

E. P. CURTISS.
Knitting-Machines.

No. 152,466.

Patented June 30, 1874.

Fig. 1.

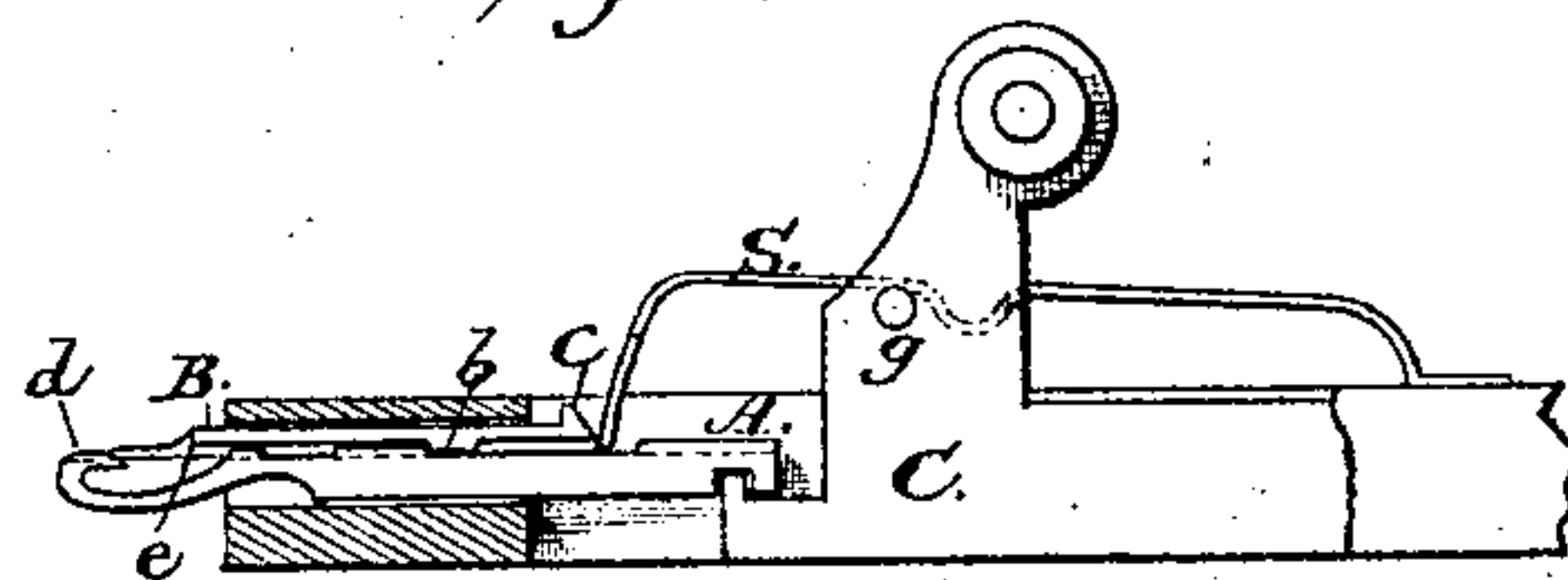
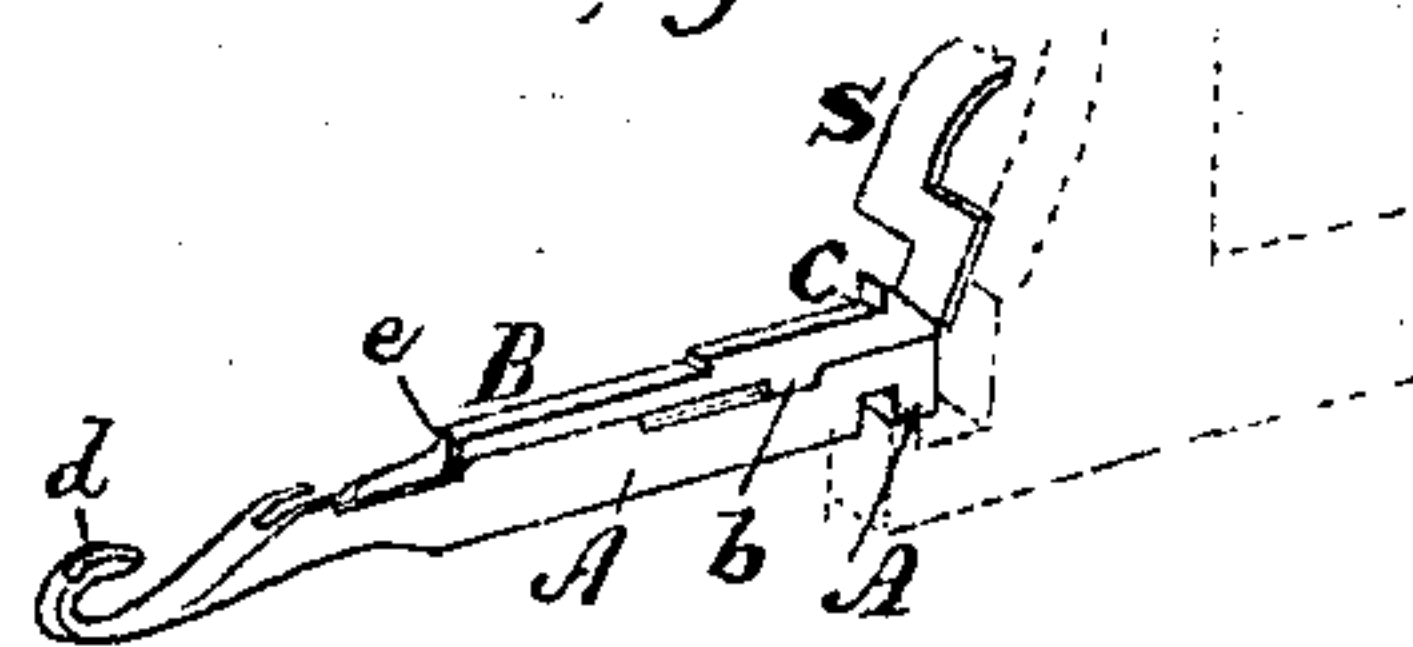


Fig. 2.



Witnesses:
Geo. W. Tibbitts
J. C. Foote

Inventor:
Edward P. Curtiss

UNITED STATES PATENT OFFICE.

EDWARD P. CURTISS, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF HIS
RIGHT TO THEODORE C. FOOTE, OF SAME PLACE.

IMPROVEMENT IN KNITTING-MACHINES.

Specification forming part of Letters Patent No. **152,466**, dated June 30, 1874: application filed
April 15, 1874.

To all whom it may concern:

Be it known that I, EDWARD P. CURTISS, of Cleveland, county of Cuyahoga and State of Ohio, have invented a Knitting-Machine, of which the following is a specification:

The invention relates to certain improvements in knitting machines; and consists in the combination with the needle and sliding latch, constructed as hereinafter described, of a spring-catch operated by the needle-bar, to control the movements of the sliding latch in the formation of the loops.

To enable others to readily and fully understand my invention, I proceed to describe the same in detail, by the aid of the accompanying drawing, in which—

Figure 1 is a view of a needle having the latch attached and slid forward. Fig. 2 is a similar view with the latch drawn back.

A, Figs. 1 and 2, represents a knitting-machine needle, in the top of which is made a groove running lengthwise. In said groove is placed a straight strip or small bar, B, having small lugs *b b* on each side near the middle, which act as stops to limit its movements back and forth, the said lugs playing in spaces cut in the sides of the upper edge of the needle. On the back end of the latch is an elevation, *c*, by means of which the latch is operated by a spring-stop, S, in connection with the needle-bar C. In the upper part of the hook of the needle is a groove, *d*, into which the point of bar B slides when the loop is to be cast off, whereby a smooth, even surface is obtained on the upper side of the needle, enabling the loop to slip off with facility. Near the front of the bar B is a shoulder, *e*, against which the loop bears, and by which it is prevented from be-

ing drawn back too far when the adjacent needles recede. There is a pin, *g*, on the needle-bar C, which, when the latter is drawn back to the position shown in Fig. 1, engages a lump on the spring, raising the latter above the elevation *c*, and allowing both needle and latch to recede together, so that the old loop may be cast off. The spring-stop then engages the front part of the elevation *c*, preventing the latch being moved forward until the proper time, or until, in the advance of the needle-bar, the pin *g* again engages the lump on the spring and relieves the latch from its pressure.

The operation of this is as follows: The new loop being in the hook, the needle is drawn in, the latch being held by the aforesaid spring-stop until the point of the hook reaches the end of the latch, securing the new loop in the hook. The spring-stop then releases the latch, when it, together with the needle, is farther drawn in, when the old loop readily slips off over the needle. The needle again moving outward, the latch being held by the said spring-stop until it arrives at the position seen in Fig. 2, the latch is again released and moves forward with the needle. Then the loop just formed slides up onto the top of the latch ready for the operation to be repeated.

Having described my invention, I claim—

In combination with the needle A and sliding latch B, provided with the shoulder *e* and elevation *c*, the needle-bar C and spring S, substantially as and for the purpose set forth.

EDWARD P. CURTISS.

Witnesses:

G. T. SMITH,
W. C. STRONG.