

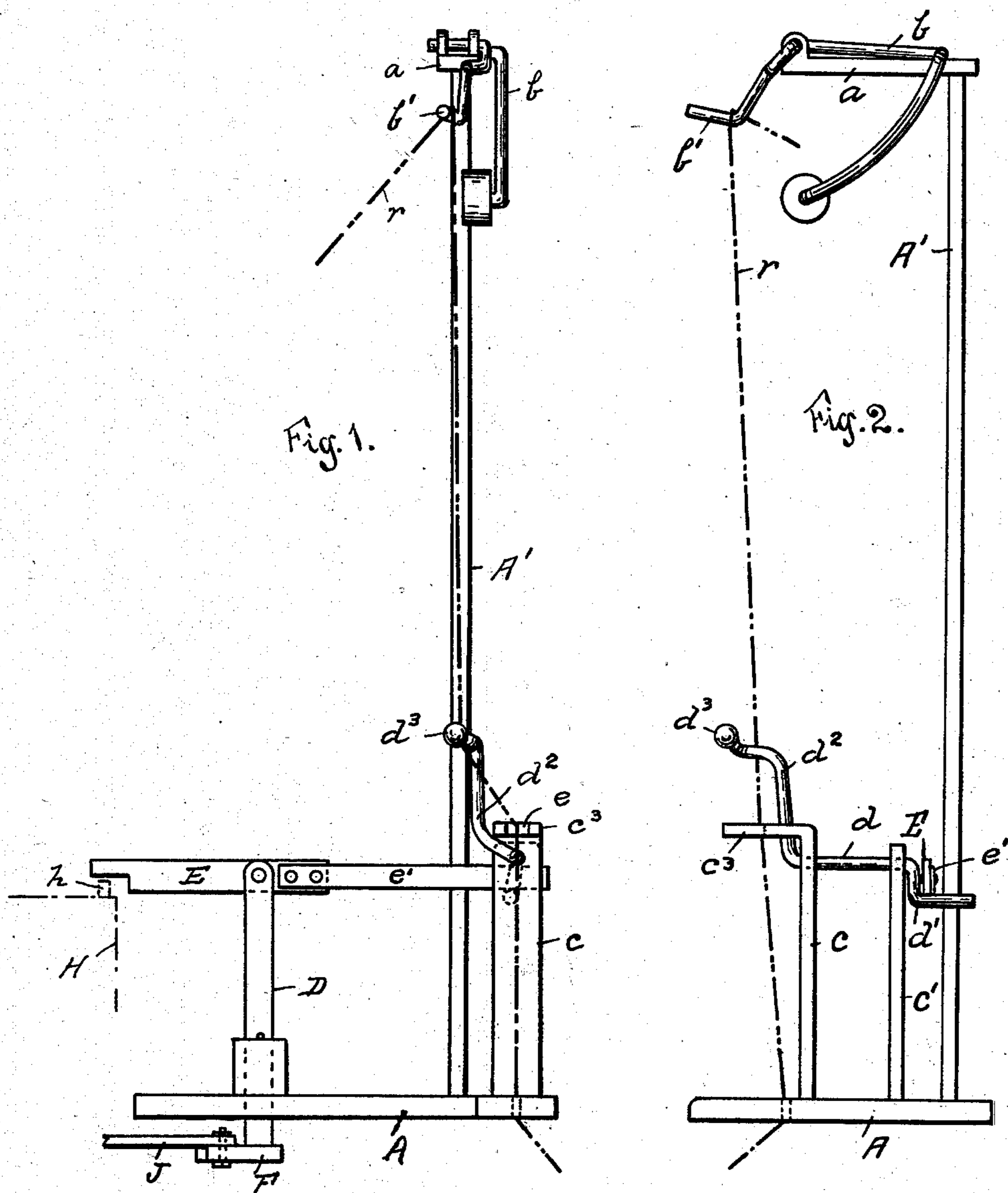
No. 714,468.

Patented Nov. 25, 1902.

F. S. FORRY.  
STOP MOTION FOR KNITTING MACHINES.

(Application filed Mar. 1, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANKLIN S. FORRY, OF MYERSTOWN, PENNSYLVANIA.

## STOP-MOTION FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 714,468, dated November 25, 1902.

Application filed March 1, 1902. Serial No. 96,202. (No model.)

*To all whom it may concern:*

Be it known that I, FRANKLIN S. FORRY, a citizen of the United States, residing at Myerstown, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Stop-Motions for Knitting-Machines; 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.

This invention relates to improvements on 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 the invention is fully described in the following specification and clearly illustrated in the accompanying drawings.

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

The frame A is secured to the machine in any suitable manner and has a vertical post A' extending upward therefrom, to the top of which is arranged an arm  $a$ , on the end of which is pivoted a weighted guard  $b$ , having a free end or finger  $b'$ , adapted to engage the yarn  $r$ . Beside and slightly to the rear of this post are arranged two uprights  $c$  and  $c'$ , in which is mounted a rocking arm  $d$ , of wire, having its inner end  $d'$  bent at right angles thereto and then again to the same plane. This end  $d'$  comes outside the upright  $c'$ , and the other end  $d^2$  is also bent at an angle thereto and extends upward alongside of the upright  $c$  and has a knob  $d^3$  formed on its end. The upper end  $c^3$  of said upright  $c$  is bent at right angles and has a tapered slot  $e$  therein, through which the yarn  $r$  passes. A post D of about the same height as the uprights  $c$  and  $c'$  is arranged on the frame A a short distance in front of said post A' and has pivoted to its top a lever E, the free forward end of which is adapted to engage one of the pins  $h$  on the cone H when it is dropped. To the rear end of this lever E is rigidly secured, as an extension thereof, a piece of sheet spring-steel  $e'$ , adapted to prove substantially rigid as against

any vertical strain, though flexible laterally, and the end of this extension  $e'$  rests on the end  $d'$  of the rocking arm  $d$ . The post D depends below the frame A and is rigidly secured to an arm F, which arm is in turn connected to the belt-shifter J.

The action is as follows: The yarn  $r$  passes from the spool over the finger  $b'$  of the guard  $b$ , thence down and under the end  $d^2$  of the rocking arm engaging it, and is held from sliding off by the knob  $d^3$ , thence into the tapered slot  $e$  in the angled end of the upright  $c$ , and thence through a hole in the frame A.

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 the yarn the weighted guard will tilt and the rocking arm  $d$  will allow its end  $d^2$ , which is heavier than the counterbalancing end, to drop, swinging the rod around and raising the angled end  $d'$  thereof, on which rests the end of the extension  $e'$  of the lever E, and when this is raised the other end of the lever E will drop and engage one of the pins  $h$  on the revolving cone H. The pressure thus placed on the lever E by the force of the cone will turn it, and with it the post D, sufficiently to give the arm F a movement that will operate the belt-shifter J sufficiently to shift the belt and stop the machine.

In case of a knot in the yarn, when it reaches the tapered slot  $e$  it will increase the tension until the yarn becomes disengaged from the finger  $b'$  on the tilting guard  $b$ , and this disengagement will operate the same as a brake by setting in action the rocking arm and lever 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 a weighted guard  $b$  at its top, the finger of which guard engages a yarn or thread, uprights on said frame, a rocking arm mounted on said uprights, said rocking arm having its outer end bent to engage said yarn, there being a tapered slot in one of said uprights through which the yarn passes, said rocking arm having an angled inner end on which rests the

free end of a lever E; a post D, arm F and  
belt-shifter J, said lever E pivotally mounted  
upon said post D, a revolving cylinder carry-  
ing pins h, said lever E adapted to engage  
5 one of said pins h, the whole adapted to op-  
erate automatically by the breaking of said  
yarn, substantially as set forth.

In testimony whereof I affix my signature  
in presence of two witnesses.

FRANKLIN S. FORRY.

Witnesses:

ED. A. KELLY,  
WM. F. FORRY.