(No Model.)

J. W. HYATT.

ROLLER BEARING.

No. 398,329. Patented Feb. 19, 1889.

Fig. 1.

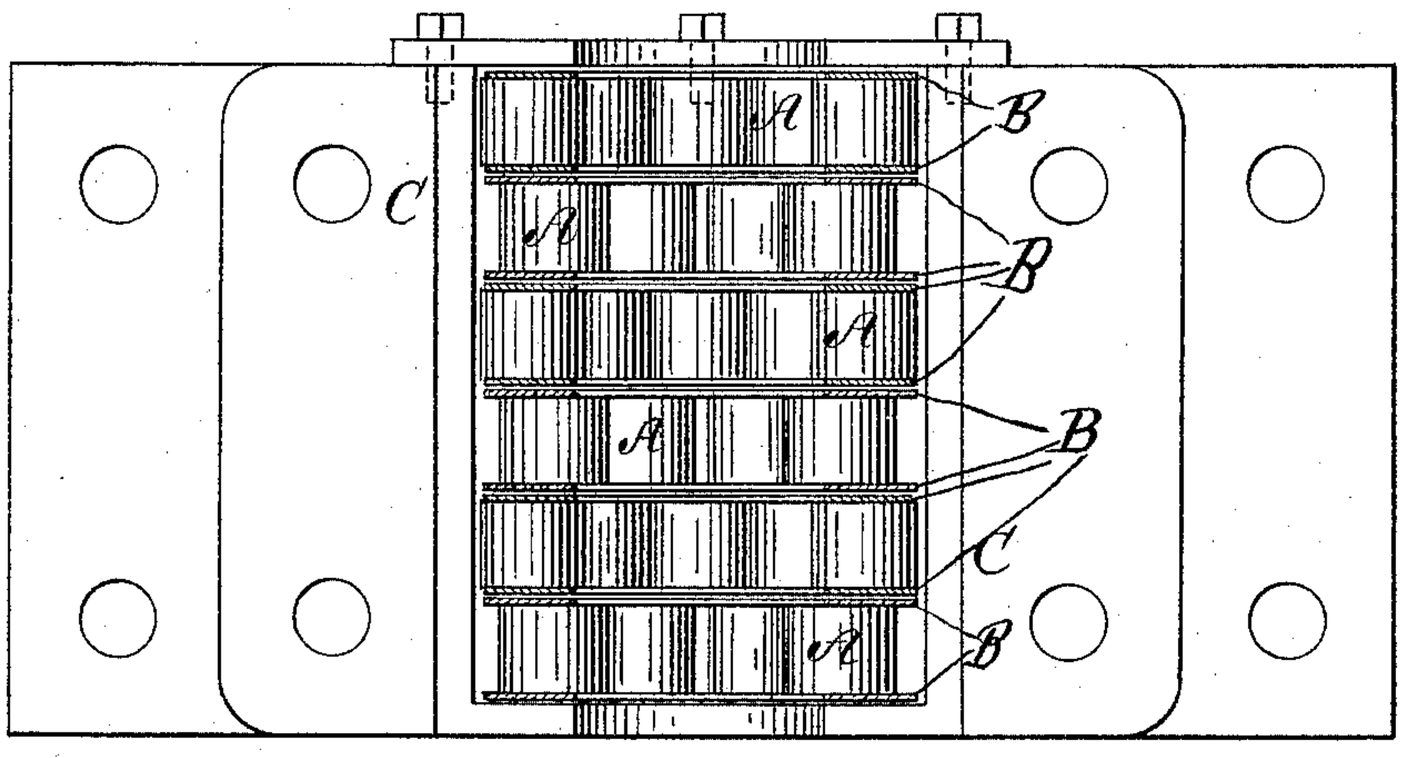
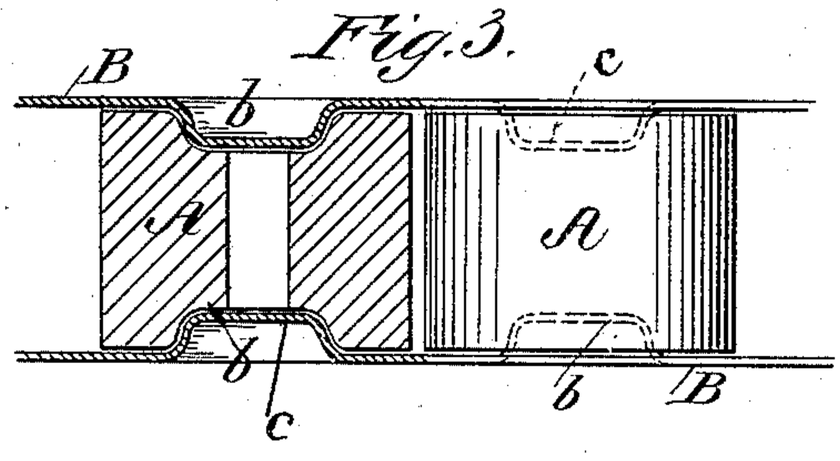


Fig. 2.

Fig. 3.



John W. Hyatt

INVENTOR

WITNESSES:

Thomas N. Williams

Chas. E. Wahlen

UNITED STATES PATENT OFFICE.

JOHN W. HYATT, OF NEWARK, NEW JERSEY.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 398,329, dated February 19, 1889.

Application filed August 17, 1888. Serial No. 283,026. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HYATT, of the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Roller-Bearings, of which the following is a specification.

My invention relates particularly to that class of roller-bearings in which the shaft is surrounded by rolls arranged in separate independently-rotating series; and the object of my improvement is to provide a bearing in which these series of rolls are held in position around the shaft and allowed to freely rotate without permitting the rolls to touch each other. I effect this object by means of circular disks or washers adapted to also freely rotate about the shaft, and provided with suitable projections which fit into corresponding depressions made in the rolls.

This invention is intended as an improvement upon the construction shown in Letters Patent granted to me June 26, 1888, No. 385,267.

I am aware that it has been proposed to use washers with projecting pins extending therefrom into the opposite side of a single series of rolls in a roller-bearing, as shown in Letters Patent granted to H. O. Winsor September 26, 1882, No. 264,989, and I therefore do not claim that construction when a single series of rolls is used.

My invention may be more clearly understood by reference to the accompanying drawings, in which similar letters throughout the several views indicate similar parts.

Figure 1 is a plan view of a shafting-pedestal; Fig. 2, a longitudinal view of the same; and Fig. 3, a view, partially sectional, of one form of washer adapted to fit the rolls in the bearings.

A A, Fig. 3, represent rolls having depressions or recesses at the points *b b*, there being corresponding projections C C upon the washers B, which fit into the depressions *b b* in the rolls. The rolls A A are thus held in their proper relative position in the series to which they belong, and while they are free to rotate on their own axes and the series is free to revolve about the shaft the rolls of each series are prevented from touching at their peripheries. The depressions *b b* in the rolls A A may extend to any desired depth; but it is preferable that these elevations and corresponding depressions do not extend through the entire axis of the roll. The casing is then filled with series of these short rolls, having intermediate washers constructed as described. These washers can be cheaply made of sheet metal having the projections stamped up. I prefer to use two washers for each series of rolls, as shown in Figs. 1 and 3, and in this case it is necessary that the washer have a smooth surface on the side impinging against the washer of the next series, and be provided with elevations only upon the side brought in contact with the series of rolls it helps to retain in position.

It is obvious that many forms of washers may be used to accomplish my purpose, and many ways of providing suitable elevations upon the surface of the washer may be used. For instance, projection-pins may be used instead of the stamped-up lugs. Such alterations would not be material departures from the spirit of my invention. The washers and rolls may also be made of any material suitable to the character of the bearing in which they are to be used. Either metal, wooden, or other rolls may be used, as the exigencies of the case may require, and the washer may consist of thin or thick disks of metal or other suitable substance.

I am aware that roller-bearings have been heretofore constructed in which rolls have been used with long bearings or axles; but my invention substitutes the bosses C C for the long axles, and provides for holding the rollers parallel with the shaft by means of the plane surfaces of the washers in contact with the ends of the short rollers, the sides of the casing supporting all the series.

Having described my invention, what I desire to claim is as follows:

In a roller-bearing, two or more independently-rotating series of rolls held in position around the shaft by means of loose washers provided with suitable elevations adapted to fit into corresponding depressions in the rolls, and allowed to rotate independently of the other series, all arranged in a casing, substantially as and for the purposes described.

JOHN W. HYATT.

In presence of—

CHAS. G. F. WAHLE, JR.,

THOMAS N. WILLIAMS.