J. RIGBY.

Loom-Shuttle.

No. 163,609. Patented May 25, 1875.

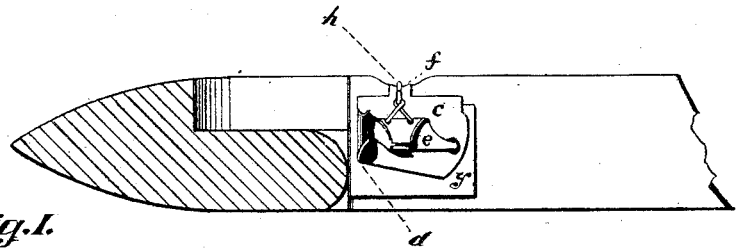

Fig. I.

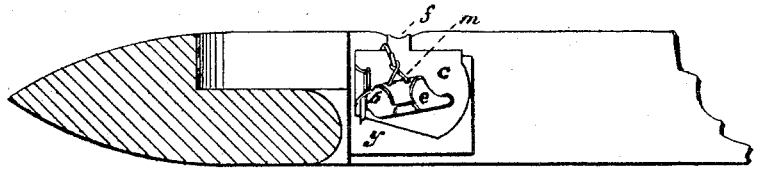

Fig. II.

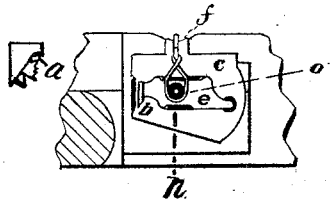

Fig III

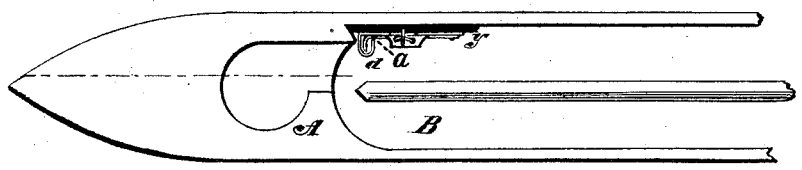

Fig IV.

Witnesses

L. F. Hyde

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JOHN RIGBY, OF CHICOPEE, MASSACHUSETTS.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **163,609**, dated May 25, 1875; application filed April 13, 1875.

To all whom it may concern:

Be it known that I, JOHN RIGBY, of Chicopee, county of Hampden and State of Massachusetts, have invented an Improvement in Shuttles for Looms, of which the following is a specification:

My invention relates to that class of shuttles which are used in power-looms, though it may be applied to any ordinary shuttle used in weaving; and the object of my invention is to stop the loom automatically as soon as a thread of the warp knots, so as to prevent bad and uneven places being made in the cloth. This I accomplish by providing the shuttle with a pivoted latch, which, when the shuttle is in operation, is kept raised by a cord and hook, the top of the hook being raised above the bottom of the curve made on the top of the shuttle. When a thread of the warp breaks, so as to leave a "pick-out," and the harnesses, in consequence, fail to spread the threads apart to form a perfect shed as the shuttle passes along in the shed, the upper threads rub or press on the top of the shuttle and strike the hook, forcing it off from its bearings. Thus the loose end of the latch is allowed to fall below the chamber or that part of the frame in which it rests. At the bottom of the latch is a beveled point, and when this falls below the chamber the filling, as it circles around the spindle, is caught on the bevel-point and immediately broken. When this occurs the loom is instantly stopped by the ordinary automatic devices arranged for that purpose.

In the drawings, A is the shuttle; B, the spindle; *c*, a frame or support fastened to the side of the shuttle or to an intermediate piece of leather. *d* is the chamber or part of the frame in which the latch rests. *e* is the latch, loosely pivoted to the frame *c*, and is connected, by a cord, *m*, to the hook *h*, which, when in position, rests on the projection *f*. *a* is the stop to limit the upward motion of the latch. (Clearly shown in Fig. III.) *b* is the bevel-point of the latch, adapted to catch the weft-thread. *y* is the leather piece to which the frame is riveted.

In Fig. III part of the latch has been removed to show the manner in which the cord is fastened around the rubber spring *o*. *n* is the lower part of the latch, which is turned up to prevent the filling-thread from being entangled under the upper part, which incloses the cord and rubber spring.

When ready for use, as seen in Figure I, (the hook *h* upon the bearing *f*,) the bevel-point *b* of the loose end of the latch is kept raised above the chamber *d* of the frame *c*. The filling is thus left free to circle around the spindle when the shuttle is in operation. When thus arranged and in use, if the cloth were being made uneven, so as to leave a pick-out, the threads of the warp, not being permitted to spread apart, would rub along the top of the shuttle as it passed along, and, striking the hook *h*, would force it off its bearing *f*. The bevel-point *b* of the latch would then fall below the chamber *d*, and, as the filling circles around the spindle, it is caught and broken by the bevel-point of the latch. The loom is then stopped by the ordinary stop-motion.

The frame *c* may be riveted to the center of the leather piece *y*, and the leather glued to the inside of the shuttle.

Having thus described my invention, what I claim as new is—

In a loom-shuttle, the fixed frame *c*, provided with a chamber, *d*, and a projecting support, *f*, the loosely-pivoted latch *e*, having a bevel-point, *b*, and connected, by a cord, *m*, to the hook *h*, all combined and operating together, as and for the purpose set forth.

JOHN RIGBY.

Witnesses:

R. F. HYDE,

L. JOHNSON.