

(No Model.)

J. BLESSINGER.
SPINDLE AND BOX FOR WHEELS.

No. 453,960.

Patented June 9, 1891.

FIG. 1.

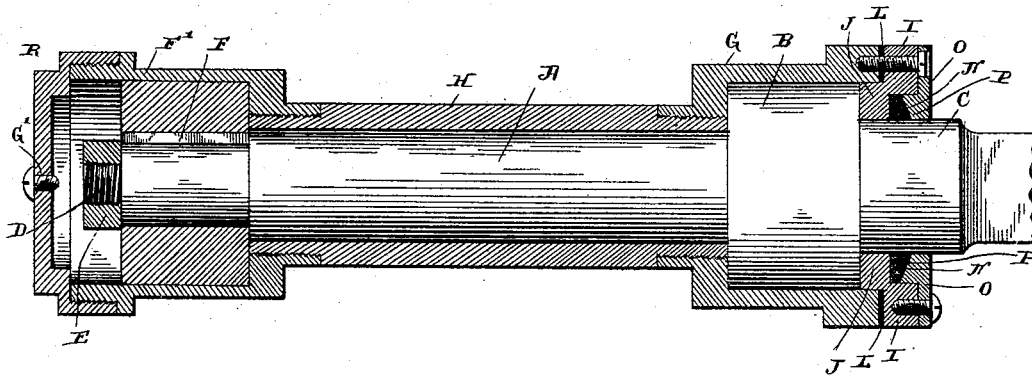
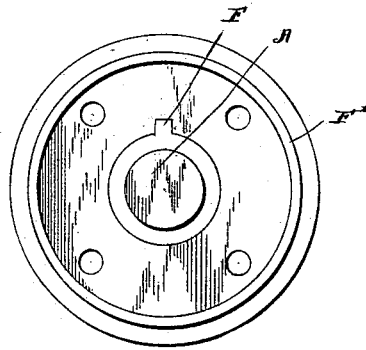


FIG. 2.



WITNESSES.

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SPINDLE AND BOX FOR WHEELS.

SPECIFICATION forming part of Letters Patent No. 453,960, dated June 9, 1891.

Application filed April 2, 1891. Serial No. 387,406. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BLESSINGER, of Huntingburg, in the county of Dubois and State of Indiana, have invented certain new and useful Improvements in Spindles and Boxes for Vehicles; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in spindles and boxes for vehicles; and it consists in the spindle provided with a flange or collar and a longitudinal rib or flange, combined with two boxes connected by a sleeve, and which is made to revolve with the spindle, as will be more fully described herein-after.

The objects of my invention are to cause all of the wear upon the spindle to take place at the collar which is formed thereon, and thus prevent the spindle from wearing out; and to provide a means for retaining the oil upon the spindle, so it will only be necessary to provide fresh oil at long intervals of time.

Figure 1 is a longitudinal vertical section of a spindle and box to which my invention is applied. Fig. 2 is an end view of the outer box or bearing, the outside nut or cap being removed.

A represents a revolving spindle, which is provided with the collar B, which will be of any desired diameter and width, and with the narrow collar or flange C, which is connected thereto. At the outer end of the spindle is formed a screw-thread D, upon which the nut E is screwed to hold the box in position, and inside of this screw-thread the axle is reduced slightly in diameter for any suitable distance, and extending longitudinally with the spindle along this reduced portion is a flange or key F. The box proper consists of the two chambers F G, which are connected together by a sleeve H, which is screw-threaded at each of its ends and which sleeve is larger than that portion of the spindle which it incloses, so as to form a chamber for the lubricating-fluid. The inner chamber or box fits over the flange or collar B, as shown, and applied to the outer end of the box is a ring or collar I, which has

a flange J formed on its inner side, and which flange fits inside of the inner end of the box and bears against the inner end of the collar B. Between this collar I and the end of the box is interposed a suitable packing L, which serves to make a perfectly tight joint, both for the purpose of preventing the escape of lubricating-fluid and prevent the dust and dirt from working in. This collar I being secured to the box and catching against one end of the collar while the box catches against the opposite end, the entire boxing is thereby secured to the axle. In order to form a perfectly tight joint, there is formed in the outer side of the collar I a recess N, in which a suitable packing is placed, and applied to the outer side of this collar I is a second collar O, which is provided with a flange P at its inner edge and which bears directly against the packing and forces it tightly into the recess prepared to receive it. This packing being in direct contact with the side of the spindle prevents any dust from working into the end of the boxing.

The outer box has secured inside of or formed as a portion for it a socket to receive the reduced outer end of the spindle, and which socket has a groove to receive the longitudinal flange upon the spindle. Through this bearing or socket are formed a suitable number of openings, which communicate at their inner ends with the chamber inside of the sleeve. When the nut E is screwed up it bears directly against this socket, as shown, and the holes are formed outside of the nut, so as not to be closed thereby. Over the screw-threaded outer end of the box is screwed the cap R, through the center of which is formed an opening, through which lubricating-fluid is poured. This outer cap forms a covering for the chamber which is formed in the end of the box to receive the lubricating-fluid which runs from the chamber through the opening into the sleeve.

It will be seen from the above that the longitudinal flange by catching in a groove in the socket locks the entire boxing to the spindle, so that the spindle is compelled to revolve with the boxing.

The bearings at each end of the spindle being larger in circumference than the spindle and the box being out of contact with the

spindle, the friction is reduced and the wheel will revolve more easily than where the ordinary box and spindle engage each other throughout their entire length.

5 Having thus described my invention, I claim—

1. The spindle provided with the collar and a longitudinal flange, combined with the two boxes, a sleeve for connecting the two boxes, 10 and collars which are applied to the inner box for attaching the boxing to the spindle, substantially as shown.

2. The spindle provided with a collar and a longitudinal flange, combined with the two 15 boxes, a sleeve for connecting them, a socket formed in the outer box and which receives the flanged end of the spindle, and suitable

devices for securing the boxing to the spindle, substantially as described.

3. The spindle provided with the longitudinal flange upon its outer end, the box provided with the grooved socket and having 20 holes through which the lubricating fluid passes, and the nut E, combined with the perforated screw-threaded cap, which is applied 25 to the outer end of the box, substantially as set forth.

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

JOSEPH BLESSINGER.

Witnesses:

ANTHONEY MILLER,
FRANK SCHLESING.