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UNITED STATES PATENT OFFICE.

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TIP-SUPPORT FOR AUTOMATIC FILLING-REPLENISHING LOOMS.

No. 915,161

Specification of Letters Patent.

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To all-whom it may concern:

Be it known that we, EDWARD CUNNIFF, ALFRED CODERRE, and OMAR BENSON, citizens of the United States, and residents of New Bedford, county of Bristol, State of Massachusetts, have invented an Improvement in Tip-Supports for Automatic Filling-Replenishing Looms, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

In automatic looms of the Northrop type a filling-carrier is engaged by a transferrer and removed automatically from a feeder or hopper and inserted in the shuttle, as in United States Patent No. 529,940 granted to J. H. Northrop, November 27, 1894, the base and tip of the filling-carrier being engaged by the transferring instrumentality. A tip-support is also provided, constructed as a pivotally mounted and yieldingly-controlled metallic finger to extend beneath and guide the tip of the filling-carrier during transfer thereof to the shuttle.

It has been found in practice that at times the filling will rub over or be pinched between the tip of the filling-carrier and the contacting face of the tip-support, so that the filling will be broken, particularly when very fine filling is used, and also when metal cop-skewers are used.

Our present invention has for its object the production of means to prevent the engagement of the filling with the metal of the tip-support, and to that end we provide the engaging face of the latter with a non-metallic facing or contact piece, preferably leather, such facing or contact piece being held on the tip-support in such manner that when worn it can be readily removed and a new facing substituted.

Figure 1 is a transverse section of a sufficient portion of the filling-replenishing mechanism of an automatic loom, showing the tip-support embodying one form of our invention; Fig. 2 is an enlarged detail in side elevation of the tip-support and its non-metallic facing or contact piece.

The filling-feeder, partly shown at F, Fig. 1, to contain a supply of filling-carriers *b*, the transferrer *f'* mounted to rock on the fixed stud *f* and adapted to engage the head or butt of the filling-carrier, the laterally extended arm 21 on the transferrer and having

the downturned end 22 to depress the tip of the filling-carrier; the arm *f''* rigidly secured to the stud *f* and the tip-support *t* pivotally mounted on said arm at *f''* and having its free end *t'* downwardly curved, may be and are all substantially as in United States Patent No. 720,189 granted to Stimpson February 10, 1903, the tip-support being yieldingly-controlled and normally held with its tail *t''* against the stop 5 on the arm *f''*.

At the time of transfer the tip-support extends beneath and guides the tip of the filling-carrier as it is transferred from the feeder F and inserted in the shuttle S, Fig. 1, and at such time if the filling is caught between the upper or contacting face of the curved end *t'* of the tip-support and the tip of the filling-carrier the filling is apt to be broken. In accordance with our present invention, and to prevent such engagement of the filling with the metal of the tip-support, we mount on the upper face of the latter a contact-piece or facing 1, which may be of any suitable non-metallic material. Preferably we use a strip of leather, bent to the contour of the upper face of the tip-support and curled or bent over its extremity, as at 2, see Fig. 2, the contact-piece being held securely in place by a metal clip 3 engaging and overlying the same at its upper end and connected with the tip-support by a screw-bolt 4, or other suitable fastener, extended through the facing into the body of the tip-support. The length of the clip 3 is such that it cannot engage the filling-carrier or its filling, the entire face or portion of the tip-support which coöperates with the tip of the filling-carrier being covered by the contact-piece or facing 1.

By the construction described the filling cannot come in contact with the metal of the tip-support, and when metal cop-skewers are used there is no contact of two metal parts. Hence the chance of breaking or rubbing the filling is eliminated.

When the non-metallic contact piece becomes worn it can be readily and quickly removed by detaching the clip and fastening 3, and applying a new facing, after which the clip and fastening are replaced and the fastening set up.

When leather is used for the facing the resiliency thereof holds the free portion thereof against the tip-support beyond the clip, and

the bend at 2 catches onto the extremity of the tip-support and aids in holding the facing in proper position.

Having fully described our invention, 5 what we claim as new and desire to secure by Letters Patent is:—

The combination, in filling-replenishing mechanism of a loom, of a yieldingly-controlled metallic tip-support to extend be- 10 neath and guide the tip of a filling-carrier when said mechanism operates, a non-metallic covering on the contacting face of the

tip-support, and a holder partly overlying the covering to secure the same in place.

In testimony whereof, we have signed our 15 names to this specification, in the presence of two subscribing witnesses.

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OMAR BENSON.

Witnesses:

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