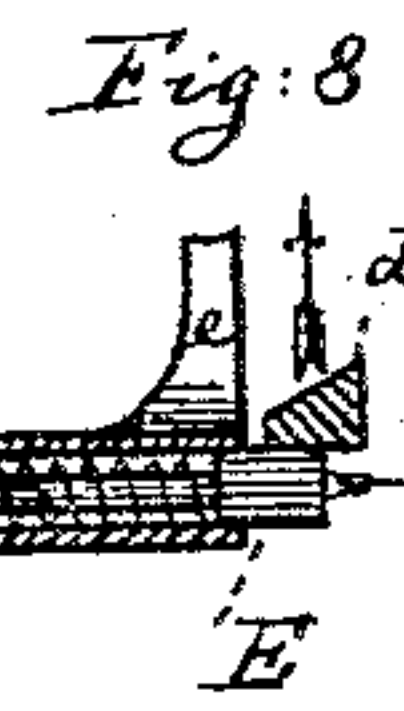
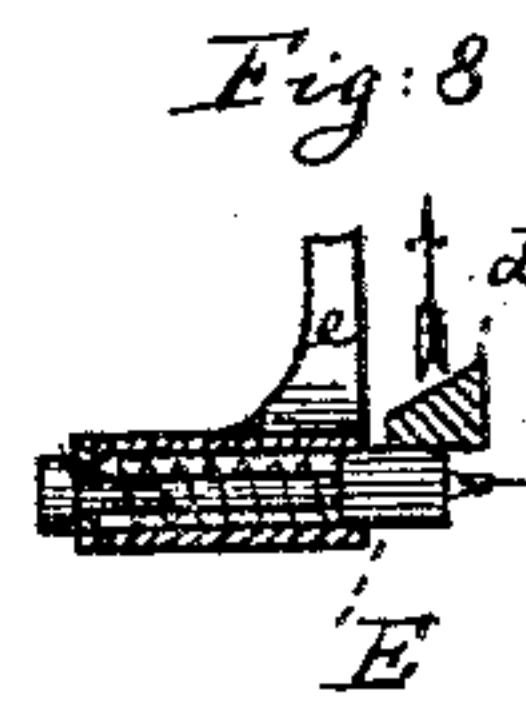
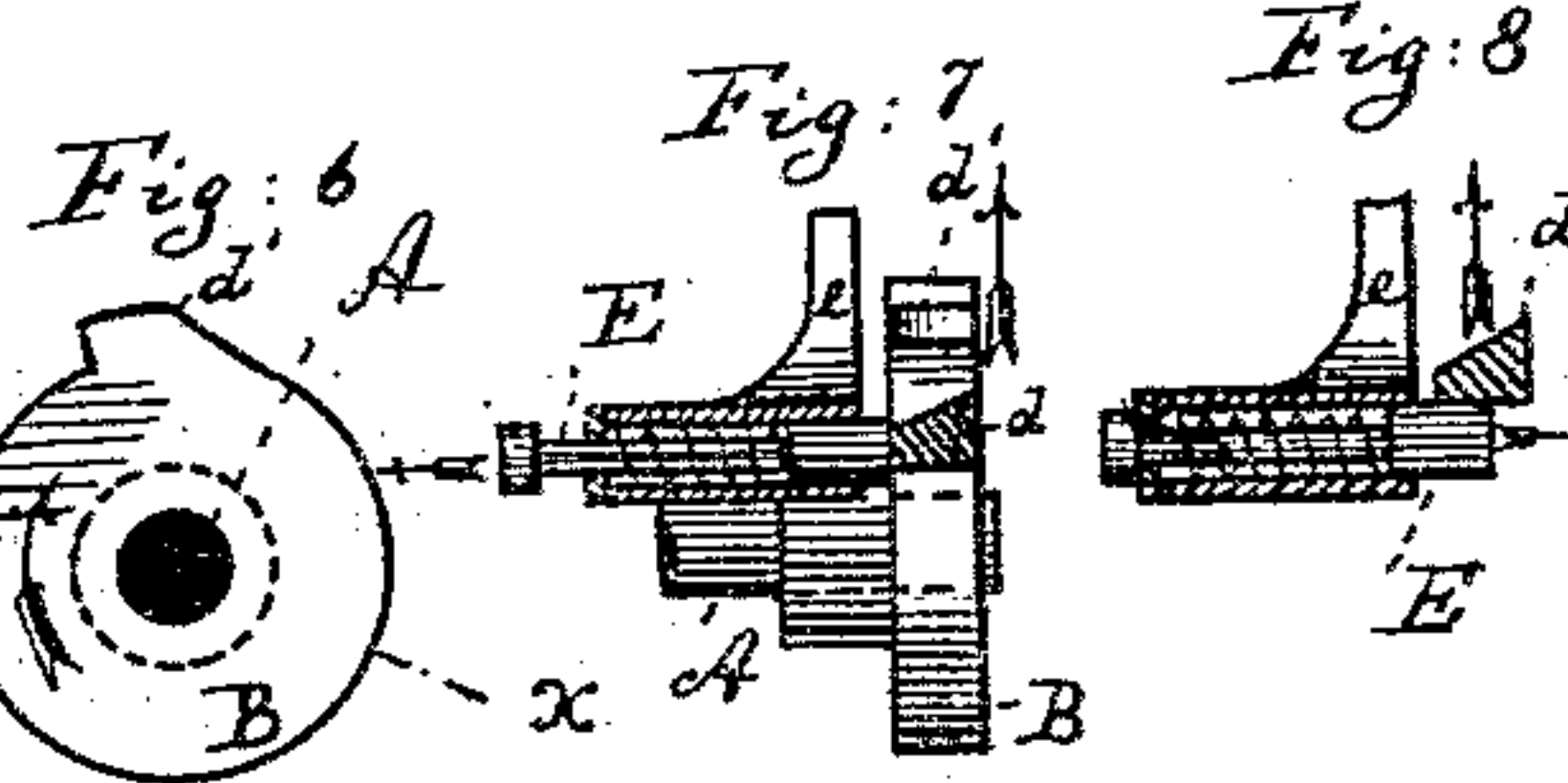
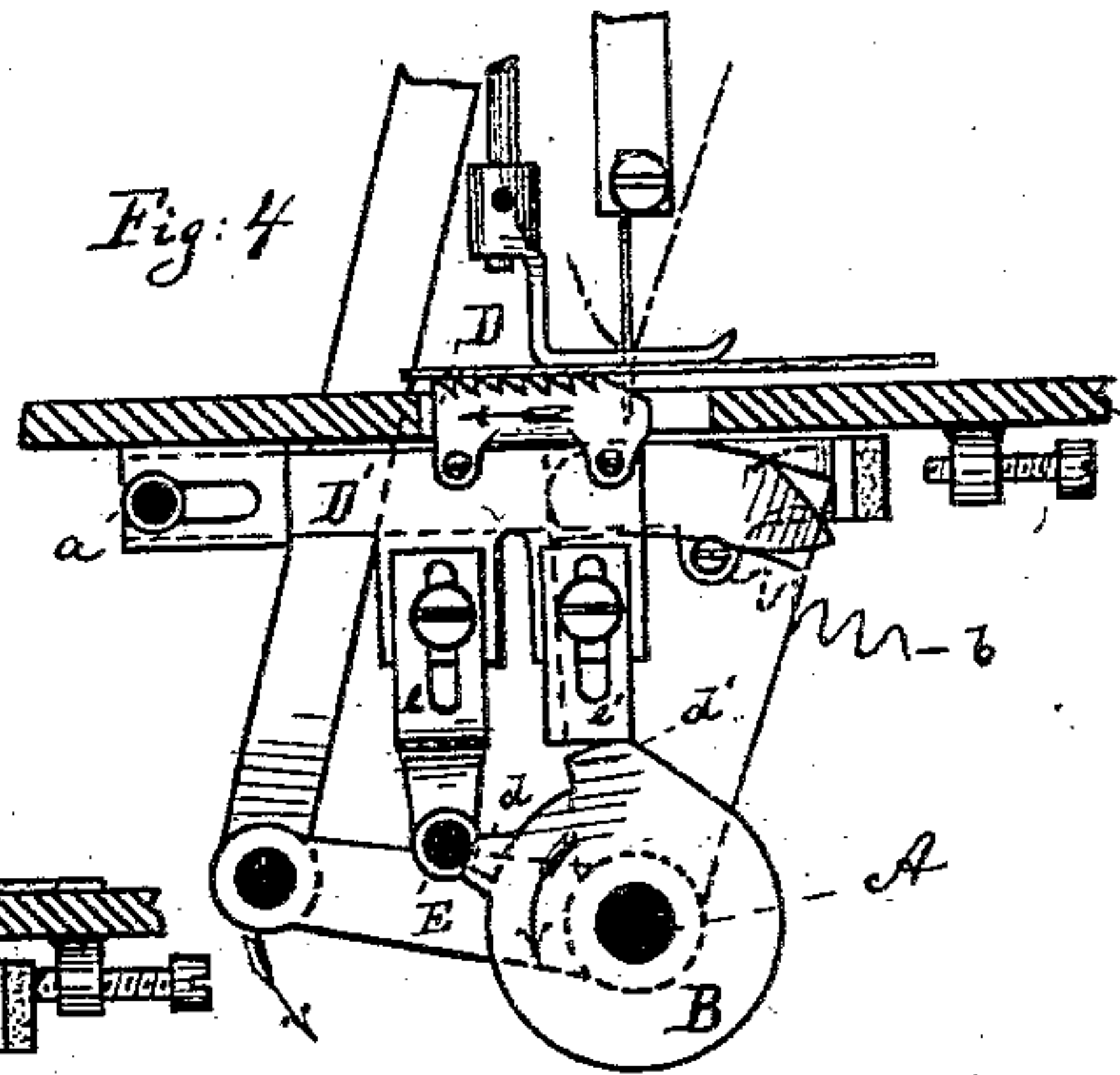
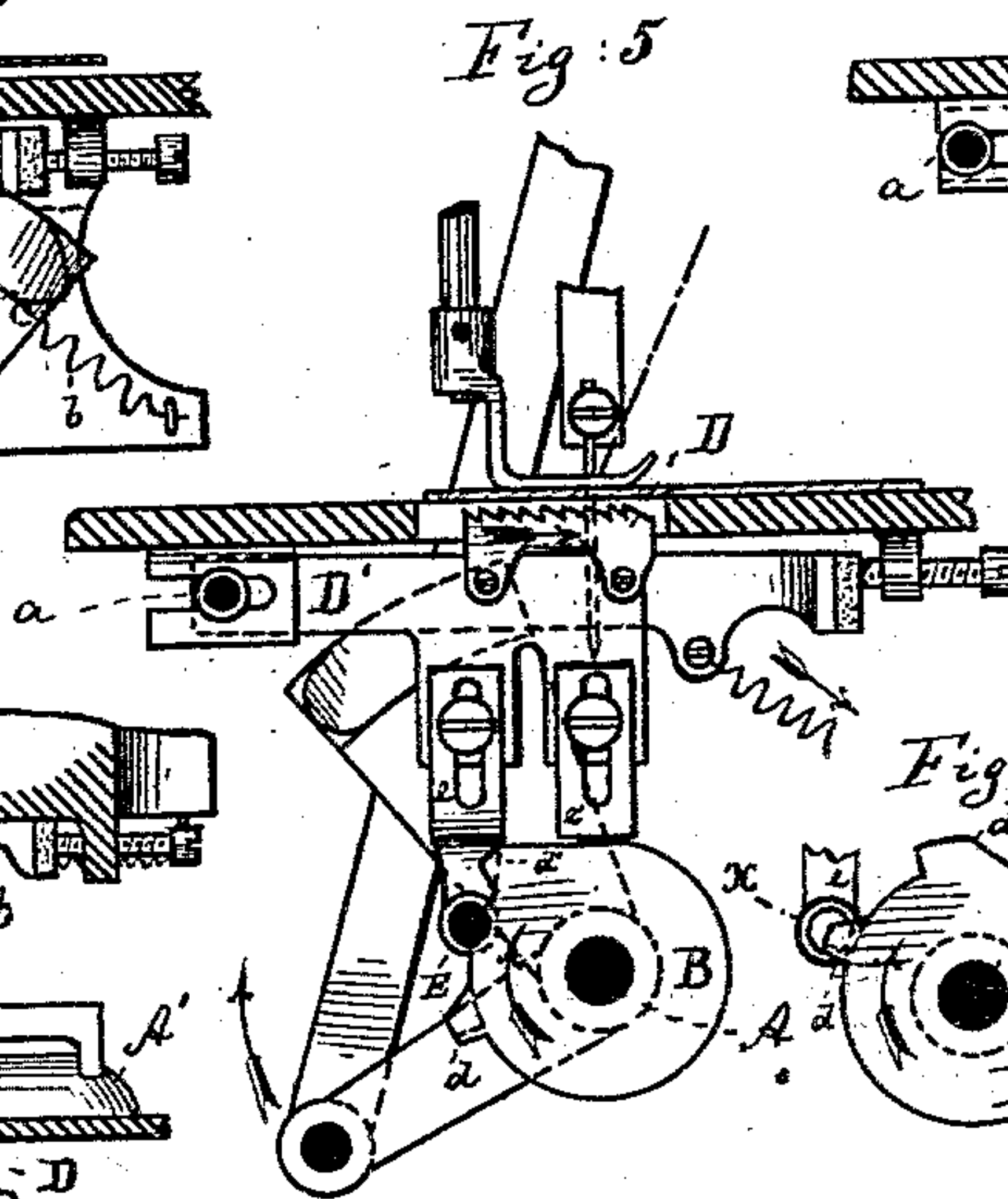
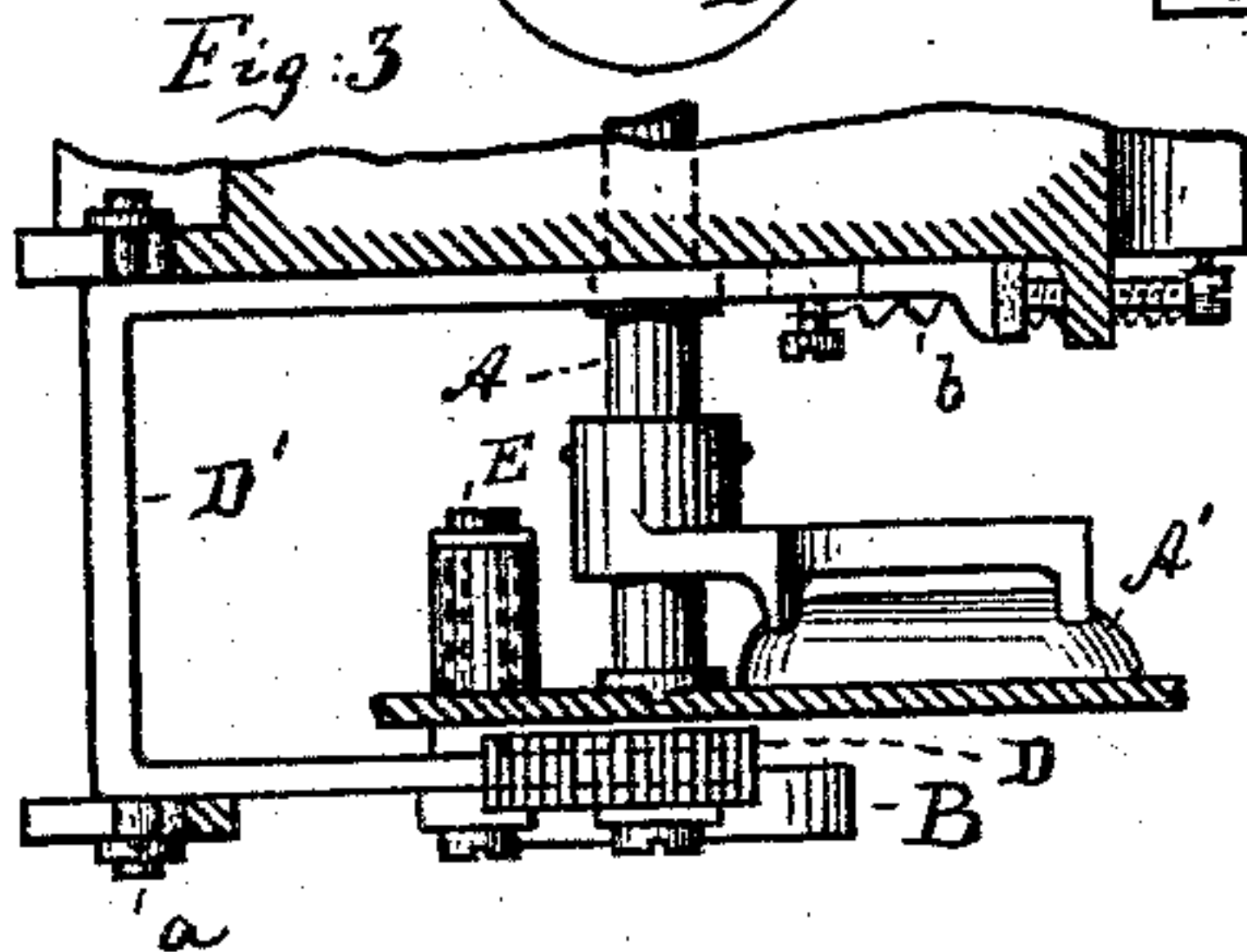
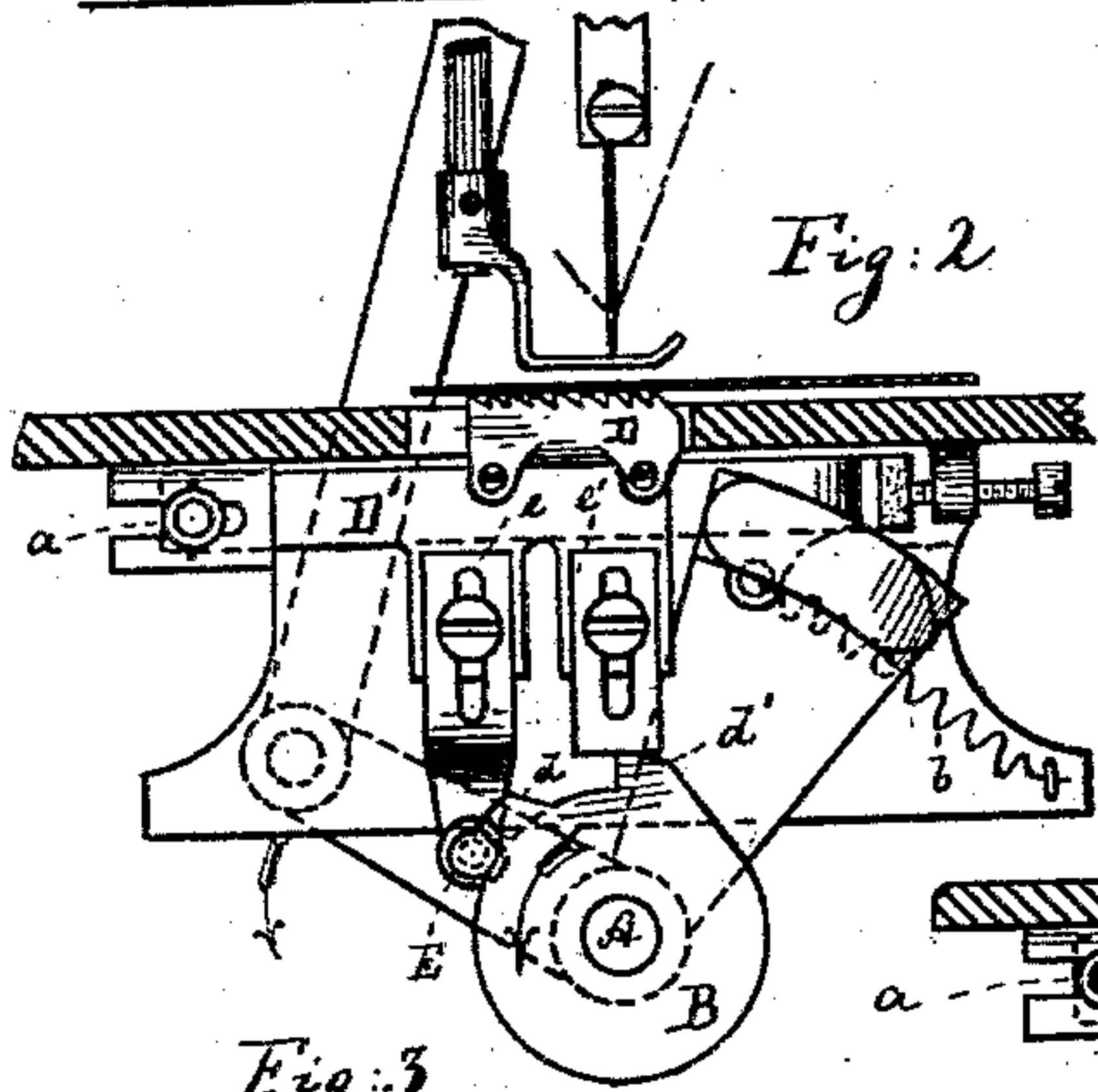
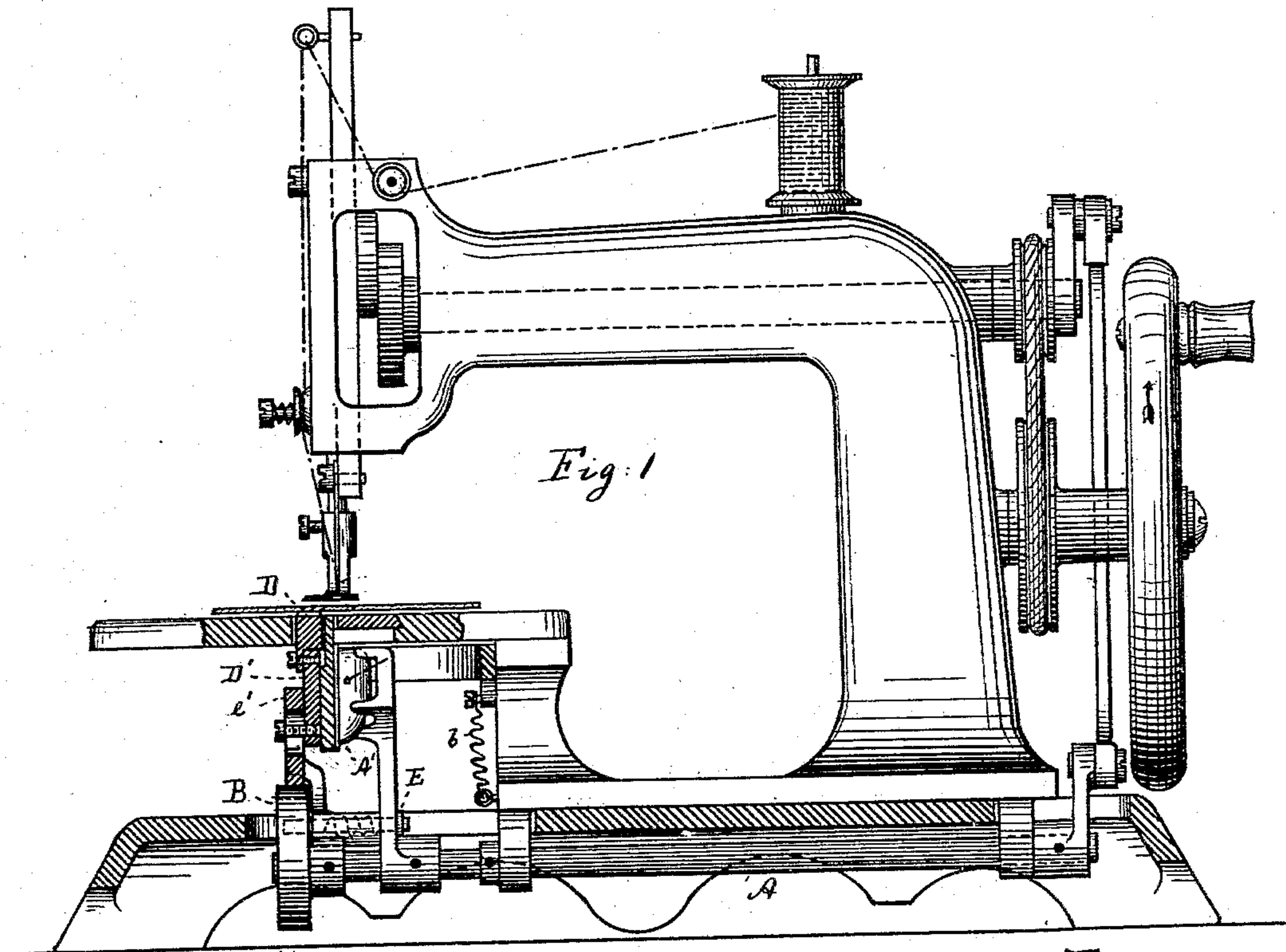


(No Model.)

L. GUNDELACH.
FEEDING DEVICE FOR SEWING MACHINES.

No. 401,271.

Patented Apr. 9, 1889.



Witnesses:

Alfred Jonghmann
Walter C. Morris

Inventor:

L. Gundelach
by his attorneys
Roeder & Priesen

UNITED STATES PATENT OFFICE.

LUDWIG GUNDELACH, OF LEIPSIC, SAXONY, GERMANY.

FEEDING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 401,271, dated April 9, 1889.

Application filed May 31, 1888. Serial No. 275,590. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG GUNDELACH, of Leipsic, in the Kingdom of Saxony, Germany, have invented a new and useful Improvement in Cloth-Feed for Sewing-Machines, of which the following is a specification.

This invention relates to a cloth-feed for sewing-machines so constructed that vertical and lateral motion is imparted to the feed-plate directly from a cam on the shuttle-operating rock-shaft.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a sectional front view of a sewing-machine provided with my improvement. Fig. 2 is a view of the feeding mechanism, showing the feed-dog raised. Fig. 3 is a top view of the feed. Fig. 4 is a sectional front view of the feed, showing the nose of the operating-cam in engagement with the pin that reciprocates the feed. Fig. 5 is a similar view to Fig. 4, but showing said nose out of engagement. Fig. 6 is a detail face view of cam and pin, showing the position of the parts when the nose of the cam presses the pin inward. Fig. 7 is a section on line *x x*, Fig. 6; and Fig. 8 is a section similar to Fig. 7, but showing the parts in a different position.

The letter A represents the rock-shaft of a sewing-machine operating-shuttle, A'. Upon the shaft A there is mounted a cam, B, having a pair of noses, *d' d'*. The nose *d'*, on the oscillation of the cam B, raises the frame D' of the feed-plate D by means of projection *e'*, such plate being free to vibrate around pivot *a*. The frame D' moves downward by its own gravity after the nose *d'* has acted upon the projection *e'*. Thus it will be seen that the nose *d'* serves to move the feed-plate in a

vertical direction; but aside from this vertical motion reciprocating motion must also be imparted to the feed. To accomplish this effect the nose *d* is beveled at one face, as shown in Figs. 7 and 8, and this beveled face acts against a spring-pin, E, projecting forward from a projection, *e*, of the frame D'. On the motion of the cam to the right the inclined face of the nose *d* causes the pin E to be pressed inside, Fig. 7, and thus the nose can pass over the pin without moving frame D'. As soon as the nose has cleared the pin the latter will spring outward, Fig. 8. On the next motion of cam B to the left the nose *d* will take hold of the pin and carry the frame D' and feed D with it against the action of a spring, *b*, Fig. 4. After having carried the feed to a sufficient distance the nose *d* will slip underneath the pin E and pass into a position to the left of the pin, Fig. 2. The spring *b* will now draw the feed back into its original position, Fig. 5. Thus the parts are again in the proper position for the next movement of the cam toward the right. It will be seen that in this way the feed receives both vertical and lateral motion.

What I claim is—

The combination of feed-plate D and pivoted frame D', that supports said plate and has projections *e'*, with movable spring-pin E and with an oscillating cam, B, having two noses, *d d'*, the nose *d* being beveled and adapted to engage pin E, while the nose *d'* is adapted to engage projection *e'*, and with the spring *b*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LUDWIG GUNDELACH.

Witnesses:

EDMUND BACH,
MAX MATTHÄI.