(No Model.)

J. CONNELLY.

WINDING ROLLER FOR LOOMS, &c.

No. 245,138. Patented Aug. 2, 1881.

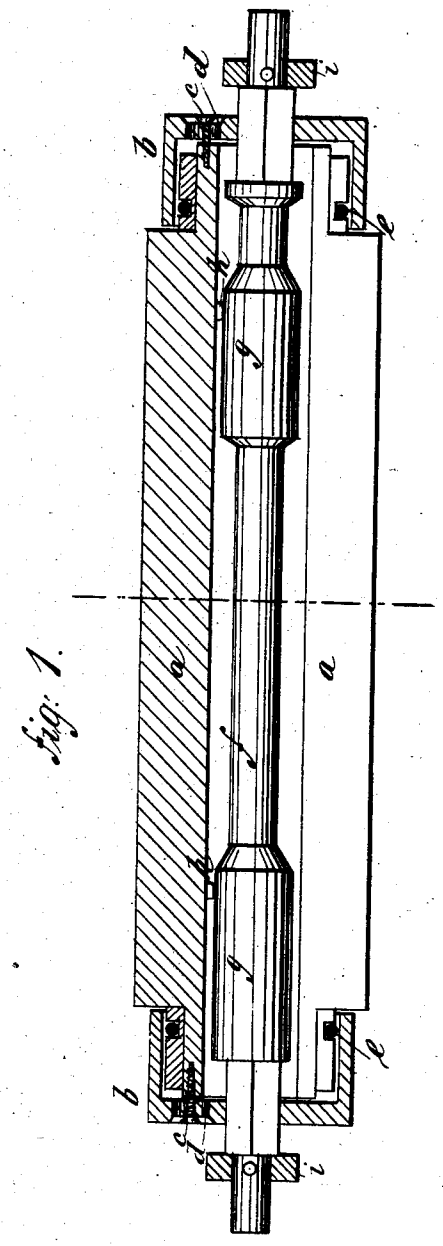


Fig. 1.

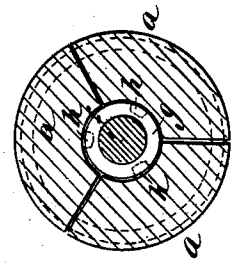


Fig. 4.

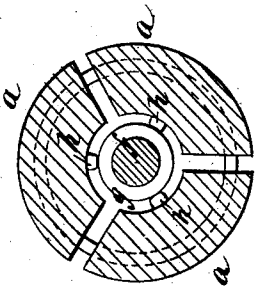


Fig. 3.

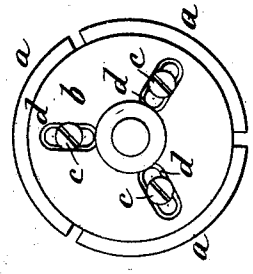


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN CONNELLY, OF HALLOWELL, MAINE, ASSIGNOR TO HIMSELF AND SAMUEL ORR, OF SAME PLACE.

WINDING-ROLLER FOR LOOMS, &c.

SPECIFICATION forming part of Letters Patent No. 245,138, dated August 2, 1881.

Application filed March 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN CONNELLY, of Hallowell, in the county of Kennebec and State of Maine, have invented a new Improvement in Winding-Rollers for Looms, &c., of which the following is a full, clear, and exact description.

My invention relates to cloth-winding rollers used with looms to receive the cloth, and paper-machines for winding the paper, and in winding web of other material.

The object of the invention is to allow convenient removal of the material after being wound; and it consists in a collapsible roller of novel construction, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal section of a winding-roller of my invention. Fig. 2 is an end view of the same. Fig. 3 is a cross-section of the roll as expanded, and Fig. 4 is a cross-section of the roll in a collapsed condition.

Similar letters of reference indicate corresponding parts.

The cylindrical body of the roller, as shown, is formed by three segments, *a a a;* but there may be four or more. The segments *a* are turned down or formed with rabbets at their ends, upon which caps *b b* are held by screws *c*, that enter the ends of the segments through radial slots *d*, that are formed in the ends of the caps. The screws *c* may thus slide in the slots as the segments are moved in and out, and the internal diameter of the caps should be such that the ends of the segments will be held tightly when expanded by the devices hereinafter described.

Within the caps *b* the end of the segments are grooved to receive elastic rings *e*, that tend to close the segments inward.

Through the center of the roll passes a shaft or spindle, *f*, by which the roll is supported and turned. This shaft is squared where it passes through the ends of caps *b*, so as to carry the roll, and is fitted within the roll with collars *g g*, that are formed with beveled ends.

The segments *a* are provided with lugs or projections *h*, that project inward from the inner surfaces of the segments. There are two lugs, *h*, on each segment adjacent to the two collars *g*, so that when such lugs rest upon the plain surface of the collars the segments are held outward.

The shaft *f* can be moved endwise to the extent allowed by the fixed collars *i* on the shaft, outside caps *b*, so as to remove the collars *g* from between the lugs *h*, and the segments are then free to collapse.

In use the material is wound on the roller while it is expanded. To remove the material from the roller, shaft *f* is to be moved endwise to release the segments, which then collapse, and the diameter of the roller is reduced to an extent that allows ready removal of the roll. By moving the shaft in the opposite direction the beveled ends of collars *g* act against pins *h* and force the segments outward.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The collapsible winding-roller consisting of segments *a*, provided with internal lugs, *h*, end caps or plates, *b*, and the shaft *f*, fitted for endwise movement in the caps, and provided with beveled collars *g*, combined for operation substantially as shown and described.

2. In collapsible rollers, the combination of segments *a*, provided with lugs *h*, elastic rings *e*, slotted caps *b*, screws *c*, and shaft *f*, provided with beveled collar *g*, substantially as shown and described, for operation as set forth.

JOHN CONNELLY.

Witnesses:
LLEWELLYN H. HUTCHINSON,
EDWIN H. ATKINS.