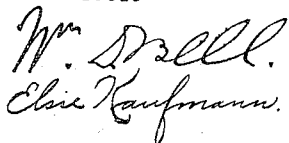


STOP MOTION MECHANISM FOR SPINNING MACHINES AND THE LIKE.
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STOP-MOTION MECHANISM FOR SPINNING-MACHINES AND THE LIKE.

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To all whom it may concern:

Be it known that we, OSCAR AGEL and CHARLES F. ISLEIB, citizens of the United States, residing in Paterson, Passaic county, New Jersey, have invented a certain new and useful Improvement in Stop-Motion Mechanisms for Spinning-Machines and the Like; and we 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 characters of reference marked thereon, which form a part of this specification.

This invention relates to machines in which threads are unwound from one series of rotated members and wound on another, being at the same time subjected to one or other of such operations as spinning, doubling or throwing.

The object of the invention is to provide an improved stop-motion mechanism which, on the breaking of a thread or other irregularity in the advance thereof from the supply to the receiving member, will quickly and effectively bring the member controlled thereby to a stop.

Our invention has been so far in practice employed in the stopping of the member from which the thread is unwound, herein termed the "supply spindle," and is so illustrated and described herein, but it will be understood that we are not limited to that particular adaptation thereof.

We have fully illustrated the invention in the accompanying drawing, wherein,

Figure 1 is a vertical transverse sectional view of so much of a machine constructed in accordance with our invention as it is necessary to show for the purpose in hand; Fig. 2 is a horizontal sectional view on line *x-x* of Fig. 1; Fig. 3 is a vertical sectional view on line *y-y* of Fig. 2; Fig. 4 is a front elevation of certain parts carried by the upper rail; and, Fig. 5 is a side elevation, enlarged, of a part forming a mounting and a guide for other and movable parts.

In said drawings, *a* designates the upper rail and *b* the lower rail. In the upper rail is shown the usual step-bearing *c* for the spindle *d* carrying the spool *e* and adapted to be rotated by a suitably driven belt *f* which engages the whirl *g* of the spindle. The spool *e* is the receiving member and

surrounding it is the usual ring *h* on which runs a traveler *i*. On the rail *a* is also arranged a mechanism for throwing the belt *f* out of contact with the whirl *g*, the same comprising a lever *j* pivoted on a vertical stud *k* and carrying a roller *l* on one arm thereof and having its other arm formed with a horizontally projecting stud *m*; in normal position, the lever stands as shown in Fig. 1, in which the roller *l* does not impinge against the belt, but when a bracket *n*, having an inclined slot *o* receiving the stud *m*, is raised, the lever is shifted, the roller *l* impinging against the belt and throwing it out of contact with the whirl. The bracket *n* is carried by a vertically moving rod *p* guided in the rails *a* and *b*. Normally this rod stands depressed, it being held in that position by a pivoted detent *q* which engages a pin *r* on another rod *s* sliding vertically in the rail *a* and a suitable guide *t* and connected with the rod *p* by the cross-piece *u*. A spring *v*, coiled about rod *s*, is normally held under compression (when the detent *q* is engaged with pin *r*) between a collar *w* on said rod and the rail *a*. When a pivoted faller *x* which is normally held elevated by the threads *A*, which it engages between two suitable guides *y*, drops, it strikes the detent *q*, causing it to release the rods *s* and *p*, the consequent rise of the bracket *n* effecting a shifting of lever *j* in the manner above described, with the result that the belt *f* is disengaged from the whirl *g*. In step-bearing *z* of levers 1 pivoted in the rail *b* at 2 are journaled the spindles 3 carrying the supply spools 4 and having the whirls 5. The whirls are normally held engaged with a belt or belts 6 by suitable springs 7 engaging the levers 1 and operating in a well known manner to press the whirls toward each other.

In the rail *b* between the openings 7' therein, which allow inward and outward movements of the step-bearing *z*, is introduced the threaded stud 8 of a mounting 9. This mounting has a cross-sectionally squared recess 10 formed transversely in its head 11, the recess being open at the top and the mounting having a plate 12 which covers the recess and may be secured thereto by screws 13. The mounting, including its plate and stud 8, has a vertical bore 14. The stud receives a nut 15 on its lower protruding threaded end 16, the same acting to bind

the mounting in place. In the recess 10 are guided two alined blocks 17 which, under the action of the spring 7, are normally pressed by the flanges 18 of the whirls 5 into a position where their adjoining ends approximately contact with each other. The mounting, which thus affords a horizontal guideway for the blocks 17, also affords by its bore 14 a vertical guideway for a vertical pin or wedge-piece 19 whose upper end is tapered and which is carried by an arm 20 extending from rod *p*. In the normal position of the wedge-piece, its upper tapered end projects slightly between the blocks 17.

15 The operation is as follows: When the faller *x* drops and so causes the detent *q* to release the rods *s* and *p*, thereby causing belt *f* to be thrown out of engagement with the whirl *g*, the wedge-piece is raised and in rising forces apart the block 17 which in turn acts to force the whirls 5 apart and hence out of contact with the driving belt 6. The blocks are preferably formed of leather or some such substance which will offer high

25 frictional resistance to the rotation of the spindles, so that once they contact therewith the rotation of the spindles will be quickly stopped.

Having thus fully described our inven-

tion, what we claim as new and desire to secure by Letters Patent is:

The combination of a suitable support, rotary spindle members, a driving member for the spindle members disposed between the latter, each spindle member being movable toward and from the driving member, a mounting arranged in said support between the spindle members and having a guideway formed parallel with the axes of the spindle members and another guideway formed transversely of said axes of the spindle members, a wedge piece movable in the first guideway, movable parts arranged in the second guideway, one between the wedge piece and one spindle and the other between the wedge piece and the other spindle, and mechanism, controlled from the thread, for actuating the wedge piece, substantially as described.

In testimony, that we claim the foregoing, we have hereunto set our hands this 26th day of November, 1909.

OSCAR AGEL.
CHARLES F. ISLEIB.

Witnesses:

JOHN W. STEWARD,
WM. D. BELL.