

UNITED STATES PATENT OFFICE.

OSCAR GLEASON, OF PUTNAM, CONNECTICUT, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 697,713, dated April 15, 1902.

Application filed November 9, 1901. Serial No. 81,691. (No model.)

To all whom it may concern:

Be it known that I, OSCAR GLEASON, a citizen of the United States, and a resident of Putnam, county of Windham, State of Connecticut, have invented an Improvement in Loom-Shuttles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of novel means for steadying the filling-carrier when mounted in holding-jaws located in the receiving-opening of a loom-shuttle; and my invention applies more especially
15 to that type of automatically self-threading shuttle forming the subject-matter of United States Patent No. 538,507, dated April 3, 1895. In said patent the spring-acting holding-jaws are provided on their inner faces with a series
20 of upright grooves to receive annular projections or rings surrounding the head of the filling-carrier. Sometimes the filling-carriers become defective by one or more of the rings becoming loose, so that the jaws cannot hold
25 the filling-carrier firmly and steadily, and sometimes the rings become so loose that while they are held firmly in the jaws the filling-carrier can wobble in the rings. In my present invention such defective filling-carriers are held as firmly and steadily as if they
30 were in perfect condition.

Figure 1 is a top or plan view of an automatically self-threading loom-shuttle embodying one form of my invention, a filling-carrier being shown therein in operative position. Fig. 2 is an enlarged longitudinal sectional detail on the line 2-2, Fig. 1. Fig. 3 is an enlarged detail, in side elevation and section, showing the filling-carrier as it is being moved into position in the shuttle; and
40 Fig. 4 is a top or plan view, detached, of the steadying device to be referred to.

The shuttle-body A, having an elongated opening A^x therein to receive the filling-carrier B, having the annular projections or rings *a* on its tubular head B^x, the spring-acting jaws C, having series of ring-receiving grooves *c^x* on their inner faces, and the inclined guide or directing plate *c c'* are and
50 may be all substantially as in said Patent

No. 538,507 and operate as therein described, the shuttle being provided at one end with an automatically self-threading device T, Fig. 1, forming no part of this invention. If the rings *a* are properly tight upon the head of the filling-carrier and if some of said rings have not sprung off, the jaws C will hold the filling-carrier firmly and steadily in position; but if some of the rings are missing or they are not tight upon the head the filling-carrier will be improperly held and has a tendency to wobble and to get out of proper position. In order to prevent this, when a filling-carrier is defective I have slotted the inclined part *c'* of the guide, as at *c⁵*, and through this slot a resilient finger *d*, preferably made of tempered spring-steel, is extended longitudinally of the shuttle into the opening A^x and above the jaws C. This finger at its outer end passes beneath the top part *c* of the guide and has a hole *d'*, (see Fig. 4,) through which the screw *m* passes to thereby secure the finger in place, its free end projecting into the path of the head of the filling-carrier when the latter is inserted in the shuttle.

When the filling-carrier is inserted, the lower part of its head hits the top of the finger *d* and deflects it, as shown in Fig. 3, until the rings *a* enter the grooves *c^x*, Fig. 1, in the jaws, and at or just before such time the edge of the head passes beyond and releases the finger. The latter owing to its resiliency immediately springs up, but within the interior of the tubular head B^x, and presses against the inner circumference thereof at the top, as shown in Fig. 2, steadying the filling-carrier independently of the action of the holding-jaws, so that all tendency to wobble or move out of proper position is prevented. When the filling-carrier is ejected by the insertion of a fresh filling-carrier, the finger is deflected temporarily, as before described.

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

1. A shuttle-body having an opening to receive a filling-carrier, holding-jaws for and to yieldingly engage opposite sides of the head of the filling-carrier, and located at one

end of said opening, and resilient means mounted on the shuttle-body to engage and steady the head of the filling-carrier held by the jaws, the latter holding the filling-carrier
5 wholly independently of said means.

2. A shuttle-body having an opening to receive a filling-carrier, laterally-separable spring-acting jaws located in said opening at one end thereof, to receive between them and
10 hold at opposite sides the head of a filling-carrier, and a longitudinally-extended spring-finger mounted on the shuttle-body to engage and steady the filling-carrier independently of the said jaws, and contacting with
15 the head of the filling-carrier at a point intermediate the engaging points of the jaws.

3. A self-threading shuttle-body having an opening to receive a filling-carrier, holding-jaws in said opening, an inclined guide in the
20 rear of the acting faces and between said jaws, and a resilient finger longitudinally extended above the guide and forwardly to engage and steady the head of a filling-carrier held by the jaws.

25 4. A self-threading shuttle-body having an opening to receive a filling-carrier, holding-jaws, an inclined, slotted guide in the rear of the acting faces and between said jaws, and a resilient finger longitudinally extended
30 through the slotted guide, to engage and

steady the head of a filling-carrier held by the jaws.

5. A shuttle-body having an opening to receive a filling-carrier, holding-jaws in said opening at one end thereof, a filling-carrier
35 having a tubular head provided with annular projections to be engaged by said jaws, and a resilient, longitudinally-extended finger on the shuttle-body, to enter the tubular head of the filling-carrier and engage and
40 steady the same when supported by the holding-jaws.

6. A shuttle-body having an opening to receive a filling-carrier, laterally-separable holding-jaws for the latter at one end of said
45 opening, and a resilient finger mounted on the shuttle-body above and between said jaws and extending toward the opposite end of the shuttle-body to enter and interiorly engage the tubular head of a filling-carrier when the
50 latter is inserted between and held by the jaws, to steady the filling-carrier and maintain it in operative position.

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

OSCAR GLEASON.

Witnesses:

THOMAS REILLY,
JEROME TOURTELLOTTE.