

No. 753,214.

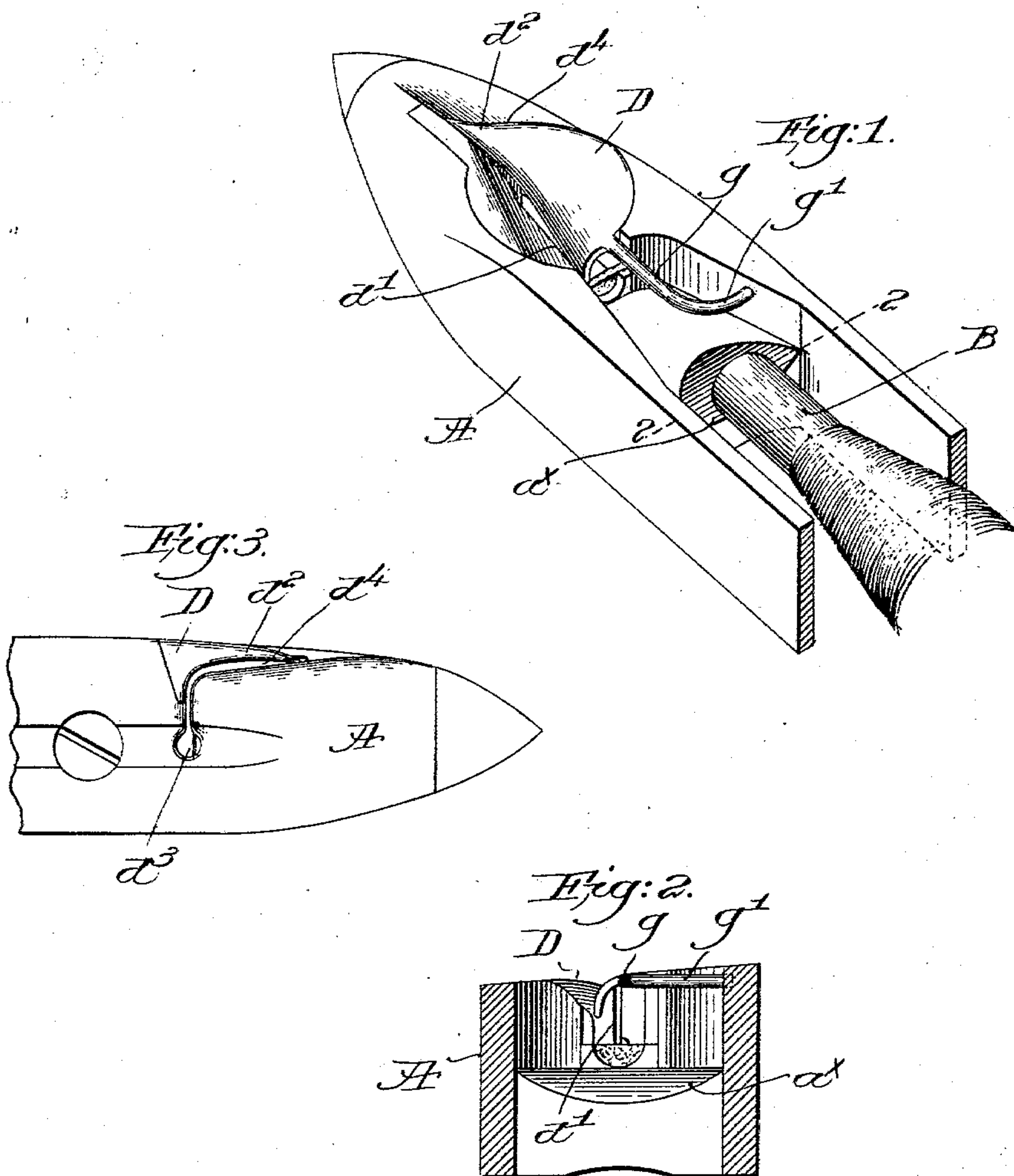
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J. W. SHERRY.

AUTOMATICALLY SELF THREADING LOOM SHUTTLE.

APPLICATION FILED OCT. 12, 1903.

NO MODEL.



Witnesses,
Edward H. Allen.
Warren D. Owen

Inventor;
John W. Sherry,
by Mosby Meyers,
attys.

UNITED STATES PATENT OFFICE.

JOHN W. SHERRY, OF NEW YORK MILLS, NEW YORK, ASSIGNOR TO
DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

AUTOMATICALLY-SELF-THREADING LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 753,214, dated February 23, 1904.

Application filed October 12, 1903. Serial No. 176,590. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SHERRY, a citizen of the United States, and a resident of New York Mills, county of Oneida, State of New York, have invented an Improvement in Automatically-Self-Threading Loom-Shuttles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates particularly to loom-shuttles of the type wherein the thread of a filling-carrier or bobbin when inserted in the shuttle is automatically threaded into the delivery-eye, such shuttles being used in looms provided with filling-replenishing mechanism such as shown in United States Patent No. 529,940 and others. In some cases the filling-thread is thrown forward from the tip of the filling-carrier when the shuttle is stopped in the shuttle-box, tending to remove the thread from the thread-passage which leads to the delivery-eye, and the loop of thread then has a tendency to catch on the front of the threading device and break. When weaving coarse filling, the tendency of the heavy thread to be so thrown forward is increased owing to the weight of the thread.

My present invention has for its object the production of a guard which projects over the path of the filling-thread between the tip of the filling-carrier and the rear end of the thread-passage in the threading device and extended beyond the rear end of the latter, preventing the thread from throwing forward and upward out of said passage.

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 perspective view of the front or threading end of a loom-shuttle with one embodiment of my invention shown in operative connection therewith. Fig. 2 is a cross-section on the line 2-2; Fig. 1, looking forward; and Fig. 3 is a side elevation of the end of the shuttle, showing the side delivery-eye.

The shuttle-body A has a longitudinal opening A^x therein to receive the filling-carrier or bobbin B, the latter being held therein by means (located in one end of the opening and not herein shown) which grasp the head of the filling-carrier, all in well-known manner. At the other end of the opening the wood of the shuttle-body is shown cut away to leave a tip-supporting shelf a^x , substantially as in United States Patent No. 630,793.

The automatic threading device D, mounted in the end of the shuttle in front of the tip-support, has a longitudinal thread-passage d' , open at its top, and a horn d^2 at one side thereof, a space or clearance d^1 between the horn and the top of the shuttle permitting the filling-thread to pass from the front end of the thread-passage and beneath the horn to the side delivery-eye d^3 of the shuttle, Fig. 3, such threading device being substantially such as shown in United States Patent No. 574,864, to which reference may be had.

When the shuttle is suddenly stopped in the shuttle-box, the filling-thread, especially if coarse and heavy, has a tendency to throw forward off the tip end of the filling-carrier, and to thereby be drawn up out of the rear end of the thread-passage d' . This may in some cases unthread the shuttle, or the bight of the loop may be thrown far enough to catch over the horn d^2 and break as soon as tension is again applied to the thread, and in either case a fresh filling-carrier must be inserted in the shuttle.

To prevent the thread from throwing forward, I have devised a guard which is extended rearwardly from the threading device and projects over the path of the thread between the rear end of the thread-passage and the tip of the filling-carrier. Such a guard is shown herein as a stout wire-like prolongation g , secured to or forming part of the threading device D and extended rearwardly therefrom along substantially the median line of the shuttle well along toward the tip of the filling-carrier. The rear end of the guard is bent or curved laterally at g' , and its extremity

is inserted in a hole in the side wall of the shuttle, steadying the guard and leaving nothing for the thread to catch upon.

The rotative movement of the thread as it is drawn from the filling-carrier is from right to left viewing Fig. 2, so that if any quantity is thrown off when the shuttle is stopped it will be thrown against and under the guard, being thereby prevented from throwing onto the top of the shuttle. In the shuttle shown such thrown off thread will be caught between the guard and the tip-support a^x and will draw off through the thread-passage properly when the shuttle is shot from the box.

From an inspection of Fig. 1 it will be seen that the rear end g' of the guard is so far back from the horn d^2 as to make it practically impossible for any loop to be thrown of sufficient length to reach the horn even should the thread rise up over the guard.

As the thread cannot fly up in front of the rear end of the thread-passage, it cannot slip out of it and unthread the shuttle.

My invention is not restricted to the precise construction and arrangement shown and described, as the same may be modified by those skilled in the art without departing from the spirit and scope of the invention.

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

1. An automatically-self-threading loom-shuttle having an open side delivery-eye, a threading device having a longitudinal thread-passage open at its top and means to direct the thread from the front end thereof to the eye of the shuttle, and a guard extended rearwardly from and beyond said threading device and projecting over the path of the thread between the tip of the bobbin and the rear end of the thread-passage, said guard being curved laterally at its rear side to engage the side wall of the shuttle.

2. An automatically-self-threading loom-shuttle having an open side delivery-eye, a threading device having a longitudinal thread-passage and means to direct the thread from the front end thereof to the eye of the shuttle, and a rearwardly-extended prolongation on said threading device at one side of the thread-passage and projecting along the median line

of the shuttle over the path of the thread between the tip of the bobbin and the rear end of the thread-passage, to serve as a guard and prevent the filling-thread from being thrown forward and out of the thread-passage.

3. An automatically-self-threading loom-shuttle having an open side delivery-eye, a threading device having a longitudinal thread-passage and means to direct the thread from the front end thereof to the eye of the shuttle, and a guard extending rearwardly from said device above the path of the thread between the tip of the bobbin and the rear end of the thread-passage, said guard at its rear end being curved laterally to and supported in the side wall of the shuttle.

4. An automatically-self-threading loom-shuttle having a longitudinal opening to receive a filling-carrier or bobbin and provided with a side delivery-eye, a threading device at one end of said opening having a longitudinal thread-passage and means to direct the thread therefrom to the eye, a tip-support at the adjacent end of the opening in the shuttle-body, and a guard mounted on the threading device and extended rearwardly therefrom to project above the tip-support over the path of the filling-thread between the tip of the filling-carrier and the rear end of the thread-passage.

5. An automatically-self-threading loom-shuttle having an open side delivery-eye, a threading device having a longitudinal thread-passage and means to direct the thread from the front end thereof to the eye of the shuttle, and a rearwardly-extended guard attached at its forward end to the threading device and having its rear end curved laterally and supported in the side wall of the shuttle, said guard projecting over the path of the filling-thread as it passes to the thread-passage and preventing it from being thrown forward out of said passage.

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

JOHN W. SHERRY.

Witnesses:

JOHN O. AMES,
JAS. MCGEE, Jr.