

(No Model.)

L. C. HUSE.

THICKENING THREAD MECHANISM FOR CIRCULAR KNITTING MACHINES.

No. 495,973.

Patented Apr. 25, 1893.

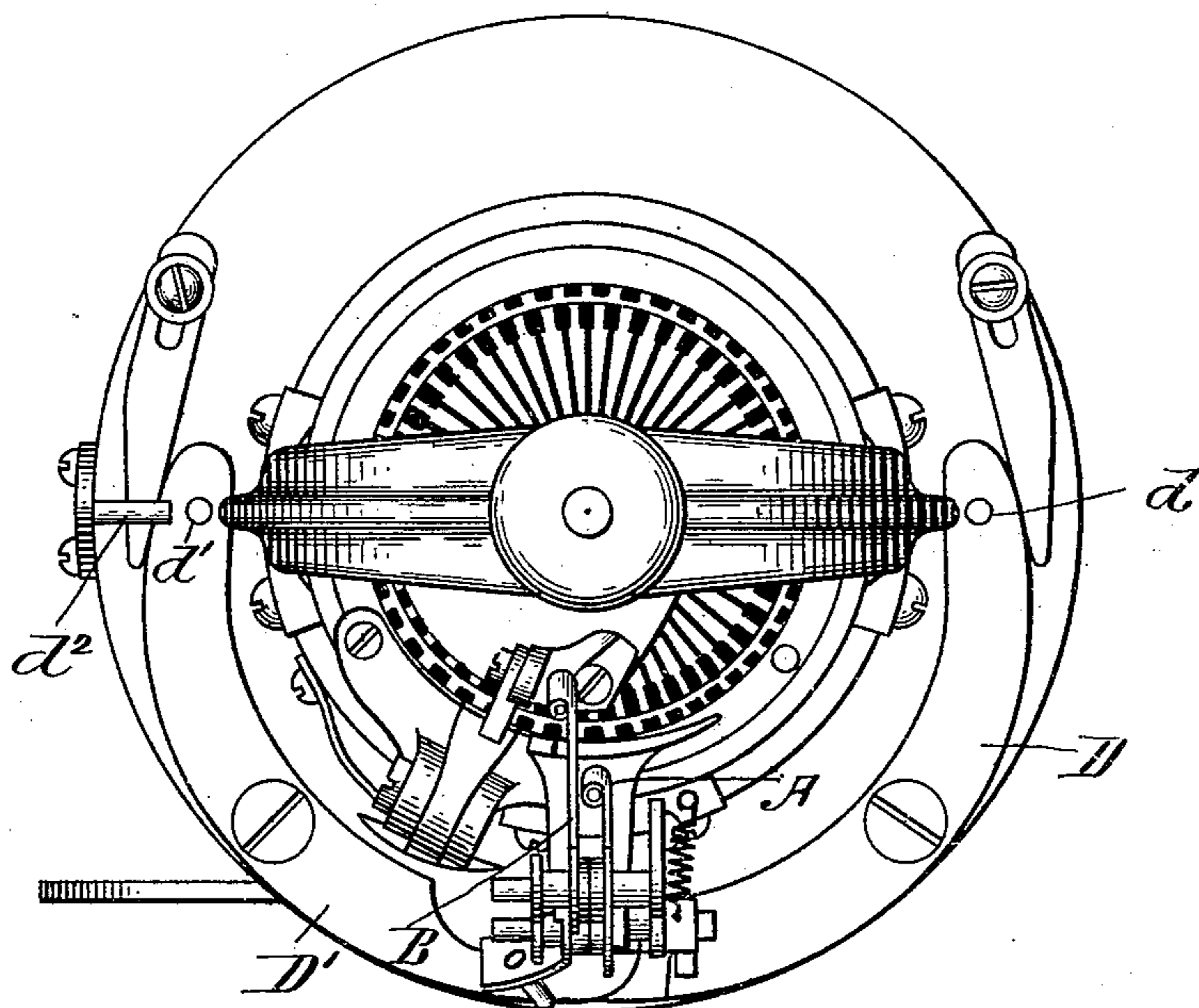


Fig. 1.

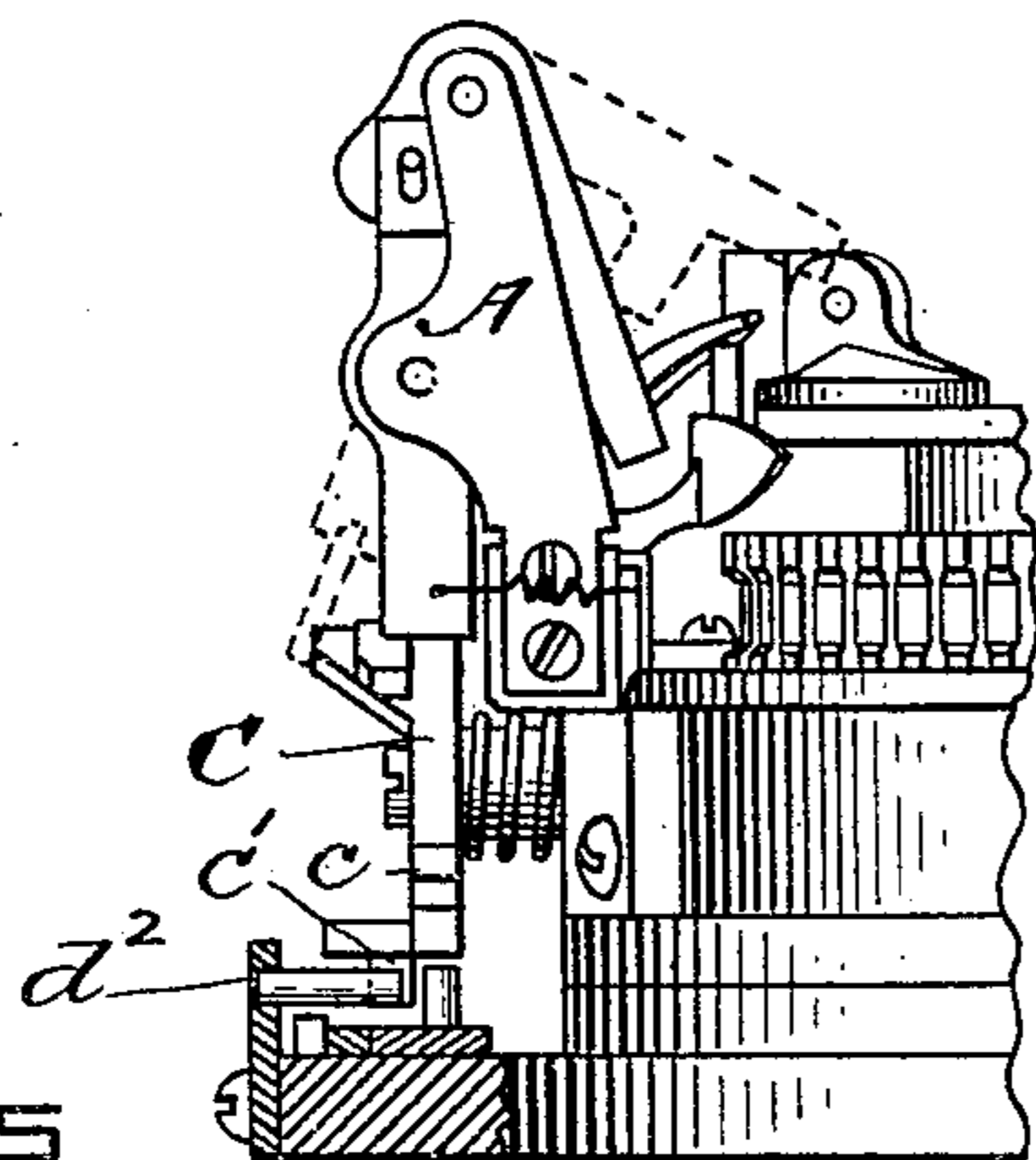


Fig. 2.

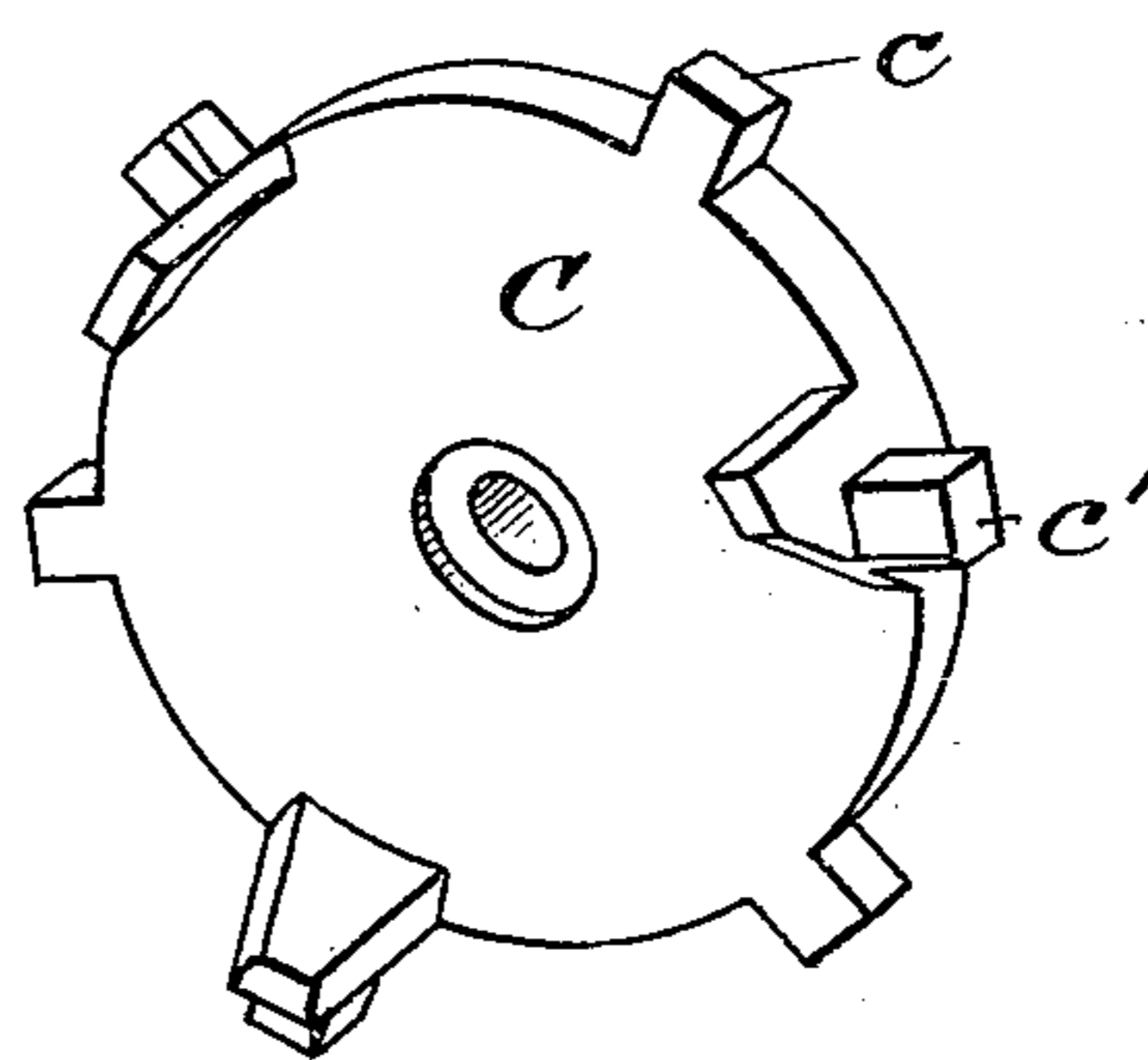


Fig. 3.

WITNESSES

Moses S. Case
Ellen B. Tomlinson.

INVENTOR

Leon C. Huse
by Alex. P. Browne
attorney

UNITED STATES PATENT OFFICE.

LEON C. HUSE, OF LACONIA, NEW HAMPSHIRE, ASSIGNOR TO THE PITMAN MANUFACTURING COMPANY, OF SAME PLACE.

THICKENING-THREAD MECHANISM FOR CIRCULAR-KNITTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 495,973, dated April 25, 1893.

Application filed September 19, 1892. Serial No. 446,266. (No model.)

To all whom it may concern:

Be it known that I, LEON C. HUSE, a citizen of the United States, residing at Laconia, in the county of Belknap and State of New Hampshire, have invented certain new and useful Improvements in Thickening-Thread Mechanism for Circular-Knitting Machines, of which the following is a specification.

My invention relates to circular knitting machines provided with mechanism by which a second or independent thread may be knitted in to form a double thickness or reinforce for the fabric at those parts or places most subject to wear, as for instance at the knees of stockings.

My present improvement relates particularly to a circular knitting machine provided with thread guides and a cam disk substantially as shown in Letters Patent No. 239,168 to Warren D. Huse, dated March 22, 1881, and with a pair of pivoted levers thrown into and out of operative position by means of a third lever worked by a projection upon a pattern chain as shown in Letters Patent No. 455,018, granted to me June 30, 1891.

My present improvement consists in a modification of the cam disk above mentioned, whereby in connection with additional mechanism to be hereinafter described it is made to operate with greater certainty than heretofore.

In the accompanying drawings Figure 1 is a top view or plan of the machine; Fig. 2 a detail view in elevation of the cam and its operating devices in which my improvement is embodied, and Fig. 3 is an enlarged perspective view of the cam itself.

The two thread guides A, B, are constructed substantially as described in the Warren Huse patent, No. 239,168, with the exception that as the machine is designed for reinforcing, only one of these guides B is adapted to be moved into and out of working position, this being the guide which controls the reinforcing thread. The other guide A which controls the regular knitting thread is always in position.

The cam C for controlling the in and out

positions of the reinforcing thread guide differs from that shown in either of the patents before mentioned, in that instead of having all of its teeth or operating projections in the same line, they are set alternately in different lines as shown at *c c'*, Figs. 2 and 3.

When reinforcing is to be done, as the wheel C moves round with the cam ring, a projection *c* upon it strikes the pin *d* upon the lever D which has been moved into place by the pattern mechanism, and the cam wheel C is thereby given a partial turn, sufficient to throw the reinforcing thread into operation. The further revolution of the cylinder brings the next projection *c'*, not against the pin *d'* on the lever D', as in my former patent, but against a post *d²* fixed in the bed of the machine, and the cam wheel by contact with this post is again turned sufficiently to throw the reinforcing thread out of operation. This post *d²* being immovable, it will obviously be entirely certain in its action, which I believe to be an improved construction as compared with that in which the pin mounted upon the movable lever is employed, where there is a possibility of derangement, and consequently of a failure to stop the reinforcing thread at the proper time and place in the knitting.

The nipping mechanism for catching and releasing the reinforcing thread is operated by the pins *d, d'* in a well known manner and forms no part of my present invention.

I claim—

In a knitting machine having a revolving cam ring, the combination of a cam wheel C carried thereby, and having alternately arranged projections *c, c'* for the purpose described, a fixed post *d²* in the path of the projections *c'*, and a pin *d* mounted on a lever D, and adapted to be moved into the path of the projections *c*, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 17th day of June, A. D. 1892.

LEON C. HUSE.

Witnesses:

EDGAR F. REEVES,
JOHN W. ASHMAN.