H. A. HOUSEMAN.

TAKE-UP DEVICE FOR CIRCULAR KNITTING MACHINES.

APPLICATION FILED MAY 17, 1907.

FIG. 1.

FIG. 2.

FIG. 3.

INVENTOR

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BY

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WITNESSES:

[Signatures]
The patent specification of a take-up device for circular knitting machines is presented. It details a mechanism that maintains tension on the fabric as it is knitted, preventing slackness that could disrupt the knitting process. The device includes a tension device which is controlled by a guard or shield that moves according to the tension on the fabric, ensuring that the take-up roller is positively driven. The description includes a figure and a list of components such as the take-up roller, tension device, guard, and shield. The patent was granted to Harry A. Houseman and assigned to Standard Machine Company.
the proper amount of slack of the goods, and the active movement of the pawl will cause the ratchet to move sufficiently only to take up that slack. \( p \) is the holding pawl to prevent the ratchet moving in the opposite direction.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said guard and said tension device, whereby in one position of the tension device the guard renders the pawl inactive and the other position renders it active, and a pawl guard, independent of and in advance of the tension device guard.

2. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said guard and said tension device, whereby in one position of the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered.

3. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said guard and said tension device, whereby in one position of the tension device the guard renders the pawl inactive and the other position renders it active, and a pawl guard, independent of and in advance of the tension device guard.

4. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said guard and said tension device, whereby, in one position of the tension device the guard is elevated, and the pawl rendered inactive, and in another position the guard depressed and the pawl rendered active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered.

5. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said guard and said tension device, whereby, in one position of the tension device the guard is elevated and the pawl rendered inactive, and in another position the guard depressed and the pawl rendered active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered.

6. In combination, a take-up roller, a ratchet and pawl for moving said roller, a tension device, a guard, connection between said tension device and guard, whereby, in one position of the tension device the guard is elevated and the pawl rendered inactive, and in another position the guard depressed and the pawl rendered active, a pawl guard, independent of and in advance of the tension device guard, the rear of said independent guard being normally in alinement with the ratchet tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is lowered, and means to return said independent guard when released by said pawl.

7. In combination, a take-up roller, a tension arm adapted to rest against and move toward the fabric, a ratchet and pawl for operating the take-up roller, a guard for rendering said pawl active and inactive and connection between said pawl and said tension arm, whereby the movement of the arm in one direction moves the guard to render the pawl active and the movement in the other direction moves the guard to render the pawl inactive, and an independent guard in advance of the tension device guard.

8. In combination, a take-up roller, a tension arm adapted to rest against and move toward the fabric, a ratchet and pawl for operating the take-up roller, a guard for rendering said pawl active and inactive and connection between said pawl and said tension arm, whereby the movement of the arm in one direction moves the guard to render the pawl active and the movement in the other direction moves the guard to render the pawl inactive, and an independent guard in advance of the tension device guard.

9. In combination, a take-up roller, a tension arm adapted to rest against and move toward the fabric, a ratchet and pawl for operating the same, a guard for rendering said pawl active and inactive and connection between said pawl and said tension arm, whereby the movement of the arm in one direction moves the guard to render the pawl active and the movement in the other direction moves the guard to render the pawl inactive, and an independent guard in advance of the tension device, the rear of said independent guard.
guard being normally in alinement with the tooth masked by the tension device guard and adapted to be struck by the pawl when the tension device guard is released, and means to return said independent guard when released by the pawl.

In testimony of which invention I have hereunto set my hand, at Philadelphia, on this 13th day of May, 1907.

HARRY A. HOUSEMAN.

Witnesses:

M. M. HAMILTON,
A. M. URIAN.