

No. 799,204.

PATENTED SEPT. 12, 1905.

J. S. TAYLOR.

AXLE BOX.

APPLICATION FILED OCT. 18, 1904.

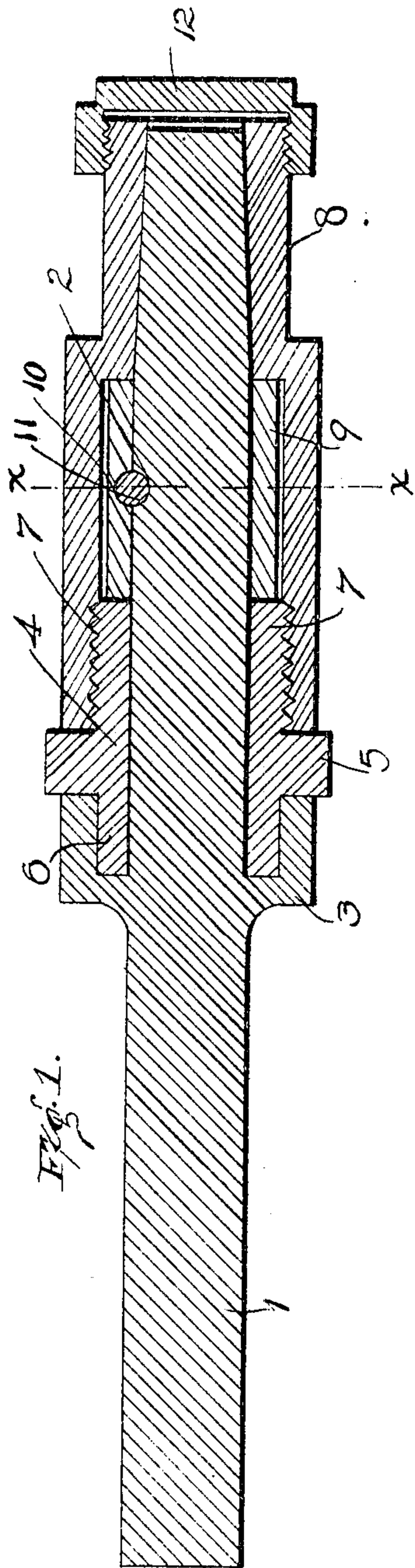


Fig. 1.

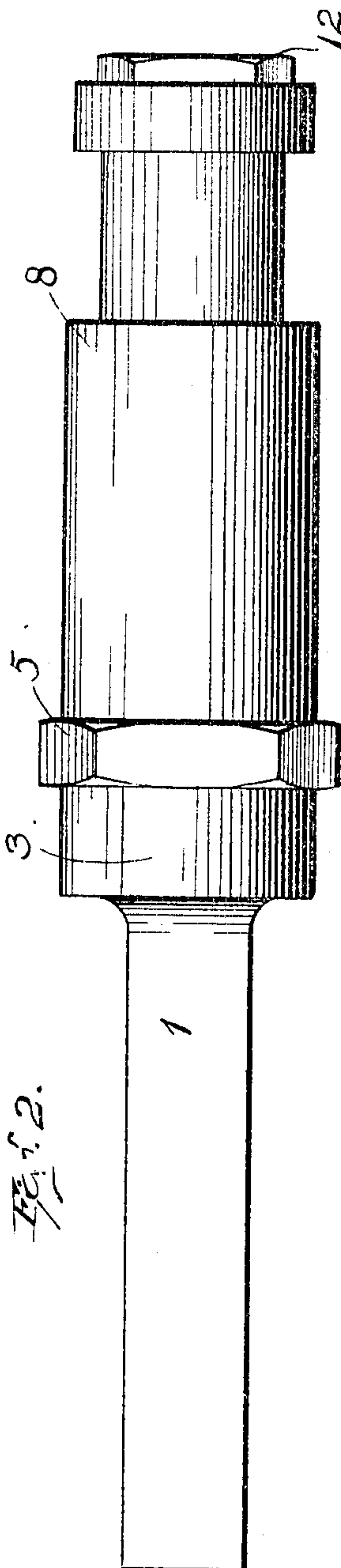


Fig. 2.

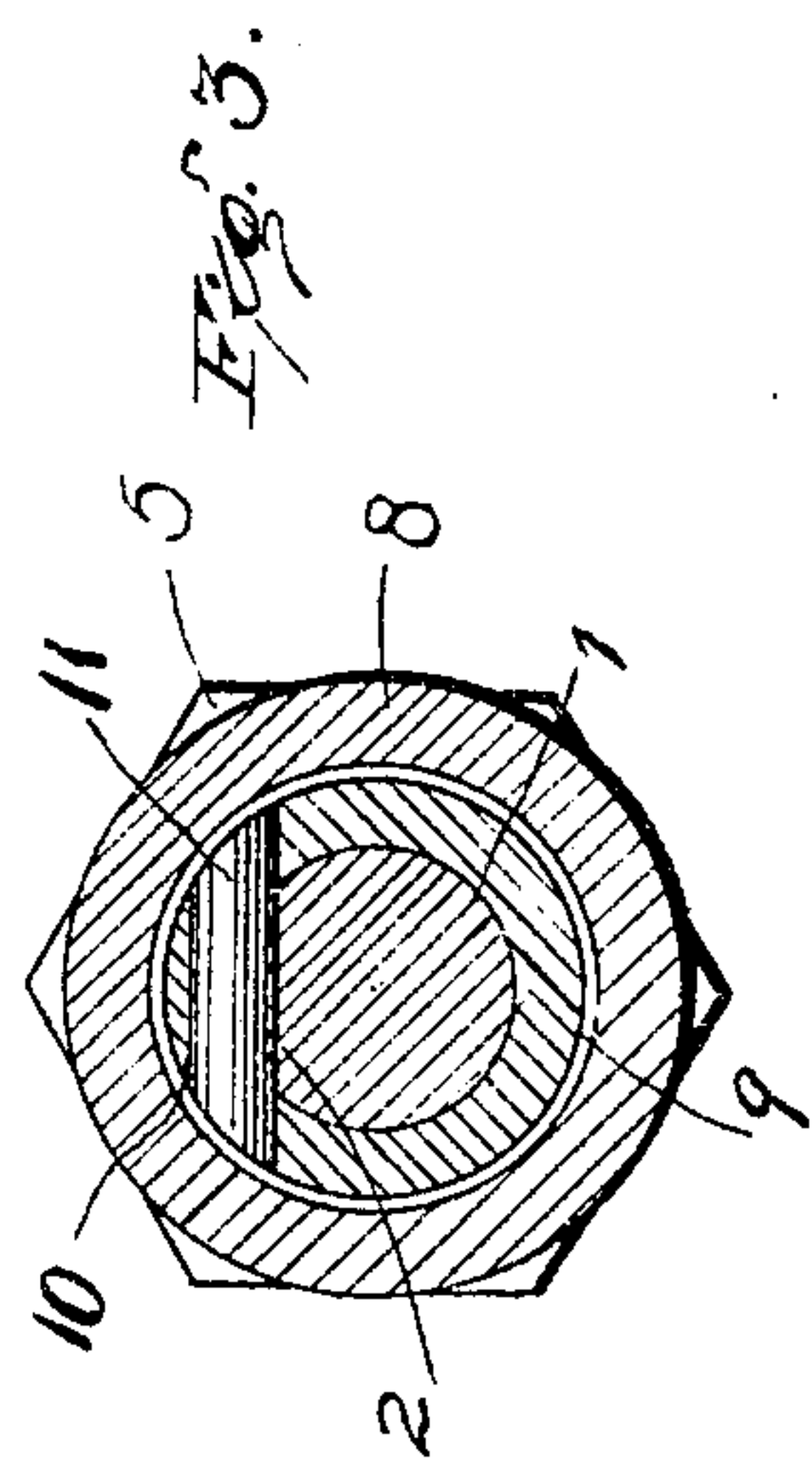


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN S. TAYLOR, OF LOGANSFORT, INDIANA, ASSIGNOR OF ONE-HALF
TO E. D. MORGAN, OF COFFEYVILLE, KANSAS.

AXLE-BOX.

No. 799,204.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed October 18, 1904. Serial No. 228,995.

To all whom it may concern:

Be it known that I, JOHN S. TAYLOR, a citizen of the United States, residing at Logansfort, in the county of Cass and State of Indiana, have invented certain new and useful Improvements in Axle-Boxes; 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 axle-boxes.

It has for its object, among others, to reduce friction, secure a steady-running wheel, and to exclude all dirt, but retain the oil.

The invention consists in the details of construction and combination of parts shown and described herein and more particularly pointed out in the claims concluding this specification.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a longitudinal section of the box or bearing, showing its application to a spindle. Fig. 2 is an external view thereof, and Fig. 3 is a cross-sectional view on the line *x x* of Fig. 1.

While the preferred embodiment of my invention is fully shown in the accompanying drawings and its construction and operation clearly described in this specification, the right is reserved to make such changes from the construction shown and described herein as the scope of the claims hereto appended will permit.

Referring more particularly to the drawings, in carrying out my invention I provide the spindle 1 with a transverse groove or slot 2 about midway of its length and a shoulder ring or collar 3 at the hub end. The outer end of said spindle tapers about one-third its length to the end. A shoulder-bearing 4 has an intermediate enlarged nut-surface 5 for actuating the same and laterally-restricted extensions 6 7 at either end, the part 6 adapted to fit within the shoulder ring or collar 3 and the part 7 being screw-threaded to engage the end of the boxing 8. A broad sleeve 9 fits over the central portion of the spindle against the shoulder-bearing and has a transverse perforation 10 therethrough registering with the groove 2, so that a pin 11 may engage both and lock them together. The boxing 8 fits over said sleeve and screws on the shoulder-bearing, whereby said boxing and shoulder-

bearing may freely revolve on one spindle, but are locked in place by said sleeve, which forms bearings for both the shoulder in said boxing and the end of the shoulder-bearing. The external diameter of said sleeve is somewhat smaller than the interior of that portion of the box which fits therearound to provide a chamber for the oil. The outer end of the boxing is closed by a screw-threaded cap 12. The end of the spindle tapers, preferably, about one-eighth of an inch from the sleeve to the end.

It will be noted that with my construction it is impossible for the boxing to bind. It is extremely simple and involves the minimum amount of wear from dirt. The fact that the sleeve is smaller than the boxing, leaving a space for the oil, restricts the bearings to the ends, thus reducing the friction one-third. The device is also durable, light-running, and cheap of manufacture.

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

1. The combination with a spindle having a transverse groove about midway thereof, of a shoulder-bearing fitting around said spindle and having a portion for engagement with the boxing, a sleeve having a transverse perforation therein adapted to register with the groove in said spindle whereby said sleeve may be locked to the spindle by a pin engaging said groove and perforation, whereby the shoulder-bearing may be retained in place, a boxing having a portion adapted to fit around the end of said spindle and an upwardly-offset portion extending over and beyond the sleeve, provided with means for engagement with the shoulder-bearing, the inner shoulder formed by the offset portion of said boxing engaging the outer end of said sleeve, and a cap adapted to fit over the end of said boxing.

2. The combination with a spindle having a transverse groove about midway thereof, a laterally-extending shoulder ring or collar and its outer end tapered, of a shoulder-bearing fitting around said spindle, said shoulder-bearing having a portion extending under said shoulder-ring, a portion for engagement with the boxing and a portion extending outward between said shoulder-ring and boxing for turning said shoulder-ring into place, a sleeve having a transverse perforation therein adapted to register with the groove in said spindle

whereby said sleeve may be locked to the spindle by a pin engaging said groove and perforation whereby the shoulder-bearing may be retained in place, a boxing having a portion
5 adapted to fit around the tapered portion of said spindle and an outwardly-offset portion extending over and beyond the sleeve provided with means of engagement with the shoulder-bearing, the inner shoulder formed by the off-
10 set portion of said boxing engaging the outer end of said sleeve, and a cap adapted to fit over the end of said boxing.

3. The combination with a spindle having a transverse groove about midway thereof, a
15 laterally-extending shoulder ring or collar and its outward end tapered, of a shoulder-bearing fitting around said spindle, said shoulder having a portion extending under said collar, a portion for engagement with the boxing and
20 a portion extending outward between said collar and boxing for turning said shoulder-bearing into place, a sleeve having a trans-

verse perforation therein, adapted to register with the groove in said spindle whereby said sleeve may be locked to the spindle by a pin
25 engaging said groove and perforation and the shoulder-bearing may be retained in place, said sleeve being of the same thickness throughout, a boxing having a portion adapted to fit around the tapered portion of said spindle and an outwardly-offset portion extending
30 over and beyond the sleeve leaving a space between the outer surface of the sleeve and the inner surface of said offset portion, said boxing being provided with means of engage-
35 ment with the shoulder-bearing, and a cap adapted to fit over the outer end of said boxing.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN S. TAYLOR.

Witnesses:

RUSSELL L. SWINDLER,
RAYMOND N. MALAY.