

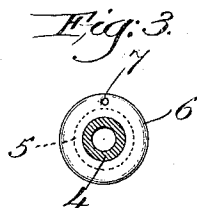
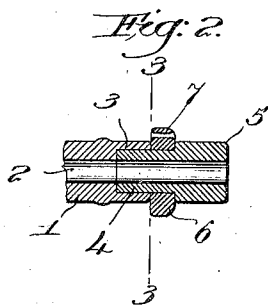
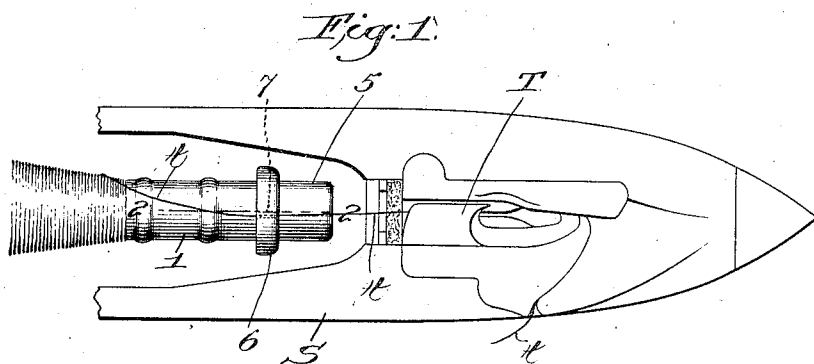
No. 828,922.

PATENTED AUG. 21, 1906.

A. E. BURTT.

FILLING TENSION AND CONTROLLING MEANS FOR LOOMS.

APPLICATION FILED NOV. 13, 1905.



Witnesses,
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UNITED STATES PATENT OFFICE.

ALLAN E. BURTT, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

FILLING-TENSION AND CONTROLLING MEANS FOR LOOMS.

No. 828,922.

Specification of Letters Patent.

Patented Aug. 21, 1906.

Application filed November 13, 1905. Serial No. 287,033.

To all whom it may concern:

Be it known that I, ALLAN E. BURTT, a citizen of the United States, and a resident of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Tension and Controlling Means for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object the production of novel means for controlling and imparting tension to the filling as it is drawn off from the filling-carrier or bobbin in the running shuttle of a loom, said controlling and tension-producing means in my present invention being mounted on the filling-carrier. By means of such invention the filling is subjected to a certain amount of tension as it travels around the tip of the carrier, and at the same time it is guided and its ballooning or whipping around the filling-carrier is greatly restricted. A very even or uniform delivery of the filling is thus effected.

The various 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 top plan view of the delivery end of a loom-shuttle and the adjacent or tip portion of a filling-carrier with one embodiment of my invention applied thereto. Fig. 2 is a longitudinal sectional detail on the line 2 2, Fig. 1; and Fig. 3 is a transverse section on the line 3 3, Fig. 2, looking toward the right.

So far as my present invention is concerned the filling-carrier or bobbin may be of any usual construction and adapted for use in automatically self-threading loom-shuttles or in ordinary hand-threaded shuttles, and herein I have shown only the portion of the barrel 1 of the filling-carrier at or near the tip or delivery end thereof, it having the usual longitudinal bore 2, Fig. 2. At the tip end the bore is reamed out or counterbored, as at 3, to receive tightly the tubular shank 4 of a plug 5, the shank being long enough to leave an annular clearance or recess between

the plug and the tip of the carrier. In the present form of my invention I mount in such clearance an annulus or ring 6, rotatable on the exposed portion of the shank and held in proper position by the plug, as will be obvious from Figs. 1 and 2, the outer circumference of the ring being preferably transversely rounded or convexed, as shown. An eye 7 is made in the ring, and, as shown in dotted lines, Fig. 1, said eye may be slightly flared at its ends, the eye being substantially parallel to the longitudinal axis of the filling-carrier.

The filling *t* is threaded through the eye, as shown in Fig. 1, and passes thence to the delivery-eye of the shuttle *S*, Fig. 1. As the filling is drawn off through the eye it travels in a spiral path around the tip end of the carrier and in so doing imparts rotation to the ring, so that the frictional resistance of the latter exerts a drag or tension upon the filling sufficient to maintain it properly taut during the weaving operation. Thus the filling-tension is provided by means mounted directly on the filling-carrier, and such means not only provides tension, but it also guides the filling as it is delivered and limits or restricts the usual whipping action of the filling as it draws off to be delivered. This is of very material advantage, as the filling is not so liable to catch upon adjacent portions of the shuttle, and when the filling-carrier is adapted for use in shuttles having an automatically self-threading device, as *T*, Fig. 1, the restriction of the filling from ballooning or undue whipping prevents any throwing forward of a loop of the filling into the threading device. As the filling is delivered from the eye 7, which travels in a constant circular path close to the tip of the filling-carrier, the conical path of the filling between the controlling means and the passage in the shuttle leading to the delivery-eye is very materially decreased in dimensions and is maintained substantially constant at all times.

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

1. A filling-carrier for loom-shuttles, hav-

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ing an annular clearance or recess near its tip, and an annular filling-guide rotatably mounted in said recess, said guide having an eye formed therein through which the filling
5 is drawn off.

2. A filling-carrier having its tip counter-bored, a plug having a shank inserted therein, and a ring rotatably mounted on the shank between the plug and the tip of the

carrier, said ring having an eye through 10 which the filling is drawn.

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

ALLAN E. BURTT.

Witnesses:

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ERNEST W. WOOD.