

No. 750,411.

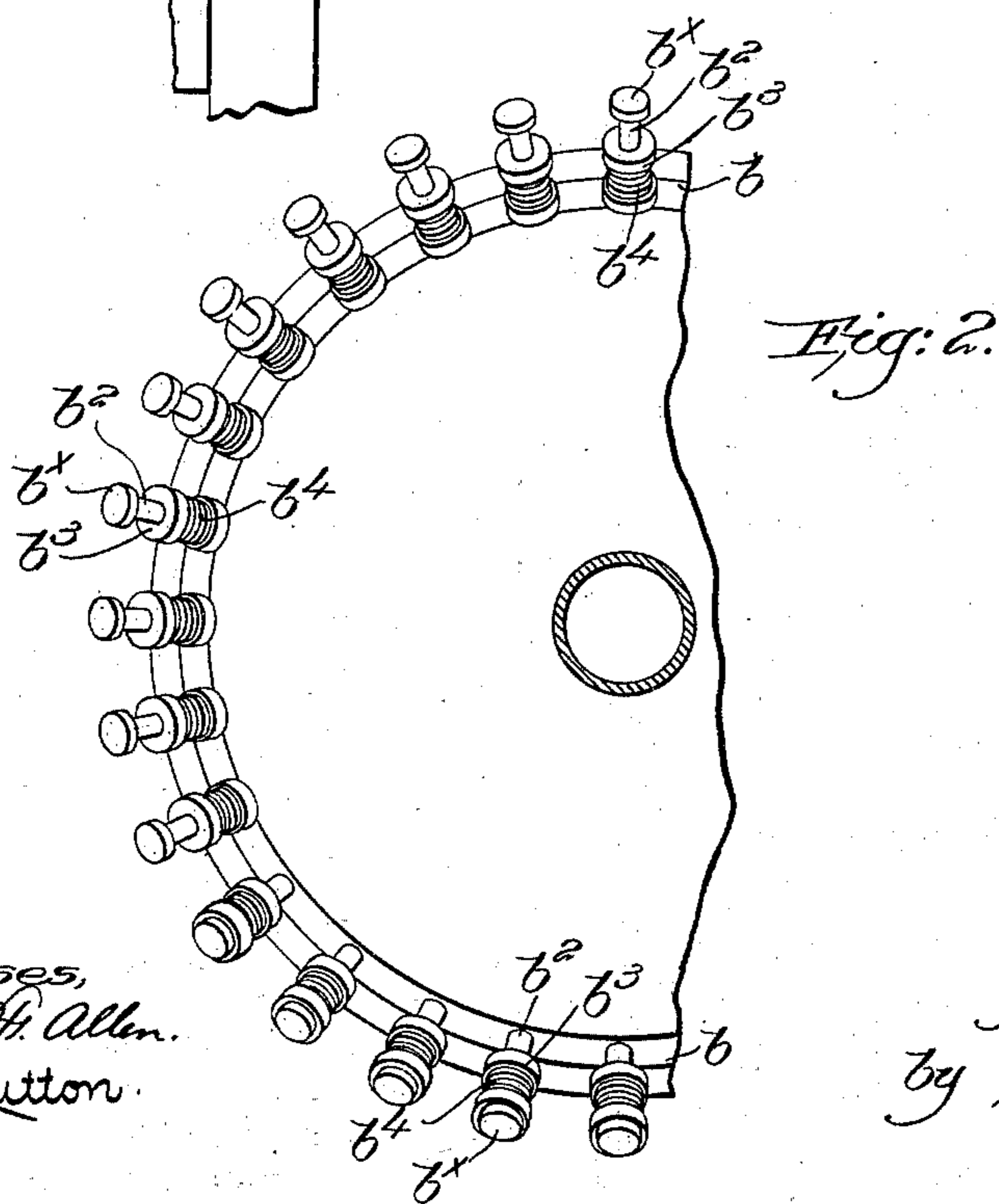
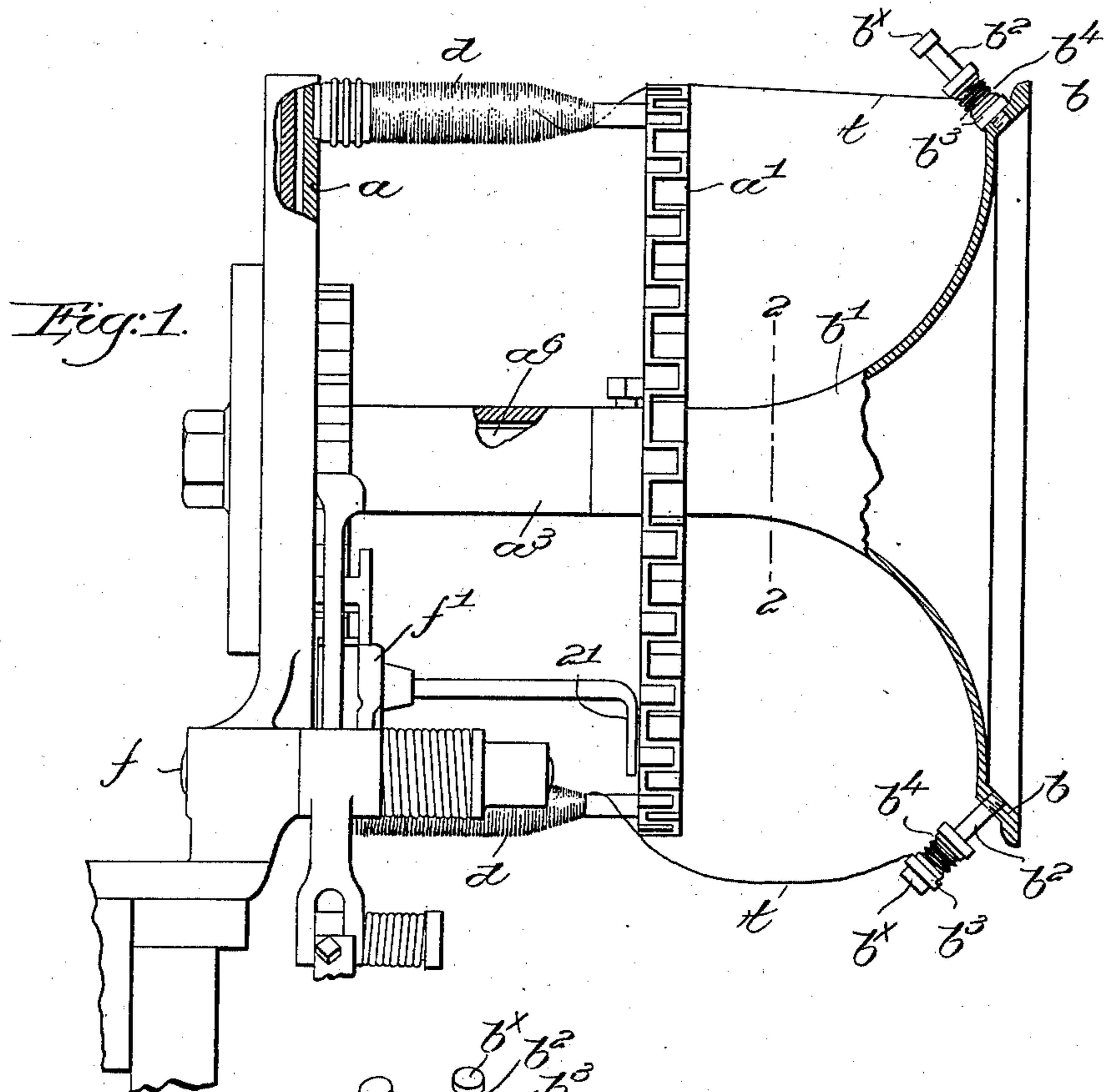
PATENTED JAN. 26, 1904.

M. L. STONE.

FILLING END HOLDING MEANS FOR AUTOMATIC LOOMS.

APPLICATION FILED NOV. 9, 1903.

NO MODEL.



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UNITED STATES PATENT OFFICE.

MELVIN L. STONE, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

FILLING-END-HOLDING MEANS FOR AUTOMATIC LOOMS.

SPECIFICATION forming part of Letters Patent No. 750,411, dated January 26, 1904.

Application filed November 9, 1903. Serial No. 180,306. (No model.)

To all whom it may concern:

Be it known that I, MELVIN L. STONE, a citizen of the United States, and a resident of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Filling-End-Holding Means for Automatic Looms, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates more particularly to automatic filling-replenishing looms of the Northrop type, such as forms the subject-matter of United States Patent No. 529,940, wherein the filling-carriers are sustained in a rotatable feeder and are transferred one by one therefrom to the shuttle.

The filling ends are led from the feeder over the edge of a circular disk rotatable with the feeder and thence to a stud on the outer face of the disk, the ends being secured to the stud. When a filling-carrier is inserted in the shuttle, the sudden strain upon the filling end sometimes breaks it before it can draw off with sufficient rapidity from the end of the filling-carrier.

My present invention has for its object the production of novel and very simple means to slacken or provide automatically a surplus length of filling (between the filling-carrier and the point at which the filling end is secured) at the time of transfer, so that sufficient time is afforded for the filling to unwind before the throw of the shuttle exerts any breaking strain on the filling.

The novel features of my invention will be fully described in the subjoined specification, and particularly pointed out in the following claims.

Figure 1 is a front elevation, partly broken out, of a filling-feeder for an automatic loom of the specified type with one embodiment of my invention applied thereto; and Fig. 2 is a sectional detail on the line 2-2, Fig. 1, of a portion of the apparatus shown in Fig. 1.

The disks or plates a a' of the filling-feeder connected by the hub a^3 , rotatable on the stud a^6 , the transferrer f' , mounted on the fixed

stud f and adapted to engage the head of a filling-carrier d , and the tip-depressing finger 21 may be and are substantially as in the patent referred to and operate as therein set forth so far as relates to the general features. I have dispensed with the central end-holding stud shown in said patent, and certain changes have been made in the disk mounted on the outer end of and rotating with the feeder, as will now be described. The disk-like plate b , rigidly connected by the bell-shaped portion b' with the outer end of the feeder to rotate therewith, is provided with a series of peripherally-located pins or supports b^2 , located in radial planes, but inclined toward the feeder, as clearly shown in Fig. 1. By such arrangement the outer ends of the pins are nearer the disk a' of the feeder than are their inner ends, this being manifest from an inspection of the highest and lowest pins, Fig. 1. Upon each pin is slidably mounted a filling-end holder b^3 , made in any convenient manner, and herein the holders are shown as spools having grooves b^4 to facilitate wrapping the filling around them. When a pin or support b^2 is upright or above a horizontal line, the weight of the holder will cause it to seat on the periphery of the disk-like portion b , and the filling end z , leading from the opposite filling-carrier in the feeder, will be held properly taut.

When loading the feeder, the attendant winds each filling end about its cooperating holder, the latter being located substantially opposite the holding devices on the feeder for the filling-carriers, the holder b^3 then resting at the base of its pin. As the feeder is rotated intermittently to bring the filling-carriers by one into transferring position the corresponding pins will be moved in a circular path, and when a pin passes below the horizontal gravity tends to move the holder b^3 thereon toward the outer end of the pin. When the pin depends below the center of rotation of the feeder, (see the lowest pin in Fig. 1,) its corresponding filling-carrier is in transferring position, and the holder will have moved to the tip of its pin, thereby moving nearer the feeder and slackening the filling

end sufficiently to prevent breakage when the shuttle is thrown after transfer. The tips of the pins are enlarged or headed at b^x to prevent the holders from dropping off.

5 The construction is exceedingly simple. There is nothing to get out of order, and all that the attendant does when filling the feeder is to see that the holder is seated at the base of the pin when the filling end is wrapped around it.

10 My invention is not restricted to the single practical embodiment herein shown and described, as the same may be modified or changed by those skilled in the art without departing from the spirit and scope of the invention.

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

1. In filling - replenishing mechanism for looms, a movable feeder to contain a supply
20 of filling, and a gravity-controlled filling-end holder movable with and also relatively to the feeder, movement of the latter to bring the supply of filling into transferring position causing relative movement of the holder to
25 slacken the filling end.

2. In filling - replenishing mechanism for looms, a movable feeder to contain a series of filling-carriers, and a corresponding series of gravity-controlled filling-end holders movable
30 with and also relatively to the feeder, movement of the latter to position a filling-carrier for transfer causing relative movement of its corresponding holder to slacken the filling end.

35 3. In filling - replenishing mechanism for looms, a rotatable feeder to contain a plurality of filling-carriers, and a corresponding series of gravity-controlled filling-end holders supported at the outer end of and also movable
40 relatively to the feeder, movement of the lat-

ter to position a filling-carrier for transfer causing movement of its cooperating holder to slacken the filling end.

4. In filling - replenishing mechanism for looms, a rotatable feeder to contain a plural- 45 ity of filling-carriers, a series of gravity-controlled filling-end holders sustained at the outer end of the hopper opposite the filling-carriers, and means operative automatically upon movement of a filling-carrier into trans- 50 ferring position to cause its cooperating holder to move toward and thereby slacken the filling end of such filling-carrier.

5. In filling - replenishing mechanism for looms, a rotatable feeder to contain a plurality 55 of filling-carriers, a disk at the outer end of and rotatable with the feeder, a series of pins carried on the periphery of said disk and inclined toward the feeder, and filling-end holders slidably mounted on said pins, movement 60 of the feeder to position a filling-carrier for transfer causing its cooperating holder to slide downward on its pin and toward the feeder, to thereby slacken the filling end.

6. In filling - replenishing mechanism for 65 looms, a rotatable feeder to contain a plurality of filling-carriers, a series of pins located in radial planes and inclined toward the feeder, means to support said pins on and beyond the outer end of the feeder, and gravity-con- 70 trolled filling-end holders slidably mounted on the pins.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MELVIN L. STONE.

Witnesses:

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