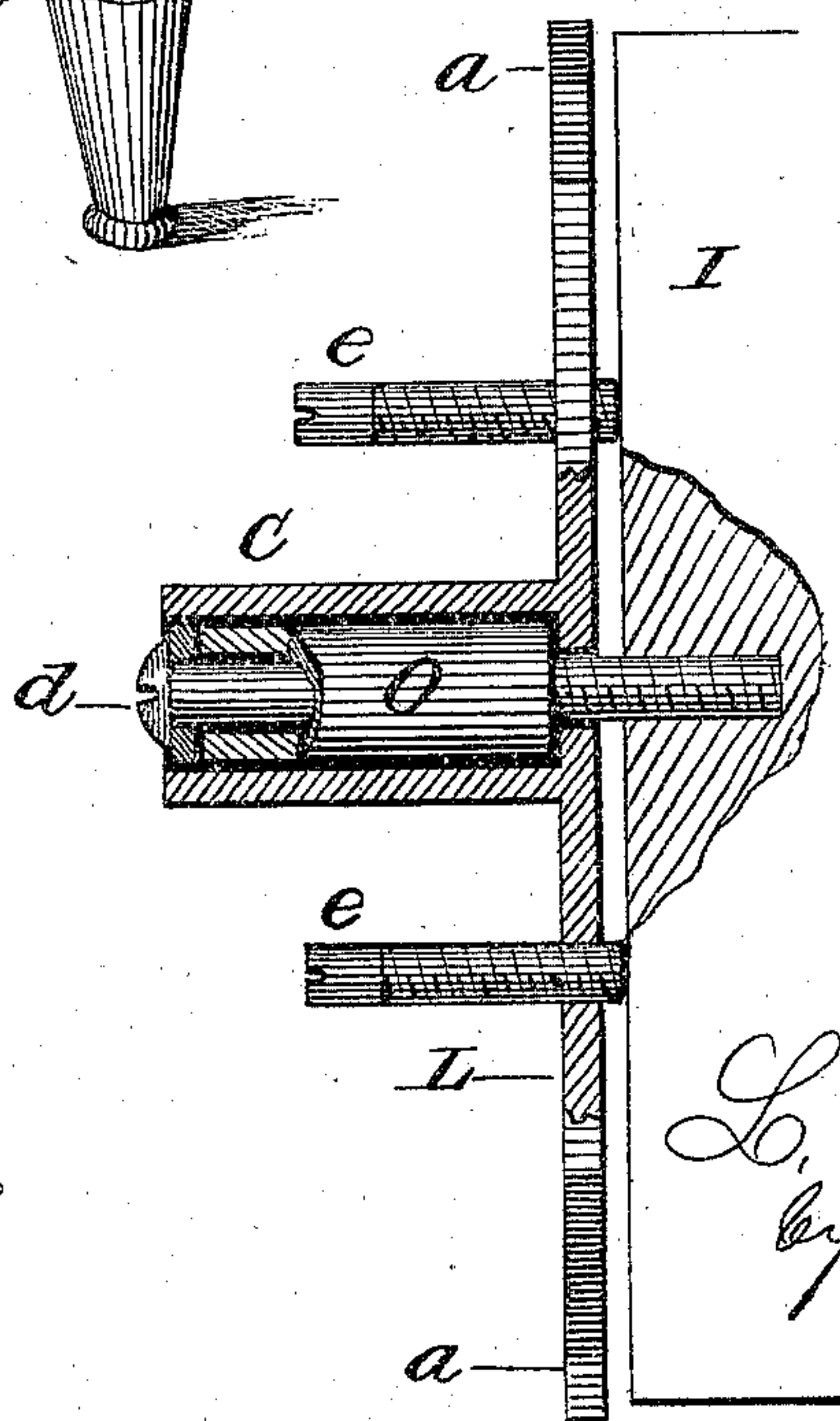
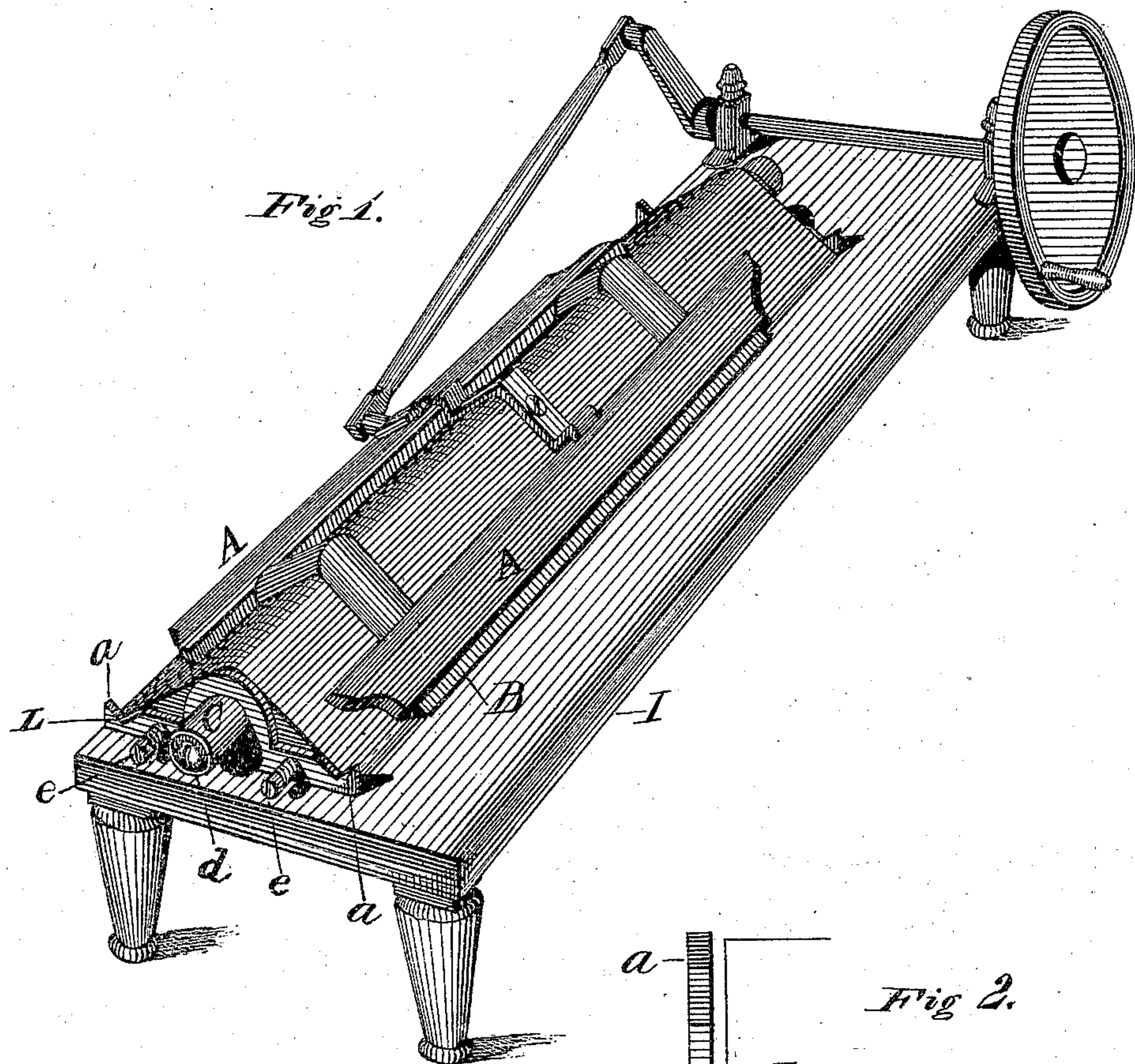


L. D. SANBORN.
Knitting-Machines.

No. 143,468.

Patented Oct. 7, 1873.



Witnesses.

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UNITED STATES PATENT OFFICE.

LORENZO D. SANBORN, OF COHOES, NEW YORK.

IMPROVEMENT IN KNITTING-MACHINES.

Specification forming part of Letters Patent No. **143,468**, dated October 7, 1873; application filed September 3, 1873.

To all whom it may concern:

Be it known that I, LORENZO D. SANBORN, of Cohoes, in the county of Albany and State of New York, have invented certain Improvements in Knitting-Machines, of which the following is a specification:

My invention relates to the Lamb knitting-machine; and it consists in applying a spring-plate or buffer to each end of the machine for the purpose of shifting the cams by a yielding instead of a fixed stop, as heretofore, and as hereinafter explained.

Figure 1 is a perspective view, and Fig. 2 a section showing the spring-plate in detail.

The Lamb knitting-machine, as is well known to those familiar therewith, is provided with a reciprocating frame, to which are attached two sliding plates for shifting the cams which operate the needles, and which sliding plates strike against rigid stops at each end, which arrangement is objectionable for several reasons; and my invention is intended to remedy these by providing yielding stops instead.

In the drawings, A represents the reciprocating frame, and B the sliding plates which shift the cams at each stroke, they being attached to and movable with the frame A, but at the same time being so connected thereto as to slide or move thereon, independently, far enough to shift the cams, or, rather, to be stopped while the frame moves on a short distance for that purpose. To the bed or main frame I of the machine, at each end, I attach a spring plate or bar, L, as shown in Fig. 1. This plate L is provided at its center with a tubular projection, C, in which is placed a rubber spring, o, though any other kind of spring may be used; and through the center passes a screw, d, which secures the same to the main frame I, as shown in detail in Fig.

2. At each end this plate L is provided with a vertical projection, a, against which the ends of the plates B strike, thereby compressing the spring o at each stroke. In order to adjust the spring-plate L, a couple of screws, e, are inserted through holes in the plate, and have their inner ends bearing against the end of the main frame, as shown in Fig. 2, whereby the plate or stop can be set or adjusted, as may be necessary to give the required throw to the cam-shifters or plates B.

It is obvious that a separate spring-stop or buffer may be used on each side of the frame, instead of making the plate L long enough to act on both cam-shifters at once; but that would be a mere modification, and not so convenient or cheap as the plan shown.

By this improvement the sudden jar now imparted to the cam-shifters is avoided, and there is less wear of the parts, and also less noise than when the rigid stop is used.

This improvement may be applied to all machines of this kind, whether run by power or by hand. The form is of no consequence, so that it acts on the plates B and does not interfere with the movements of the reciprocating frame.

Having thus described my invention, what I claim is—

1. The spring-stop L or its equivalent, arranged to act, in combination with the cam-shifters or plates B of a knitting-machine, substantially as described.

2. The spring-stop L, provided with the screws e, or equivalent means for adjusting it, as set forth.

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Witnesses:

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