

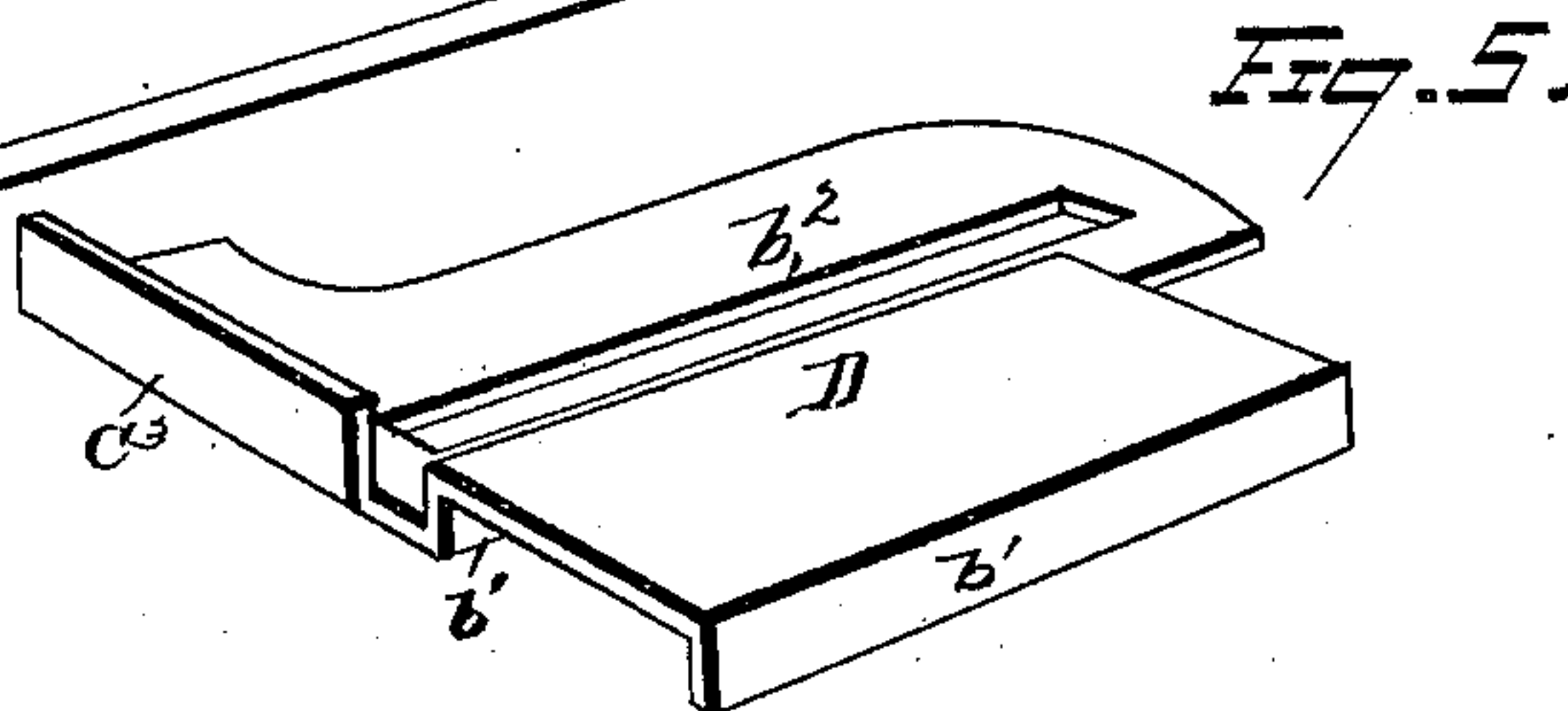
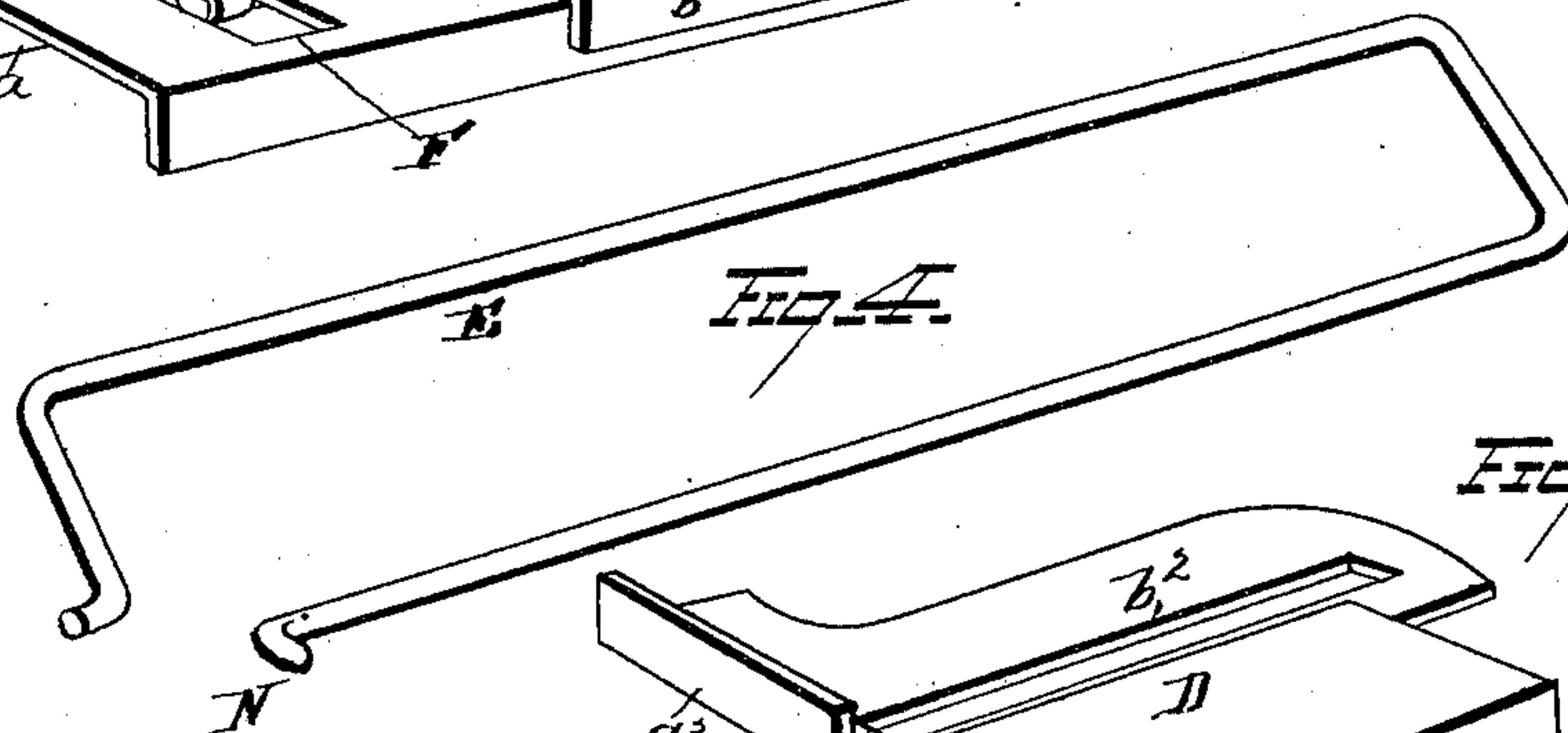
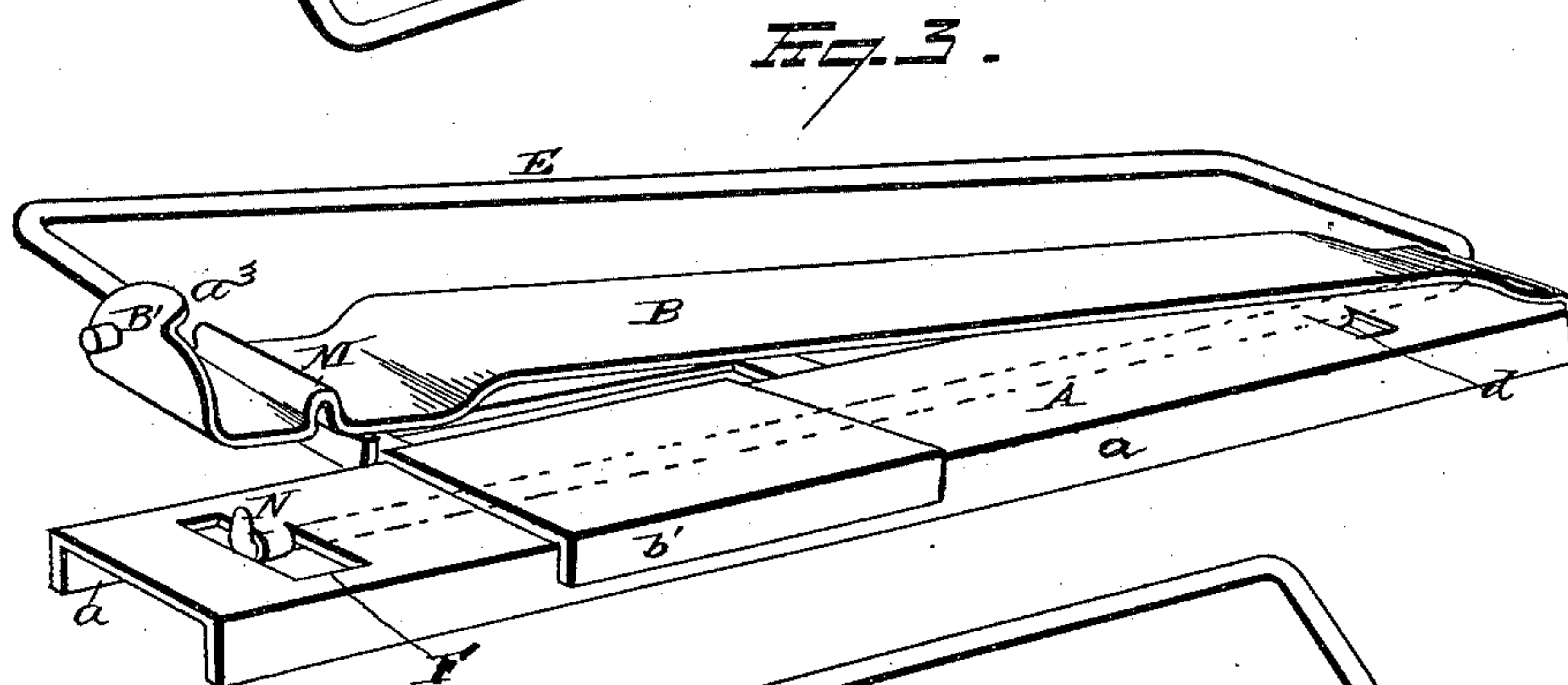
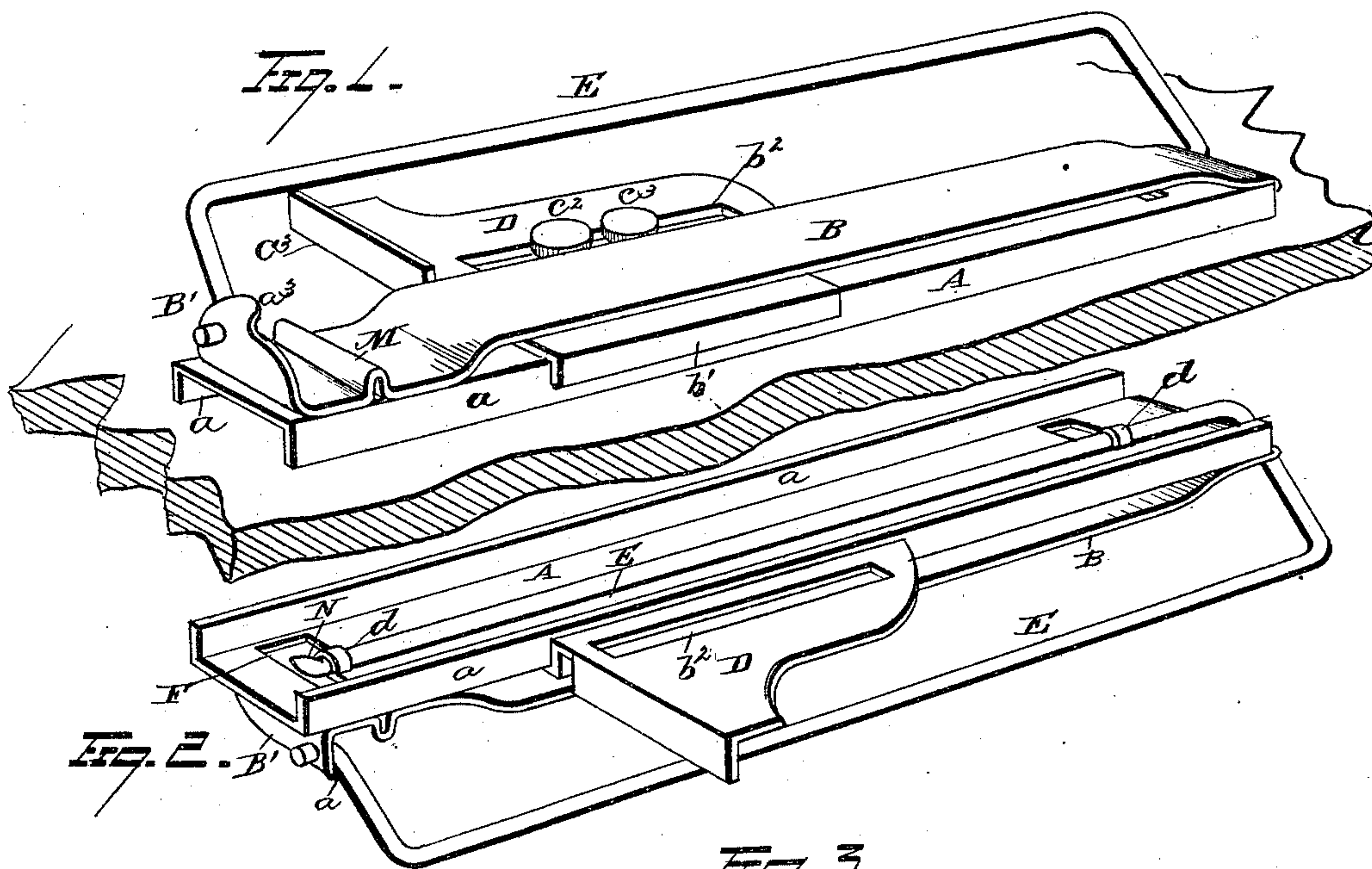
(No Model.)

H. W. COMSTOCK.

Tuck Creaser for Sewing Machines.

No. 232,175.

Patented Sept. 14, 1880.



WITNESSES
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UNITED STATES PATENT OFFICE.

HENRY W. COMSTOCK, OF MOUNT PLEASANT, IOWA.

TUCK-CREASER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 232,175, dated September 14, 1880.

Application filed June 22, 1880. (No model.)

To all whom it may concern :

Be it known that I, HENRY W. COMSTOCK, of Mount Pleasant, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in Tuck-Creasers for Sewing-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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in tuck-creasers, and is designed to provide a device of this character to be used as an auxiliary attachment for sewing-machines, which shall be simple and efficient in operation, readily adjusted, adapted to a wide range of work, and capable of being supplied to the trade at a comparatively light cost.

With these objects in view my invention consists of a metallic frame adapted to be secured to the table of a sewing-machine, and a torsion-spring, which is the medium through which motive power is communicated from the machine, and which serves the twofold purpose of creasing the cloth and feeding it onward.

In the accompanying drawings, Figure 1 is a view, in perspective, of my tuck-creaser as attached in operative position on the table of a sewing-machine. Fig. 2 is a perspective view of the under side of the tuck-creaser. Fig. 3 is a view showing the creasing-plate uplifted and the torsion-spring depressed to raise the creasing-point. Fig. 4 is a detail view of the spring, and Fig. 5 is a similar view of the clamp.

In the accompanying drawings, A represents the frame of the tuck-creaser, which is formed of metal and provided with two flanges, *a*, which support it above the machine-table.

The upper part or creasing-plate, B, of the frame is preferably formed by turning a continuation of the frame over upon the same; or it may be made of a separate piece and riveted thereto. This creasing-plate is provided with a vertical fold, M, into which the fabric is pressed by the creasing-point N.

At the extreme end of the creasing-plate B

a flange or arm, B', is formed, in which the upper end of the torsion-spring E is pivotally secured.

The frame A is fastened to the table of a sewing-machine by the clamp D, which is formed with a flanged arm, b', to clasp the frame A, and is provided with an elongated slot, b², and secured to the table by thumb-screws c² c³ inserted through said elongated slot. Said clamp, by having lateral movement in the elongated slot b², enables the operator to form tucks of any desired width in the fabric; and, further, to insure evenness in the width of the tucks, one end, C³, of the clamp is turned up at right angles with the bed-plate A', forming a guide for the fabric.

I employ two thumb-screws in clamping the creaser to the table to overcome any twisting strain exerted thereon.

When large pieces of heavy fabric are being creased it often happens that the strain is so great as to throw the creaser from position, and consequently the creasing will not be even and perfect. This difficulty is entirely obviated, and with little extra expense and complication, by the employment of two screws where only one has been ordinarily used.

The wide range of adjustment of which the creaser is capable gives an opportunity of creasing fabric for very deep as well as for very fine tucking.

A novel and salient feature of my invention is the torsion-spring E, one end of which is pivotally secured to the flange or arm B', the upper portion, a³, of which is bent over to prevent the torsional force of the spring from throwing it over beyond the reach of the needle-bar, by the reciprocatory movement of which it is actuated. The spring is secured on the under side of the frame A by stamping up a portion of the upper face thereof, as at d, and turning the portion so stamped over and clamping it upon the wire spring, thus retaining it in position and yet allowing it free pivotal motion therein.

I have mentioned one way in which the spring may be secured to the frame, but I do not limit myself to it, as the spring may be fastened to the frame in several ways with equally good results.

At F an elongated slot is formed, through

which the curved and pointed end N of the torsion-spring E projects and pushes the fabric to be creased up into the vertical fold M, formed in the creasing-plate B at a point 5 thereon which registers with the creasing-point. The vertical fold M forms a groove on the under side of the creasing-plate, into which the fabric is pressed by the point N of the torsion-spring, and enables said point to 10 mark the fabric and also feed it forward.

It will be observed that the two ends of the spring are pivotally secured nearly opposite each other, but in different planes. The result of this arrangement is that when the 15 spring is depressed it will twist slightly and create a torsional reaction, which will throw it into position for the next stroke of the needle-bar.

The peculiar advantages of this form of 20 spring are many in number. Among them may be mentioned—

First, by securing the spring at both ends it is always retained in the same position and always in readiness to receive the stroke of the 25 needle-bar, whereas when one end of the spring is free it is liable to be caught and bent by the fabric and thrown from under the needle-bar.

Secondly, the spring is always carried down 30 the same distance whether the creaser be set for a deep or narrow tuck, and consequently the point N always acts with the same effect. In many forms of tuck-creasers the leverage obtained is much less when wide tucks are being creased, because the spring has a shorter 35 stroke, and the creases will be fainter as the consequence.

Thirdly, by setting the wire on the frame in such a manner as to constitute a torsional 40 spring the number of parts is diminished and the use of all auxiliary springs is done away with.

Fourthly, the creasing-point N, aside from its creasing or marking function, aids in feeding 45 the fabric onward, giving to it thereby a more even and uniform crease than when it is left to the operator to pull the fabric through the creaser.

The operation of my tuck-creasing device is 50 as follows: The creaser is first placed in such position on the machine-table that the spring will be depressed at every stroke of the needle-bar, and the clamp, after being adjusted according as the creases are to be for wide or narrow 55 tucks, is screwed to the table. The fabric is now passed between the frame A and the creasing-plate B and its edge adjusted to come in contact with the arm or flange C³ throughout its length, which adjustment must be preserved 60 to insure parallelism between the creases. The

machine being set in motion, the fabric is drawn in, creased, and passed out from the creaser with but little assistance on the part of the operator.

It will be noted that a continuous crease is 65 the result of my invention.

It is obvious that creasing is more satisfactory than pinching, as it does not pucker or pull fine thin fabrics, as do often that class of 70 tuck-markers which pinch the cloth instead of creasing it.

If desired, the action of the spring may be reversed and the creasing-point be arranged to force the fabric into a fold or slot beneath.

I would have it understood that I do not limit 75 myself to the exact construction shown and described, but hold myself at liberty to make such changes and alterations as come within the spirit and scope of my invention.

Having fully described my invention, what 80 I claim as new, and desire to secure by Letters Patent, is—

1. In a tuck-creaser, the combination, with a supporting-frame and a clamp for securing the supporting-frame to a sewing-machine table, of a return-bend torsion-spring having a 85 creasing-point formed on one end thereof, said spring being connected to the supporting-frame and the creasing-point being adapted to have an oscillating movement imparted to it in one 90 direction by the action of the needle-bar and in an opposite direction by torsional power of the springs, substantially as set forth.

2. In a tuck-creaser, the combination, with a supporting-frame, of a torsion-spring pivotally secured at both ends thereto, and terminating at one end in a creasing-point, substantially as set forth. 95

3. In a tuck-creaser, the combination, with a frame, of a return-bend torsion-spring the 100 two ends of which are pivotally secured in different planes to give a torsional action to the spring, one end of said spring being furnished with a creasing-point, substantially as set forth. 105

4. In a tuck-creaser, the combination, with a frame or plate having a transverse slot formed in one end thereof, and a torsional spring provided with a creasing-point which projects through said slot, of a creaser-plate having a 110 transverse groove formed on its under side and at a point thereon to register with the creasing-point, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of 115 June, 1880.

HENRY W. COMSTOCK.

Witnesses:

W. F. DAUGHERTY,
RICHARD NOBLE.