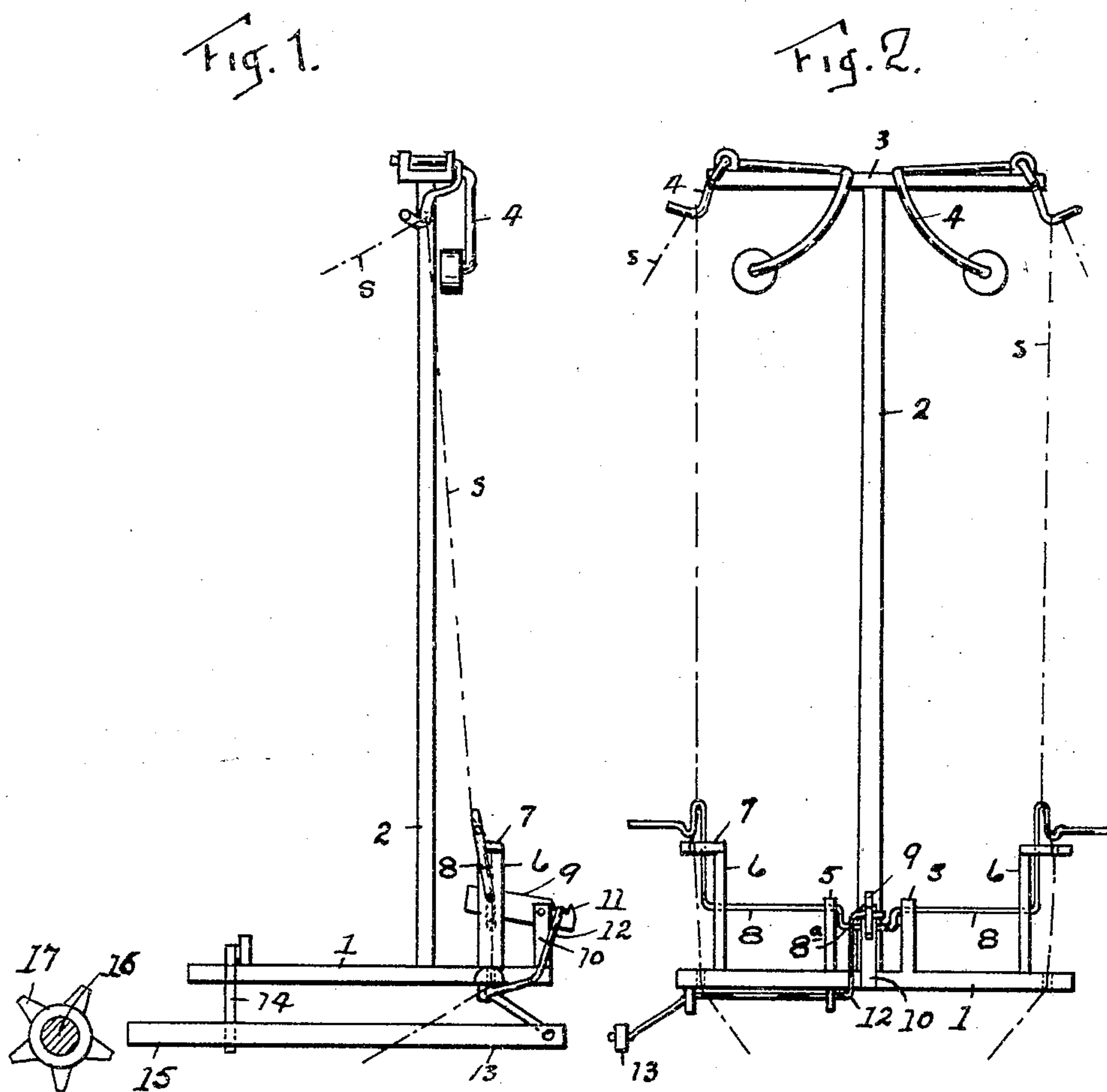


No. 778,538.

PATENTED DEC. 27, 1904.

F. S. FORRY.
STOP MOTION FOR KNITTING MACHINES.
APPLICATION FILED JUNE 24, 1904



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Witnesses
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UNITED STATES PATENT OFFICE.

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STOP-MOTION FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 778,538, dated December 27, 1904.

Application filed June 24, 1904. Serial No. 213,907.

To all whom it may concern:

Be it known that I, FRANKLIN S. FORRY, a citizen of the United States, residing at Myers-town, in the county of Lebanon and State of Pennsylvania, have invented new and useful Improvements in Stop-Motions for Knitting-Machines, of which the following is a specification.

This invention relates to improvements in a stop-motion device for use on knitting-machines of all kinds and in which it is desired to automatically stop the operation of the machine by the breaking or knotting of the yarn or thread.

The present device consists of means for automatically accomplishing this result, and is intended particularly as an improvement on Patent No. 714,468, issued to me under date of November 25, 1902.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 an end view, of my device.

The frame 1 is secured to the machine in any suitable manner and has a vertical post 2 extending upward therefrom, to the top of which is arranged an arm 3, and on the ends of this arm are pivoted weighted guards 4, having free ends or fingers adapted to engage the threads *s*. To the rear of this upright are arranged four vertical posts 5 5 and 6 6. The posts 6 6 are provided at their tops each with an angled projection 7, having a slot therein for the thread. A rocking arm 8, of wire, is mounted in each set of these posts, each arm passing through one of the posts 5 and 6, their outer ends engaging the threads *s* and their inner ends 8^a resting normally against the under side of a pivoted gate 9. This gate 9 is mounted on a post 10, also arranged on the frame 1 to the rear of the posts 5 and 6, and it has a hook 11 formed on its small end. This hook is engaged by the end of the wire rocking arm 12. This rocking arm 12 is secured to the under side of the frame 1, and its free end is attached to a horizontal rod 13. This rod 13 runs forward and engages the belt-shifter 14, and its extreme

end 15 extends beyond said belt-shifter. To the power-shaft 16 I secure a star-wheel 17, and this wheel is arranged to contact with the end 15 of the rod 13.

The action is as follows: The threads pass from the spools over the fingers of the weighted guards 4, then to the outer ends of the rocking arms 8, then to the slots in the posts 6, and from there through an opening in the frame 1.

It will be seen that as long as the tension is maintained the feed will proceed without interruption; but on the occasion of a break in either yarn the weighted guard-finger engaged by it will tilt, as will the corresponding rocking arm 8, and its inner end 8^a will raise the gate 9, thus lowering the rear end of said gate and releasing the rocking arm 12 from engagement with the hook 11. This release will cause the rocking arm 12 to rock, and this movement will push forward the horizontal rod 13 on the end thereof until it contacts with the star-wheel 17. The revolution of this wheel will lower said rod, and with it the belt-shifter 14, thus stopping the machine.

In case of a knot in the thread when it reaches the slot in the top of the post 6 it will increase the tension until the thread becomes disengaged from the guard-finger 4, and this operation will act the same as a break in the thread by setting in operation the rocking arm 8 and operating-rod 13, just described.

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

In a stop-motion for knitting-machines, a frame having a vertical post carrying weighted guards at its top, the fingers of which guards engage threads, uprights or posts on said frame, rocking arms mounted on said posts, said rocking arms having their outer ends bent to engage said threads, there being a slot in each of said posts through which the said threads pass, said rocking arms having angled inner ends on which rests the inner end of a pivoted gate, a rocking arm secured to the under side of said frame engaging the outer hooked end of said gate, a horizontal rod secured at one end to the free end of said

rocking arm, a belt-shifter engaged by said
rod, and a star-wheel mounted on a power-
shaft adapted to contact with said horizontal
rod and through it operate the belt-shifter,
5 the whole adapted to operate automatically
through the breaking of either of the threads,
substantially as described.

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

FRANKLIN S. FORRY.

Witnesses:

ED. A. KELLY,
GEO. M. MILLER.