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PATENTED NOV. 10, 1903.

F. OTT.  
TAKE-UP ROLLER FOR LOOMS.  
APPLICATION FILED SEPT. 3, 1902.

NO MODEL.

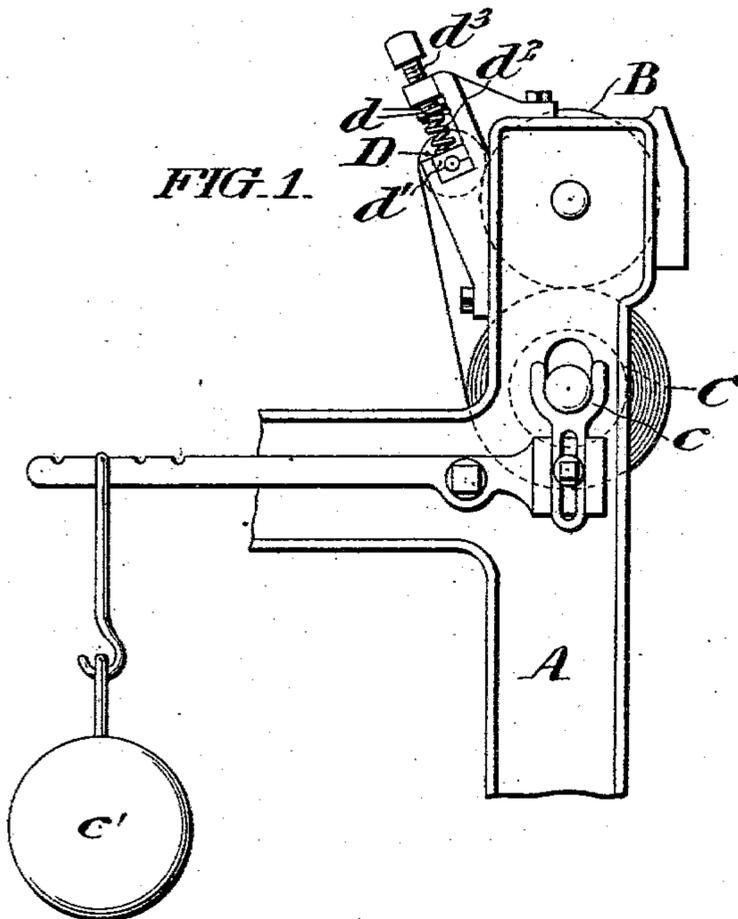


FIG. 1.

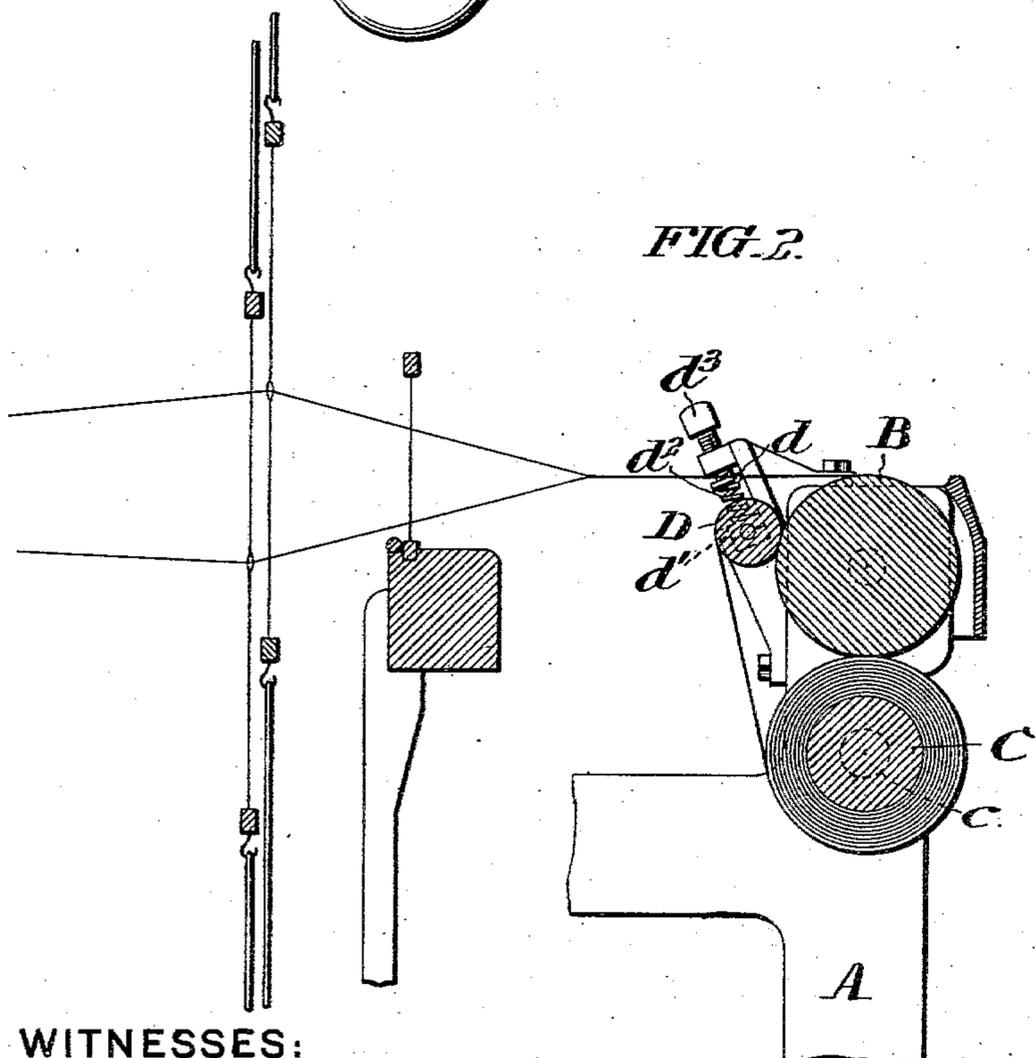


FIG. 2.

WITNESSES:  
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*Fredrick Ott*  
 by his attorney  
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# UNITED STATES PATENT OFFICE.

FREDERICK OTT, OF WOONSOCKET, RHODE ISLAND.

## TAKE-UP ROLLER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 743,657, dated November 10, 1903.

Application filed September 3, 1902. Serial No. 121,931. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK OTT, a citizen of the United States, residing in Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Take-Up Rollers for Looms, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to take-up rollers for looms, and particularly to the use of an auxiliary roller in connection with a high take-up roller.

In the accompanying drawings, Figure 1 is a side elevation of a portion of the front standards of a loom fitted with take-up rollers according to my invention. Fig. 2 is a sectional view of the same, the heddles, reed, and lathe being also indicated in proper position.

A A are the front standards of a loom, only the upper portions appearing in the drawings. The high take-up roller B is mounted in fixed journals near the top of the standards, with its top on a level with the reed and immediately in front of it. Below this the cloth-roller C is mounted in vertically-movable journals *c*, pivoted at the sides of the loom and constantly pressed up against the high take-up roller B by means of counterweights *c'*. Both may be provided with rubber surfaces, and the high take-up roller may be wound by any suitable mechanism. Auxiliary journal-ways *d d* are affixed to the standard near its top (or, if desired, formed integrally therewith) on the side toward the lathe. These carry sliding journal-boxes *d'* *d'*, which have movement in a direction somewhat inclined from the vertical toward the roller B. The journal-boxes are forced downwardly by the springs *d<sup>2</sup>*, adjusted as to their tension by the regulating-screws *d<sup>3</sup>*. Within these journal-boxes is mounted the auxiliary roller D. This is preferably of iron or other heavy material. In diameter it is smaller than the high take-up roller B and so proportioned as to press firmly against this roller when it is at the bottom of its play. It is mounted with its axis above the horizontal plane of the axis of the high take-up roller. This, together with the inclined direction of the ways in which the journal-boxes move, causes any

downward movement or pull to which it is subjected to force its surface into closer contact with that of the high take-up roller B. 55

The course of the cloth as it is wound, as indicated in Fig. 2, is over and around the high take-up roller B for somewhat over three-fourths of a circle until it reaches the line of contact with the auxiliary roller D, thence over and around the roller D, and thence down to the cloth-roller C, around which it is continuously rolled, the increasing thickness of the roll driving this roller steadily downward against the counterweight. The pull upon roller D which is exerted by the cloth as it is wound on roller C tends continually to press roller D against roller B, and thus effects a tight hold or grip upon the cloth as it passes between these two rollers. This grip is increased by the pressure of the springs *d<sup>2</sup>*, which may be adjusted to such degree of pressure that when, as frequently happens, roller C is turned backward or left loose sufficient pressure will still be exerted between roller D and roller B to prevent any backward slip of the cloth between them. 75

By the use of the rollers as I have described them I am able to overcome the tendency of the cloth to slip more perfectly than in previous arrangements of take-up rollers. Furthermore, the direct leading of the cloth to the high take-up roller without the interpositions of any press-beam or intermediate rollers and the short length of fabric between the weft-line where the weaving occurs and the line of pressure between rollers B and D enables me to weave with perfect regularity the finest silk fabric, which by reason of their slippery surface and the fineness and number of the warp-threads are difficult to weave without irregularity. 85 90

Having thus described my invention, I claim—

The take-up motion for looms, which consists of a high take-up roller immediately in front of the reed, to and over the top of which the cloth is led directly from the weft-line; a single auxiliary roller mounted behind the high take-up roller, and in contact with it in a plane above the axis of the high take-up roller; the axle of said auxiliary roller being carried in journal-boxes which slide in parallel ways with their lower ends inclined from 95 100

the vertical in the direction of the high take-up roller; springs constantly forcing said journal-boxes in the direction of the high take-up roller; means for adjusting the tension of said springs; and a cloth-roller beneath the high take-up roller which is constantly upwardly pressed against it, substantially as described.

In witness whereof I, FREDERICK OTT, have hereunto signed my name, with two subscribing witnesses, this 30th day of August, A. D. 1902.

FREDERICK OTT.

Witnesses:

JOSEPH BROWN,  
HENRY ROUSSEAU.