

No. 614,248.

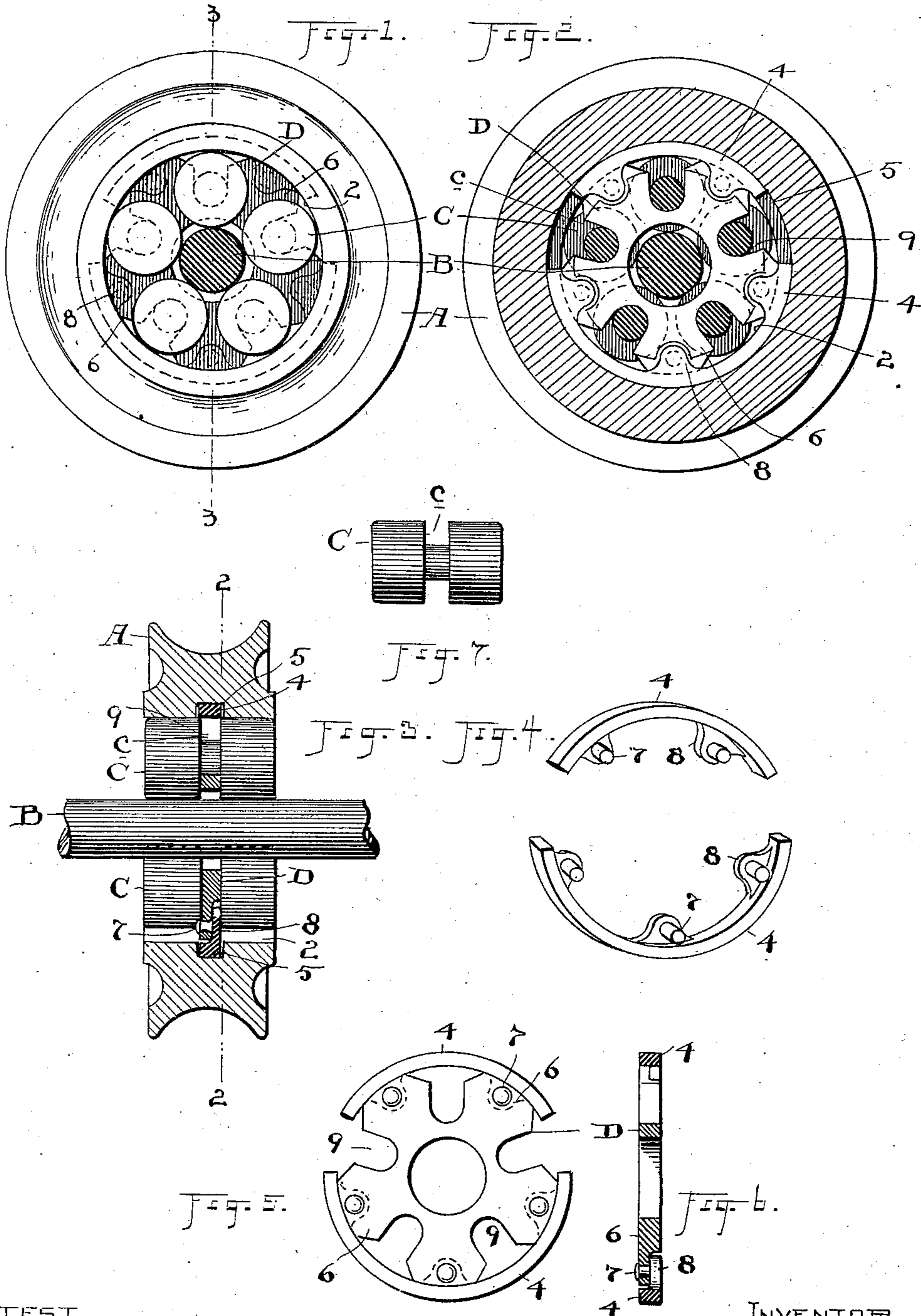
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H. V. HARTZ.

ROLLER BEARING FOR SHEAVES OF TACKLE BLOCKS.

(Application filed Apr. 13, 1898.)

(No Model.)



ATTEST

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# UNITED STATES PATENT OFFICE.

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## ROLLER-BEARING FOR SHEAVES OF TACKLE-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 614,248, dated November 15, 1898.

Application filed April 13, 1898. Serial No. 677,427. (No model.)

*To all whom it may concern.*

Be it known that I, HENRY V. HARTZ, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Roller-Bearings for Sheaves of Tackle-Blocks and the Like; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to roller-bearings for sheaves of tackle-blocks and the like; and the object of the invention is to provide such sheaves with a simple, inexpensive, and durable antifriction-bearing so constructed as to require very little handwork in its production.

In the accompanying drawings, Figure 1 is a side elevation of a sheave provided with my improved roller-bearing. Fig. 2 is a central sectional elevation of the same, taken on line 2 2, Fig. 3. Fig. 3 is a cross-section on line 3 3, Fig. 1. Fig. 4 is a detail perspective view of the segments of the retaining-strap. Fig. 5 is a side elevation of the segments as attached to the retaining-strap, and Fig. 6 is a cross-section thereof. Fig. 7 is a detail view of one of the rollers.

A represents the sheave proper, and B the shaft upon which it is supported by means of the interposed series of rollers C. These rollers are of the construction seen in elevation, Fig. 7, having a central annular recess *c*, forming an engaging portion, as hereinafter described, and are confined within the central opening of the sheave, so as to bear on the circular surface 2 thereof and upon the shaft B, and they practically fill all the intervening space between said parts. Said rollers are held operatively in this relation by the retaining plate or carrier D, which is of a spider-like outline, and the segments 4, which lie in the central annular groove or channel 5 in the sheave and constitute the immediate supports for said carrier. The said segments 4 are so freely or loosely confined in the groove 5 that they are free to travel around within the same, and the said retaining carrier or plate D has arms or projections 6 at intervals about its edge, through

which it is fastened to the segments 4 by means of the right-angled projections 7 and the inwardly-extending lugs 8 thereon, which match and fit into corresponding holes in the face of the arms 6 of the retaining plate or carrier D and over which said lugs are riveted to lock said parts together. One side of the arms 6 have recessed faces, which permit the lugs 8 to fit therein and which brings the faces of the plate D and segments 4 in parallel line with each other. Each roller C being annularly grooved or channeled midway between its ends at *c*, as before described, the said groove is made of such diameter as to freely fit in the pockets 9 between the arms 6 of the carrier D. It will thus be seen that when a roller C is inserted between a set of arms 6 the said roller cannot be removed from that position and must remain in place and have only a rotary and radial play.

Now to the end that carrier D shall be retained in position within the sheave A the segments 4 are first placed in the groove 5, and the carrier D, with its load of rollers, is then inserted into the sheave A, and lugs 8 on the segments 4 enter their corresponding openings in the said retaining plate or carrier D, where they are then riveted together, as before described. The retaining plate or carrier D and the segments 4 are of cast metal, and no handwork is required to produce them up for actual use, thus making a cheap but durable construction. The assembling and fastening of the parts is easily and quickly accomplished, and when the parts are in working position a most efficient as well as a very cheap roller-bearing is obtained.

What I claim is—

1. A sheave having an inner circular opening with a channel in the interior thereof, in combination with a series of rollers, a retaining-plate for said rollers and segments to which said plate is attached and constructed to travel in said channel, substantially as described.

2. In roller-bearings for sheaves, the combination of a series of rollers and a retaining-plate therefor engaging the rollers between their ends, and segments for said plate having projections to fasten the plate and segments together, substantially as described.

3. A sheave having a central opening from  
side to side and an annular channel in said  
opening, in combination with a series of roll-  
ers having grooves to match said channel, a  
5 retaining-plate engaging said rollers in said  
grooves, and segments constructed to travel  
in said channel and to be rigidly fastened  
with said retaining-plate, whereby said roll-  
ers and retaining-plate and segment are

caused to travel together, substantially as is  
described.

Witness my hand to the foregoing specifi-  
cation this 30th day of March, 1898.

HENRY V. HARTZ.

Witnesses:

H. E. MUDRA,

R. B. MOSER.