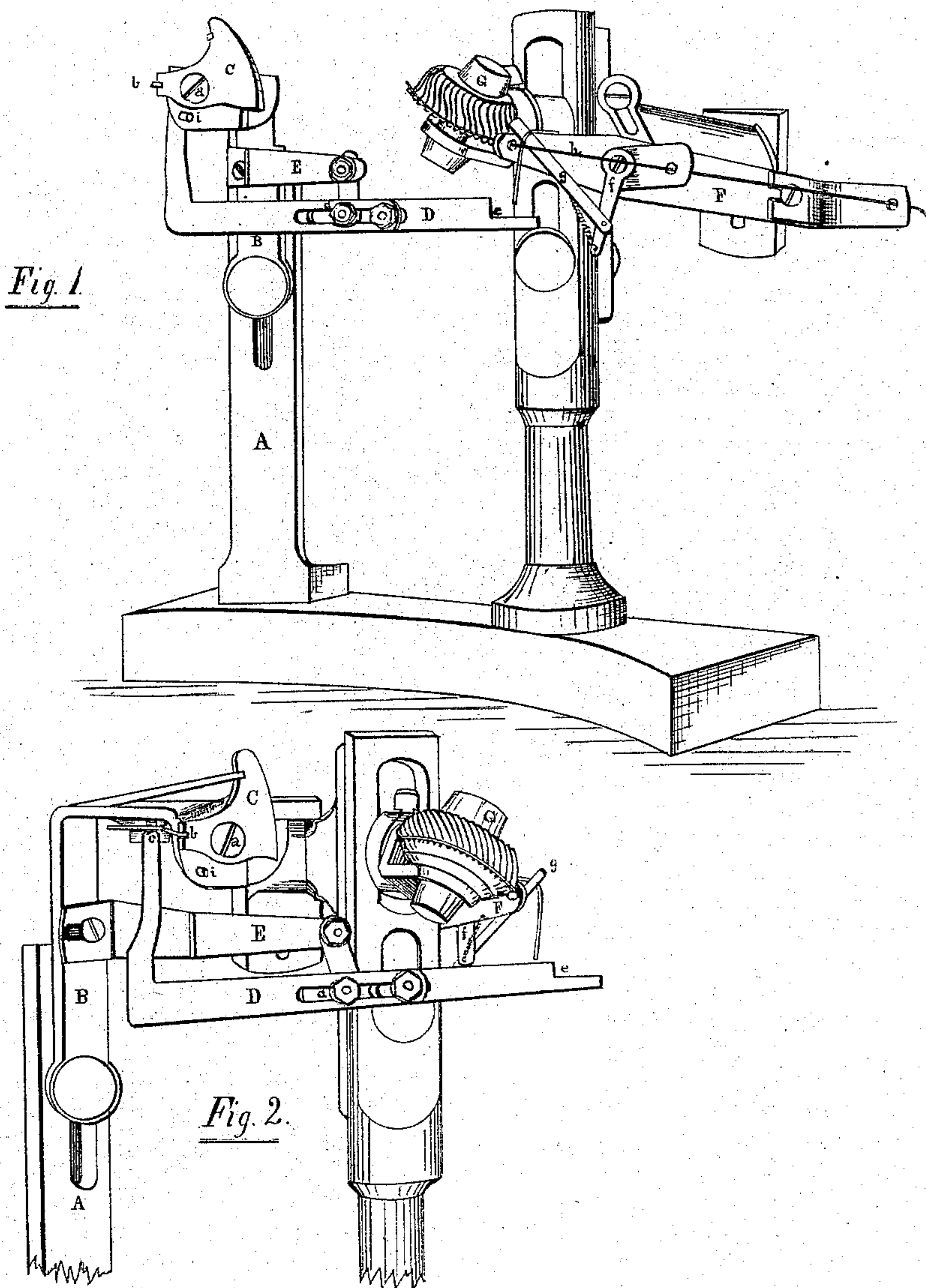


F. PHILIP.
Knitting-Machines.

No. 156,855.

Patented Nov. 17, 1874.



Witnesses.

Abram Bogardus
Wheeler H. Clarke

Inventor.

Franklin Philip

UNITED STATES PATENT OFFICE.

FRANKLIN PHILIP, OF PHILMONT, NEW YORK.

IMPROVEMENT IN KNITTING-MACHINES.

Specification forming part of Letters Patent No. **156,855**, dated November 17, 1874; application filed August 18, 1874.

To all whom it may concern:

Be it known that I, FRANKLIN PHILIP, of Philmont, Columbia county, New York, have invented a Cast-Off Arrester for Knitting-Machines, of which the following is a specification:

The object of my invention is to promptly arrest the running off of the cloth from the needles of a knitting-frame when the thread breaks or runs off the bobbin, or from any other cause fails to run in the needles, to do which I employ a drop-wire or latch-bar pivoted at one end to the foot of a dependent leg attached to the thread-carrier, the other resting inside of and on the thread next to the thread-carrier, so that when the thread breaks, or fails from any cause to run in the needles, this latch-bar drops down with its end against the needle-cylinder, which, revolving, carries it back against the shouldered end of a sliding bar connected with and made to operate at its opposite end a horizontal tripping-lever, which, when thrown back, relieves a vertical cam-piece, allowing it to drop down upon the cloth just inside the needles, and to bear down or press the cloth below the beards of the needles, and thus prevent it from running off.

Although this invention is not in itself both a cast-off arrester and a stop-motion combined, yet it is easily connected with and made to operate any of the stop devices ordinarily employed on knitting-frames.

Figure 1 of the accompanying drawings is a perspective view of my invention from right to left, (the observer standing in front or on the cylinder side.) Fig. 2 is also a perspective view taken from left to right, looking from the cylinder side.

The mechanism I employ may be thus described. To or upon the standard circle of the knitting-frame, a little beyond or back of each burr, I attach the vertical standard A, with adjustable top piece B bent over the tops of the needles at right angles to standard A, and extending to the knit cloth. To the end of this top piece B I attach the cam or depresser C, vertically and swinging or vibrating on the pivot *a*. This depresser, when not required, is supported by a swing latch or catch, *b*, in-

serted in a recess or notch in its rear edge or heel. (This is the condition of the device represented by the accompanying drawings.) This catch *b* is connected with and operated by the bent or knee bar sliding piece D, the upper extremity of which passes through the eye *c*. This sliding piece D is slotted near the middle of its horizontal part, and slides on the pin *d* attached to the supporting arm E, and is provided with a shoulder, *e*, near its forward end or that nearest the thread-carrier F, and just below the burr G. To the thread-carrier F I attach a dependent leg, *f*, and to the lower end or foot of *f* the drop-wire or latch-bar *g* is pivoted, and passes up inside the thread *h*, and next to the carrier F, of such length as that when the thread breaks, runs off the spool, or from any other cause ceases to run in the needles, and thus deprives it of support, it will drop down with its end against the revolving needle-cylinder, and be carried by it against the shoulder *e* of sliding piece D, and press or slide it backward sufficiently to operate the horizontal swing-latch *b*, and thus relieve the cam-piece or depresser C, and allow it to drop down upon the cloth, and by its increasing radius or eccentricity as it revolves, to press the cloth down below the beards of the needles, and thus prevent its being cast off.

It will be easily comprehended how the lower end of drop-wire or latch-bar *g*, being pivoted at the lower end of leg *f*, while its upper end rests on the thread, and between it and carrier F at the eye nearest the burr-wheel G, when the thread breaks, or from any other cause drops out or ceases to run in the needles, this upper end of drop-wire *g*, having no support, will drop down against the revolving cylinder, and be carried by it back against the shoulder *e* of sliding knee-bar D, and thus throw back the swing latch *b*, and allow the cam-piece or depresser C to fall down upon the cloth; and how the knit cloth, revolving with the cylinder, will cause the depresser C, owing to its eccentricity, to force the stitches down below the beards of the needles.

A pin or stop, *i*, is set behind the depresser C to stop it revolving when its greatest radial length is applied to the cloth, and thereafter

the cloth slides under it, all the stitches thenceforth being pressed down to the same point on the needles. The front end of the top piece B has a shoe attached to allow the cloth to pass smoothly under it.

Drop-wire *g* is made slightly elastic both laterally and endwise—endwise, by leg *f* being provided with a spring and allowed to move slightly on the pin which attaches it to the thread-carrier. This is to allow it to yield sufficiently to accommodate itself to the curvature of the needle-cylinder, and still bear against it with sufficient force to do its work.

I claim as my invention—

1. The depresser C, arranged and operated substantially as described, so as to be borne upon the cloth when the thread breaks, and force the loops below the beards of the needles, as and for the purpose specified.

2. The combination of depresser C, swing-catch *b*, arm E, slide-bar D, and drop-wire *g*, substantially as and for the purpose shown and described.

FRANKLIN PHILIP.

Witnesses:

ABRAM BOGARDUS,
WHEELER H. CLARKE.