(No Model.)

R. J. RISK.

TAKE-UP MECHANISM FOR LOOMS.

No. 491,816. Patented Feb. 14, 1893.

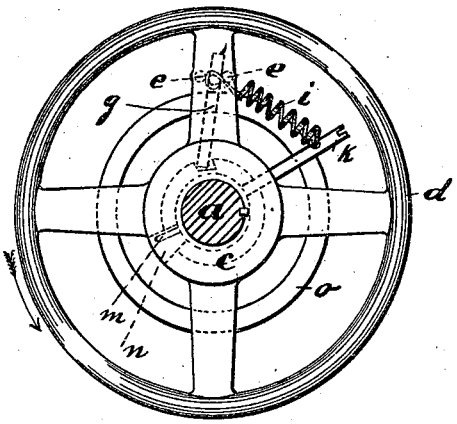

Fig. 1.

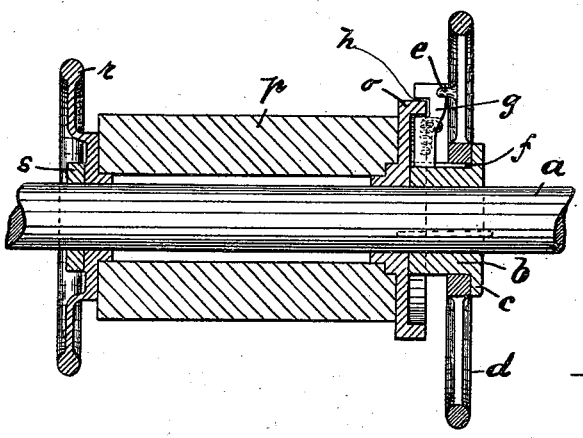

Fig. 2.

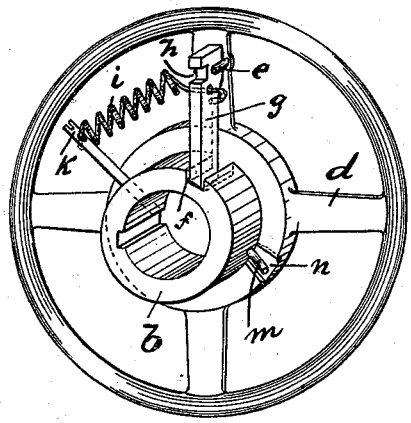

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT J. RISK, OF PATERSON, NEW JERSEY, ASSIGNOR TO BENJAMIN EASTWOOD, OF SAME PLACE.

TAKE-UP MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 491,816, dated February 14, 1893.

Application filed August 16, 1892. Serial No. 443,281. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. RISK, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Take-Up Mechanism for Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide means for stopping and reversing the motion of the take up roller in either wide or narrow fabric looms; such means being simple and durable in construction and easily handled and operated.

The invention consists in the improved take up roller stopping and reversing mechanism, and the combination and arrangements of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures: Figure 1. is an end elevation of my improved device; Fig. 2. is a longitudinal sectional view of Fig. 1; and Fig. 3. is a detail perspective view of the take up roller controlling mechanism.

In said drawings, *a* represents the take up roller shaft, to which is secured a collar *b*, provided with flange *c*. On said collar and resting against its flange, is arranged the hand wheel *d*, having in its hub a groove *n*, in which is adapted to operate a pin *m*, firmly secured in collar *b*, by which arrangement the wheel is limited in its motion on the said collar.

Between the inner face of the hand-wheel *d* and the flanged end *o* of the take up roller *p* is placed the pawl *g*, having at its upper end a recess *h* slightly wider than the width of the annular flange *o*. The lower end of this pawl *g* is placed in a recess *f* in the collar *b* (on shaft *a*). The pawl *g* is guided vertically by the pins *e e* on the inner face of the hand wheel and is held in position by these pins *e* and the flange *o* on the take up roller *p* substantially as shown in Fig. 2. A spiral spring *i* is connected at one end to the pawl *g* below its recess *h*, and at its other end to the pin *k* projecting from the collar *b*. This spring *i* serves by its tension exerted upon the upper end of the pawl *g* to throw the upper portion of the pawl over so that the recess *h* binds tightly down upon the flange *o* and thus secures the hand wheel to the take up roller, so that the hand wheel and take up roller rotate together with the shaft *a*. To the opposite end of the take up roller is secured a hand wheel *r*, which in conjunction with the take up roller *p* and disk *o* is free to turn in either direction on the shaft *a*. The collar or washer *s*, which is secured to the shaft *a*, holds the hand wheel *r* and the take up roller *p* in permanent contact with pawl *g*.

In operation the groove or recess *h* of pawl *g* by reason of spring *i* engages and clamps the flange of disk *o*, whereby said disk, and also the take up roller, is bound to rotate with the shaft *a*, in the direction, shown by the arrow in Fig. 1, of the drawings. Should it, for any reason, be necessary (as in case of miss picks), to remove part of the filling, the take up roller must be loosened from its connection with the shaft and rotated backward. This is done by moving the hand wheel *d*, a distance determined by the slot and pin connection with the collar *b*, in the opposite direction to the rotation of the shaft, when the pin *e* will throw the pawl *g* over until the recess *h* of pawl *g* comes in a concentric position with the flanged portion of disk *o*, whereby the latter and also the take up roller is free to be turned (by hand wheel *r*) in either direction on shaft *a*. By releasing the hand wheel *d*, the pawl *g* will be thrown over and its recess will again engage and clamp the flange of disk *o*—by the action of the spring *i*.

I do not intend to limit myself in the adaptation of my improvement for take up rollers only as other rollers may be fitted up in a like manner.

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

1. In a take up mechanism, the combination

with the shaft, of a roller loosely arranged on said shaft, a circular disk secured to said roller and provided with an annular flange, a collar secured to the shaft and provided with a groove, a pawl resting with one end in said groove and provided at its other end with a recess, adapted to engage the annular flange of the disk, a hand wheel provided with two pins and adapted to engage and operate said pawl, and a spiral spring adapted to bind the recess of the pawl and the flange together, all said parts, substantially as described and for the purposes set forth.

2. In a take up mechanism, the combination with the shaft, of a collar secured to said shaft and provided with a radially extending pin, a hand wheel loosely arranged on said collar, and provided with a groove or recess, adapted to be engaged by said pin, a pawl provided with a recess and adapted to be operated by said hand wheel, a roller provided with an annular flange, said flange being adapted to be engaged by the recess of the pawl, and a spiral spring normally adapted to bind said recess of the pawl and flange together, all said parts, substantially as described and for the purposes set forth.

3. In a take up mechanism, the combination with the shaft, of a roller loosely arranged on said shaft, a circular disk secured to said roller and provided with an annular flange, a collar secured to said shaft and provided with a radially extending pin, a hand wheel loosely arranged on said collar and provided with a groove or recess, adapted to be engaged by said pin, said hand wheel being also provided with two pins, a pawl arranged between said pins and resting with one end in a groove arranged in a collar, and provided at its other end with a recess, adapted to engage the annular flange of the disk, and a spiral spring secured with one end to the pawl, and with its other end to a pin arranged on the collar, all said parts, substantially as described and for the purposes set forth.

4. In a take up mechanism, the combination with the shaft, of a roller loosely arranged on said shaft, a circular disk secured to said roller and provided with an annular flange, a collar secured to the shaft and provided with a groove, a pawl resting with one end in said groove and provided at its other end with a recess, adapted to engage the annular flange of the disk, a hand wheel loosely arranged on said collar and adapted to operate said pawl, a spiral spring for controlling the return motion of said pawl, and a hand wheel secured to the roller, all said parts, substantially as described and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of August, 1892.

ROBERT J. RISK.

Witnesses:
GEORGE S. SMITH,
BENJN. EASTWOOD.