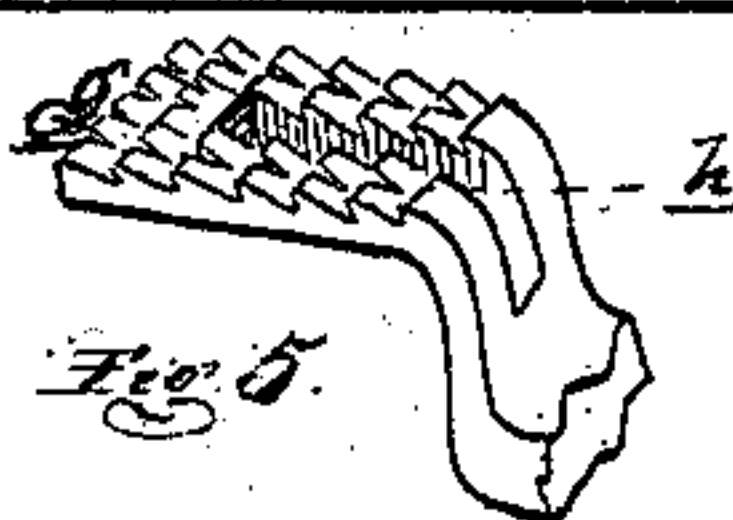
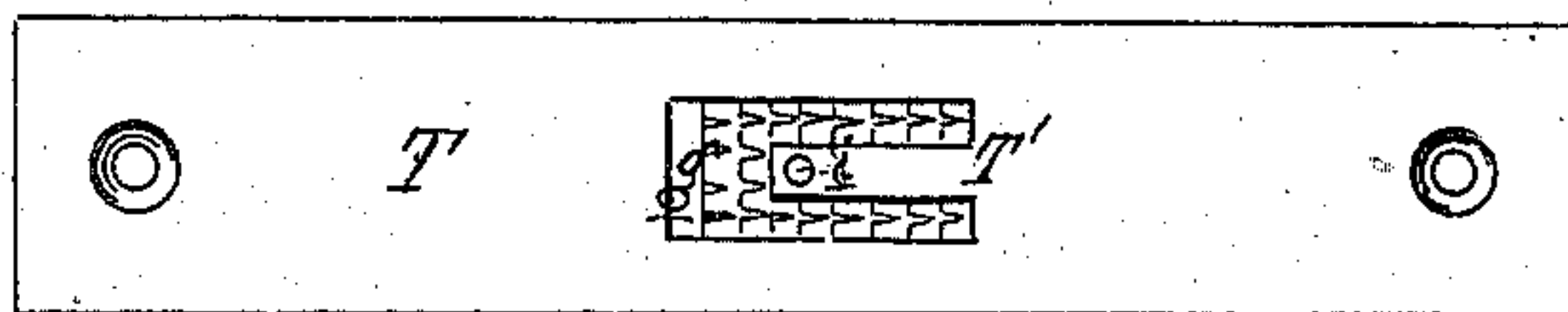
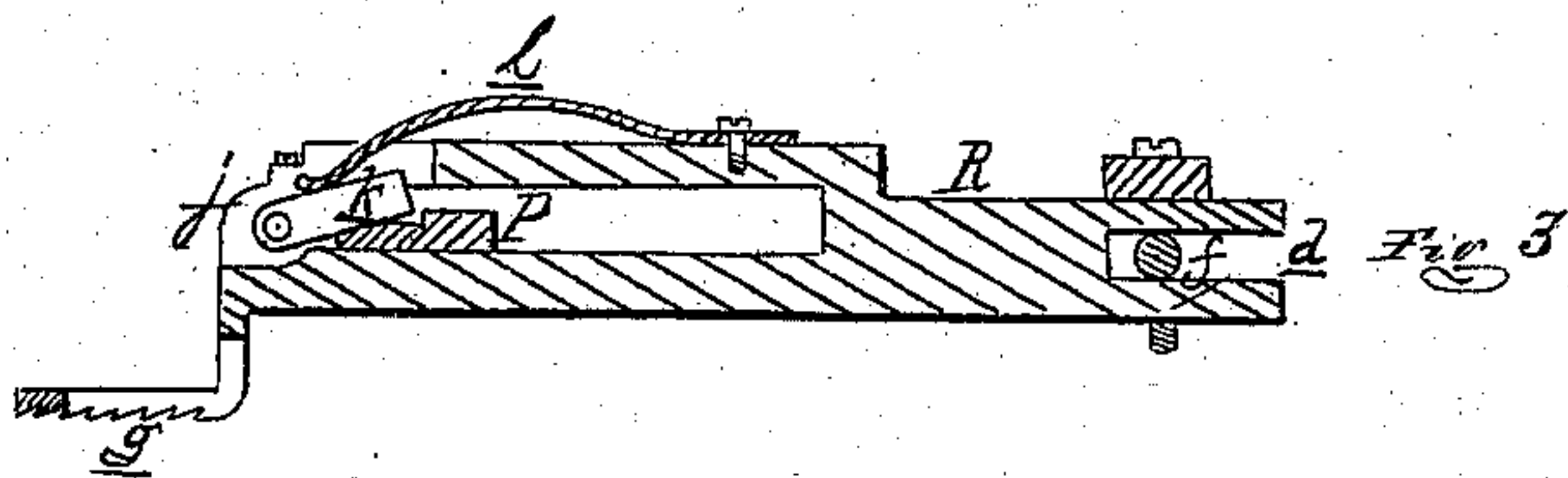
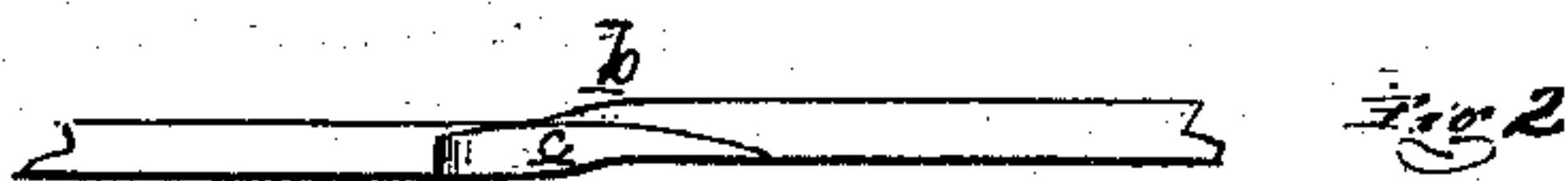
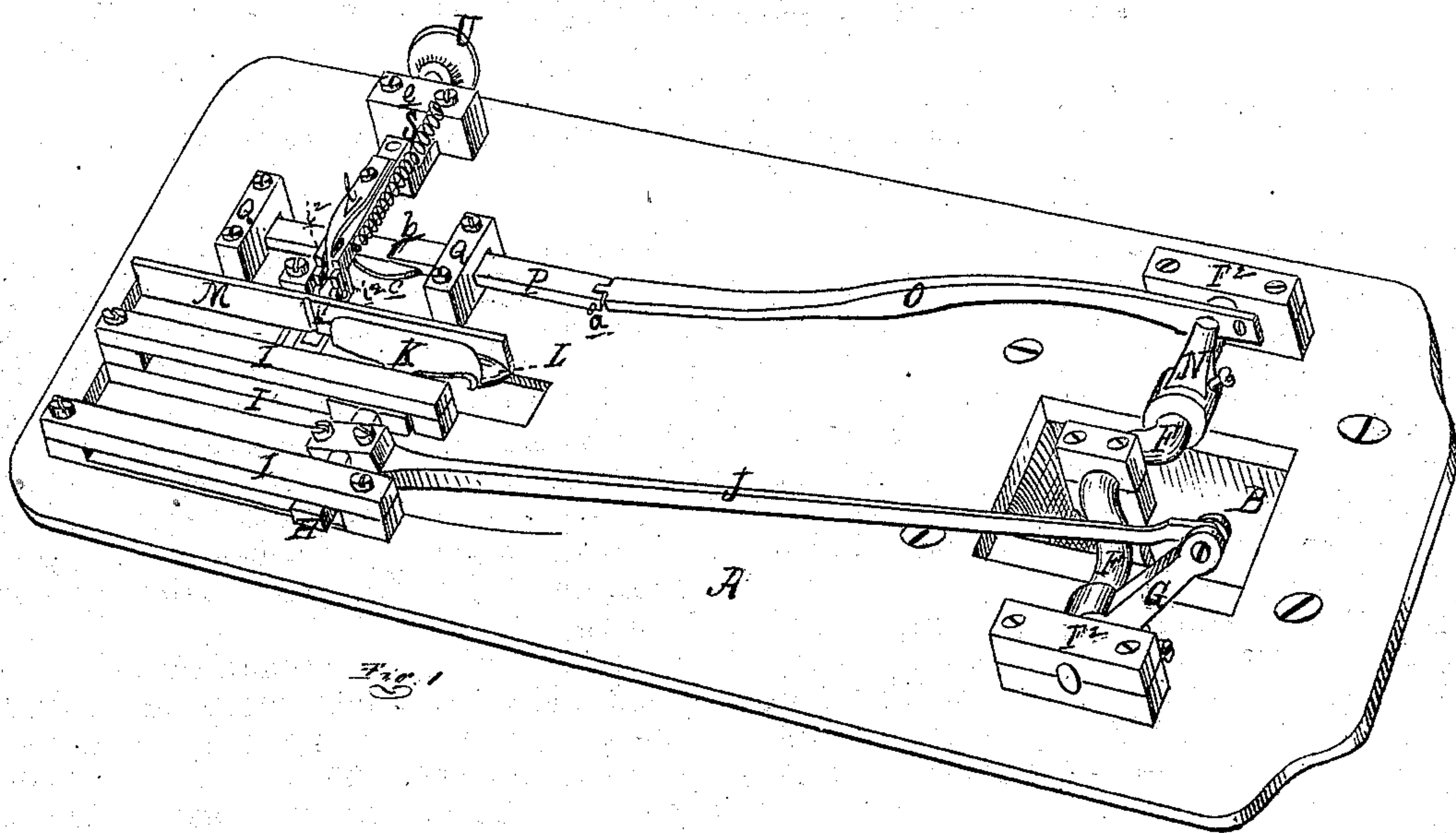


J. V. D. ELDREDGE.

Sewing-Machines.

No. 136,823.

Patented March 18, 1873.



ATTEST:
Myron H. Church
Wm. J. Sprague

Fig. 4
INVENTOR:
J. V. D. Eldredge
Per Atty
Wm. J. Sprague

UNITED STATES PATENT OFFICE.

JOHN V. D. ELDREDGE, OF DETROIT, MICHIGAN.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **136,823**, dated March 18, 1873.

To all whom it may concern:

Be it known that I, JOHN V. D. ELDREDGE, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Sewing-Machines; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification.

This invention relates to the feeding mechanism of a sewing-machine; and consists, mainly, in the combination of a spring-latch with a feed-actuating bar of peculiar construction, as will be fully described hereinafter.

In the drawing, Figure 1 represents a perspective view of the lower side of a sewing-machine having my improvement applied thereto. Fig. 2 represents a side elevation of a portion of the feed-actuating bar. Fig. 3 is a sectional elevation of the feed-piece. Fig. 4 is a plan view of the needle-plate; and Fig. 5 is a perspective view of the upper end of the feed-piece.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

A represents the plate of the machine, and F a rock-shaft, actuated in any suitable manner, which gives motion, by means of the arm N, to the rod o, attached by a loose joint to the feed-actuating bar P, which is adapted to move longitudinally in guides Q, as shown in Fig. 1. This bar P is peculiarly constructed, being bent at b, as shown in Figs. 1 and 3, to cause one part to project beyond the line of the other, and being also provided upon one side with a peculiarly-shaped cam, c, which has its edge formed in a curved line, as shown in Fig. 1, and is also constructed of wedge-like form, its upper and lower face lines converging to a point at the one end, as shown in Fig. 3. R represents the feed-piece, provided at one end with a transverse slot, in which moves the feed-actuating bar P; and at the other with a slot, d, in which rests a pivot-pin, f, upon which the feed-piece vibrates in its upward and downward movements.

This feed-piece moves longitudinally in the guide-box e, by means of which it is held from displacement; and is further provided with a latch, k, upon which rests the free end of the spring l; and also with the usual denticulated portion g, which extends upward through an opening in the plate, as shown in Figs. 4 and 5. S represents a spiral spring, one end of which is attached to the feed-piece R, and the other to the stationary block e, as shown.

By means of the mechanism described the feed-piece R receives, when the machine is operated, the four motions common to other feed devices. This result is accomplished as follows: As the feed-actuating bar P moves backward in the operation of the machine its highest portion b comes in contact with the upper surface of the slot of the feed-piece R, and, consequently, elevates the front end of the latter. The first part of the forward movement of the feed-actuating bar then causes the flat end of its cam to engage with the end of the latch k attached to the feed-piece, by which means the latter is carried forward against the force of the spring S. The latter part of the movement of the feed-actuating bar causes its lower portion to come in contact with the lower surface of the slot, by which means the front end of the feed-piece is drawn downward; and at this time, also, the cam c having passed the latch k, the feed-piece is left free to move backward through the action of the spring S.

For the purpose of preventing the feed-actuating bar from actuating the latch k in its forward movement, and thus causing the feed to move forward at the wrong time, the cam c is made of wedge-shape, so that its point passes behind the latch and elevates it, as shown in Fig. 4, without affecting the longitudinal position of the feed-piece.

The described construction gives the desired movement of the feed in harmony with the other movements of the machine.

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

1. The combination of the feed-piece R

having the spring-latch *k*, with the feed-actuating bar *P* having the wedge-shaped cam *e*, as described.

2. The slotted feed-piece, provided with the denticulated part *g*, latch *k*, and spring *l*, working in guides *e*, vibrating therein on the pin *f*, and reciprocated by the feed-actu-

ating bar *P*, substantially in the manner described.

JOHN V. D. ELDREDGE.

Witnesses:

H. F. EBERTS,

MYRON H. CHURCH.