

No. 102,779.

PATENTED MAY 10, 1870.

C. M. DABOLL.
FRICTION ROLLER BEARING.

Fig. 1.

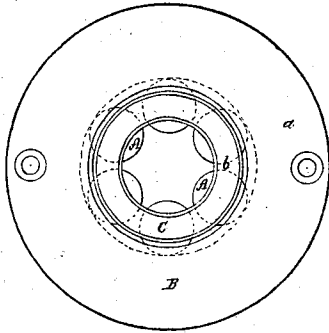


Fig. 2.

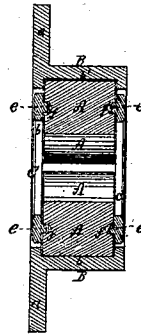


Fig. 3.

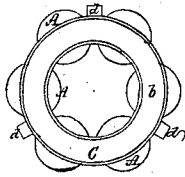


Fig. 4.

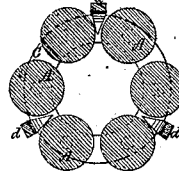


Fig. 6.

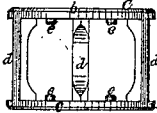
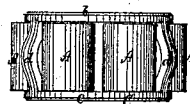


Fig. 5.



Witnesses
J. N. Piper
L. N. Miller

C. M. Daboll.
by his attorney
R. H. Eddy

United States Patent Office.

CHARLES M. DABOLL, OF NEW LONDON, CONNECTICUT.

Letters Patent No. 102,779, dated May 10, 1870.

IMPROVED FRICTION-ROLLER BEARING.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, CHARLES M. DABOLL, of the city and county of New London and State of Connecticut, have invented a new and useful Improvement in the Manufacture of Friction-roller Bushings or Bearings for Sheaves or other Articles; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and

Figure 2, a transverse section of a friction-roller box or bearing provided with my improvement.

Figure 3 is a top view;

Figure 4, a horizontal section; and

Figure 5, a side elevation of the set of friction-rollers and their contractile frame.

Figure 6 is an edge view of the frame as it appears before being contracted upon the rollers.

The drawing exhibits a series of friction-rollers, A, their box B, and carrying frame C.

The box consists of a hollow cylinder or tube provided with a fastening flange, *a*, and having a groove, *b*, cut or formed in and around the inner surface or periphery of the cylinder.

Into this groove the series of friction-rollers is extended and arranged and operate while in use, they being kept therein by means of the frame C.

This frame, as I construct it, and as represented in the drawings, consists of two flat rings, *b* *c*, connected by a series of bars, *d*.

From the inner side of each of these rings a number of pivots, *e*, extends, each pivot of one ring being directly opposite one of the other ring, there being a like number of them to each ring.

Each roller has a socket, *f*, at the center of each end of it, such socket being to receive a pivot of one of the rings.

Each of the connection-bars, *d*, should be so much longer than each roller as to admit of such roller being put in place on a pivot of one of the rings so that the opposite pivot of the other ring may be out of its socket in the roller.

The frame C is first to be arranged within the box B, after which the rollers should be successively in-

troduced into both, all of which having been properly accomplished, the frame C should be contracted so as to force one of its rings toward the other, and thereby force all the pivots out of the sockets to enter them.

This contraction of the frame will cause each of its connection-bars to be bowed or curved in manner as represented in figs. 3, 4, and 5.

Another mode in which I have contemplated the application of the principle of my invention is to make either or each of the rings of the frame with a series of corrugations, flexures, or arches, and to place a pivot in and so as to project from the hollow of each, and afterwards to contract each of the arches or flexures, or flatten it so as to drive the pivots into the sockets of the rollers, or, instead of pivots, the bends may have holes in them to receive pivots or journals projected from the rollers.

Heretofore, in making the roller-carrying frame, it has been customary to connect the rings by shouldered standards tenoned into each ring, the tenons going through the rings and being subsequently upset thereon, so as to rivet the standards to the rings, all of which is not only an expensive proceeding in comparison to that hereinbefore explained, but renders the frame very liable to separate or become out of order while in use.

What I claim as my invention is as follows, viz:

My improved mode of fixing the friction-rollers in their box or bearing-frame B, and to their pivots when such rollers are in each box and frame, the same consisting in contracting the carrying frame C upon and relatively to the series of rollers A, so as to cause the pivots of one to enter their sockets in the other, as described.

Also, the improved manufacture of friction-roller bearing, consisting of the series of rollers A, their box B, and carrying frame C, having the latter contracted so as to force the pivots of the next adjacent ends of the series of rollers into their sockets, as explained.

CHARLES M. DABOLL.

Witnesses:

R. H. EDDY,
S. N. PIPER.