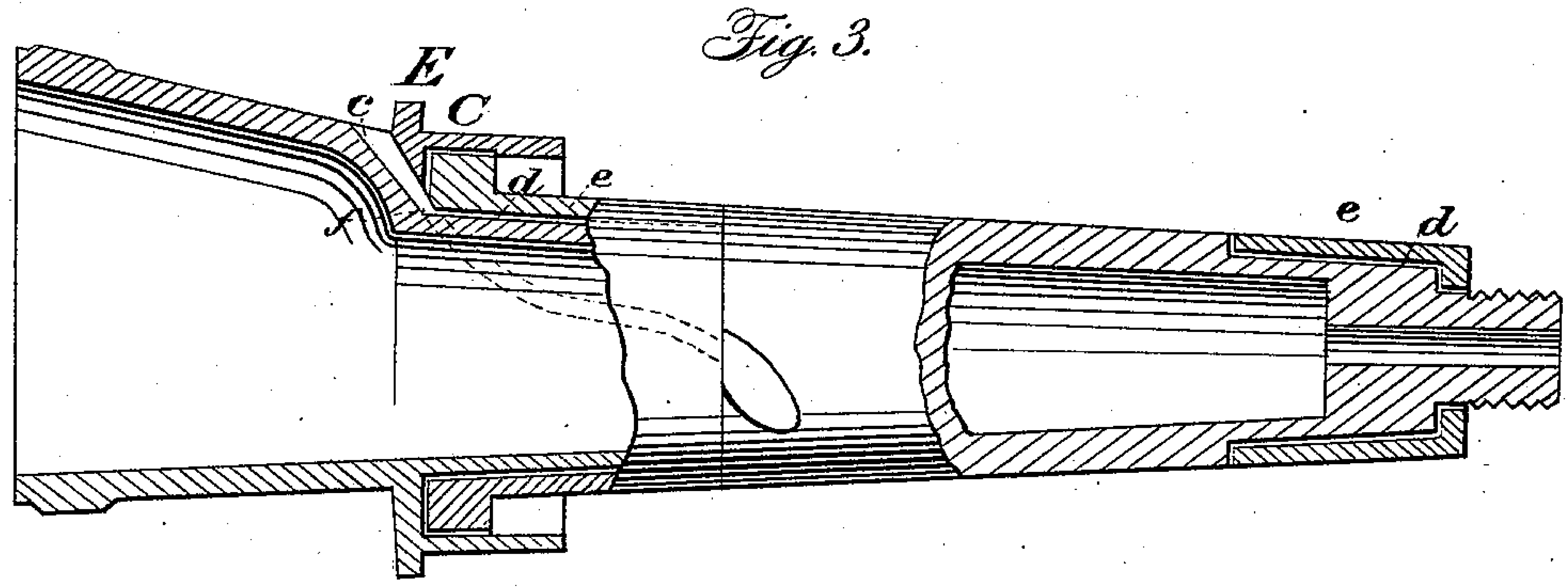


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

R. P. GILLETT, OF SPARTA, WISCONSIN.

IMPROVED AXLE FOR VEHICLES AND JOURNALS FOR MACHINERY.

Specification forming part of Letters Patent No. **52,561**, dated February 13, 1866.

To all whom it may concern:

Be it known that I, R. P. GILLETT, of Sparta, in the county of Monroe and State of Wisconsin, have invented a new and useful Improvement in Axles for Vehicles and Journals for Machinery generally; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a transverse section of the same, taken in the line *y y*, Fig. 1; and Fig. 3, a longitudinal central section of a thimble-skein provided with my improvement.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and useful improvement in axles for vehicles patented by me on the 30th September, 1862.

The invention consists in a new and improved mode of coating the arm of the axle—the portion on which the wheel runs—with Babbitt metal or other similar composition, as hereinafter set forth, and also in a mode of forming a lubricating-passage for axles thus coated, whereby it is believed that a very superior axle is obtained, as well as superior journals for machinery.

A, Figs. 1 and 2, represents an axle provided with a collar or shoulder, B, at its inner end, with an annular recess, *a*, at its outer side to receive the inner end of the boxing of the hub, to exclude all dust and dirt therefrom. This collar or shoulder B is cast with a flange, *b*, extending around it circumferentially and centrally, and *c* is a hole made in the collar or shoulder B, extending from its periphery down to the annular recess *a*.

The axle thus constructed I coat with Babbitt metal or other similar composition, or soft metal, as follows: The hole *c* is filled with clay, the latter extending down into the recess *a* to form a core, and the axle is covered by means of a soldering-iron with tin *d*, and then, by means of a suitable mold, the external coat of Babbitt metal *e* is cast upon it, said metal *e* passing around the core formed by the clay. The clay is then removed and a chamber or passage, *f*, formed, which is an extension of *c*. This passage *f* is further extended by having a needle or rod made of taper form and placed against the axle A, to form a core while casting the metal *e* around the axle, and this metal core, after the metal *e* is cast around the axle, is withdrawn by means of pinchers constructed for the purpose. This passage for the oil may extend from the collar or shoulder B a greater or less distance, according to the length of the axle, (see dotted lines *f*,) and in applying the metal rod or core to the axle the small end is inserted in the clay core of the hole *c*. By having this metal core of taper form the oil-passage is gradually enlarged from the lower end of *c* to the exterior of the metal coating *e*, and said passage will therefore not be liable to become choked up.

The flange *b* serves as a dust-guard, preventing dust, dirt, soil, &c., from working into the box at the rear of the hub.

This invention is applicable to thimble-skeins for wooden axles. The skein, however, is not completely covered with the Babbitt metal *e*, two rings or bands of the same being applied, as shown clearly in Fig. 2. This thimble-skein is cast with a collar or shoulder, C, and a socket, D, and a flange, E, all in one piece, the lubricating-passage being the same as that previously described, and having the same letters of reference.

By coating the axle or journal with tin previous to casting the Babbitt metal around it the latter is made to adhere firmly to the axle—a very important feature.

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

The collar B on the axle A, constructed with a recess, *a*, for the insertion of the butt-end of the boxing *e*, substantially as and for the purpose described.

R. P. GILLETT.

Witnesses:

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