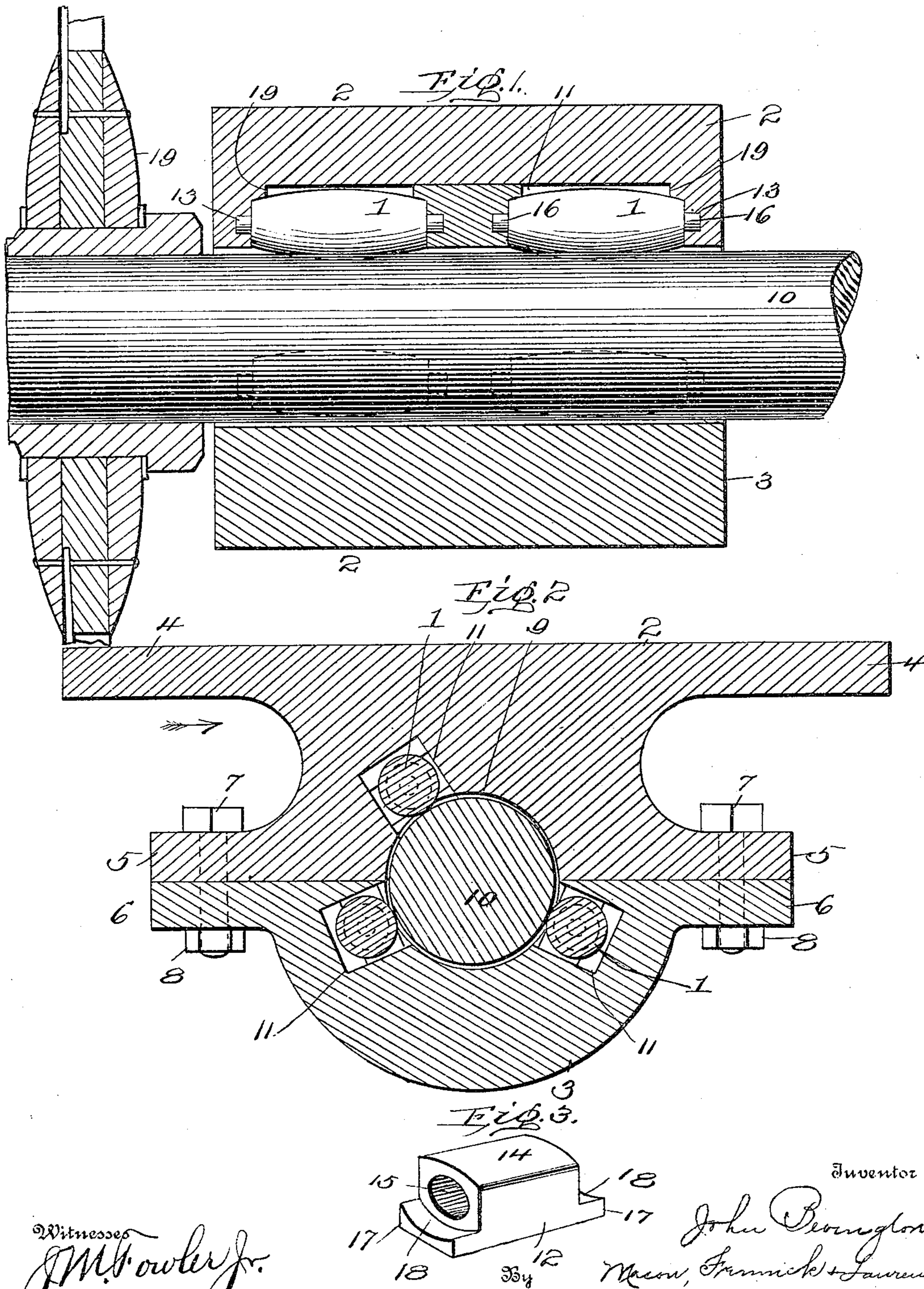


No. 801,174.

PATENTED OCT. 3, 1905.

J. BEVINGTON.  
ANTIFRICTION BEARING.  
APPLICATION FILED JUNE 27, 1905.



Witnesses  
*J. M. Fowler Jr.*  
*Edwin C. Vrooman.*

Inventor

*John Bevington.*

*Macon, Farnick & Lawrence*

*his Attorneys*

# UNITED STATES PATENT OFFICE.

JOHN BEVINGTON, OF CORDOVA, NEBRASKA.

## ANTIFRICTION-BEARING.

No. 801,174.

Specification of Letters Patent.

Patented Oct. 3, 1905.

Application filed June 27, 1905. Serial No. 267,286.

*To all whom it may concern:*

Be it known that I, JOHN BEVINGTON, a citizen of the United States, residing at Cordova, in the county of Seward and State of Nebraska, have invented certain new and useful Improvements in Antifriction-Bearings for Revolvable Shafts; 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.

This invention relates to improvements in running-gears, and particularly to a roller-bearing for a revolvable shaft.

One of the objects of the invention is the improvement of the construction of a sectional box or member within which are positioned rolls.

Another object of the invention is the construction of a peculiar shaft-bearing, the shaft engaging said bearing preferably carrying vehicle-wheels.

With these and other objects in view the invention consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter shown and described, and specifically set forth in the appended claims.

In the drawings, Figure 1 is a longitudinal vertical sectional view of a box and showing in elevation a set of rolls and a fragmentary view of a shaft positioned thereon, the shaft being provided with a wheel as shown in transverse fragmentary section. Fig. 2 is a view taken on line 2 2 of Fig. 1. Fig. 3 is a perspective view of a bearing-box employed in the present invention.

The member or box carrying the rolls 1 is constructed of sections 2 and 3. For the purpose of illustrating the general principle of my invention I have shown the sectional box or member constructed of sections 2 and 3 as being provided with pairs of diametrically opposite extending flanges or portions 4, 5, and 6, respectively. The flange portions 4 4 are preferably employed for securing the upper section 2 to the base of the body of a vehicle. The lower flanges 5 5 of the upper section 2 are of similar structure as flanges 6 6 of the lower section 3 of the roll-carrying box or member. The flanges 5 and 6 afford suitable means for carrying the fastening means, as bolts 7, provided with nuts 8, for securing the upper and lower sections of the box together.

Each of the sections of the box is provided

with a semicylindrical longitudinal groove or way 9, which when the sections are secured together constitutes an opening or aperture within which the revolvable shaft 10 is positioned. The upper section 2 of the box is provided with a pair of rolls 10, positioned in a groove 11. The lower section 3 is provided with a plurality of grooves 11, within each of which a pair of rolls is positioned. The grooves 11 in each of the sections are similarly constructed, as well as the rolls 1 and the removable bearing-box 12, constituting locking means for the rolls. For this reason I will only specifically describe one set of rolls, their bearing-boxes, and the groove within which said members are positioned. At each end of the way or groove 11 there is formed a recess 13, which provides a bearing for one end of each of the antifrictional rolls 1. The opposite end of the antifrictional roll is journaled in the removal-box 12. The box 12 comprises in its construction a substantially rectangular body portion 14, which is provided with diametrically opposite recesses 15, in which the projections 16 of the rolls 1 are adapted to be positioned. Integral extensions 17 are secured near the base of the box 12 and extend longitudinally therefrom. Said extensions 17 are concaved for the purpose of forming bearings 18, which are adapted to be engaged by the end portion of the pair of rolls 1. Similarly-constructed bearings 19 are formed in each way or groove 11, near each end thereof, adjacent to the recess portion 13. The journal-box 12 is preferably secured centrally of the groove 11.

It will be obvious that the rolls 1 extend beyond the wall of the longitudinal aperture formed by the grooved portions 9 9 of the sections, so that when the shaft 10 is positioned within the aperture said shaft 10 will be spaced from the sections by and rest upon the rolls 1. The rolls 1 constitute the bearing for the shaft 10. The groove 11 in the upper section 2 is preferably formed so as to place the rolls normally positioned therein one side of the shaft 10 and nearer to one of the lower sets of rolls than the other. When a bearing-box formed by sections 2 and 3 is secured to a vehicle and the vehicle is moving in the direction of the arrow, Fig. 2, the thrust or pressure of the shaft 10 will be upon the rear set of rolls 1, carried by the lower section 3 and the rolls positioned within the upper section 2. When a vehicle is stationary, the pressure of the axle upon the rolls will be evenly distributed;

but, as stated, when the same is moving forward the pressure will be practically distributed entirely upon the two sets of rolls nearest together, which is very desirable, as the strain is nearly always on this part of the box. The upper surface of section 2 is preferably flat for facilitating the attaching of the sectional box to the vehicle-body. The engaging faces of sections 2 and 3 are also preferably flat.

To the revoluble shaft 10 there are fixedly secured wheels—as, for instance, wheel 19—said wheel being preferably of the same structure disclosed in my Patent No. 785,990, issued March 28, 1905. Upon the rotation of the wheel 19 movement will be imparted to the shaft 10, causing the same to be revolved within the stationary box, which is provided with rolls 1.

What I claim is—

1. A device of the character described, comprising sections, fastening means for securing said sections together, each section provided with a groove, the end walls of the groove being fixed with respect to the section, rolls disposed within said groove, and a lateral removal-box interposed between said rolls for normally maintaining the same in position, the lateral movement of the box permitting the removal of said rolls.

2. A device of the character described, comprising an upper and a lower section, the upper section provided with laterally-extending flanges, said lower section provided with laterally-extending flanges, means connecting some of said flanges formed upon the upper section and the flanges formed upon the lower section for securing said sections together,

said upper and lower sections provided with grooves, the end walls of each of said grooves being fixed with respect to the section, rolls disposed within each of said grooves, and locking means interposed between said rolls and susceptible of lateral movement for releasing the rolls.

3. A device of the character described, comprising a sectional member, rolls carried by each of the sections of said member, and laterally-movable locking means interposed between said rolls for normally maintaining the same in position, said locking means being adapted to lie normally in approximately the same horizontal plane with the rolls, and being adapted to be moved laterally for permitting lateral removal of the rolls from the sections.

4. In a device of the character described the combination, of an upper and a lower section, means for securing said sections together, a shaft positioned between said sections, a plurality of pairs of rolls engaging said shaft and carried by said lower section, a single pair of rolls engaging said shaft and carried by said upper section, and nearer to one of the pair of rolls carried by the lower section than to the other pair carried by said section, and laterally-movable locking means interposed between the rolls of each pair for securing the same in a fixed position.

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

JOHN BEVINGTON.

Witnesses:

W. D. BLACKWELL,  
S. H. BLACKWELL.