(No Model.)

E. T. THOMAS.

FEEDING MECHANISM FOR SEWING MACHINES.

No. 245,581. Patented Aug. 9, 1881.

Fig: 1.

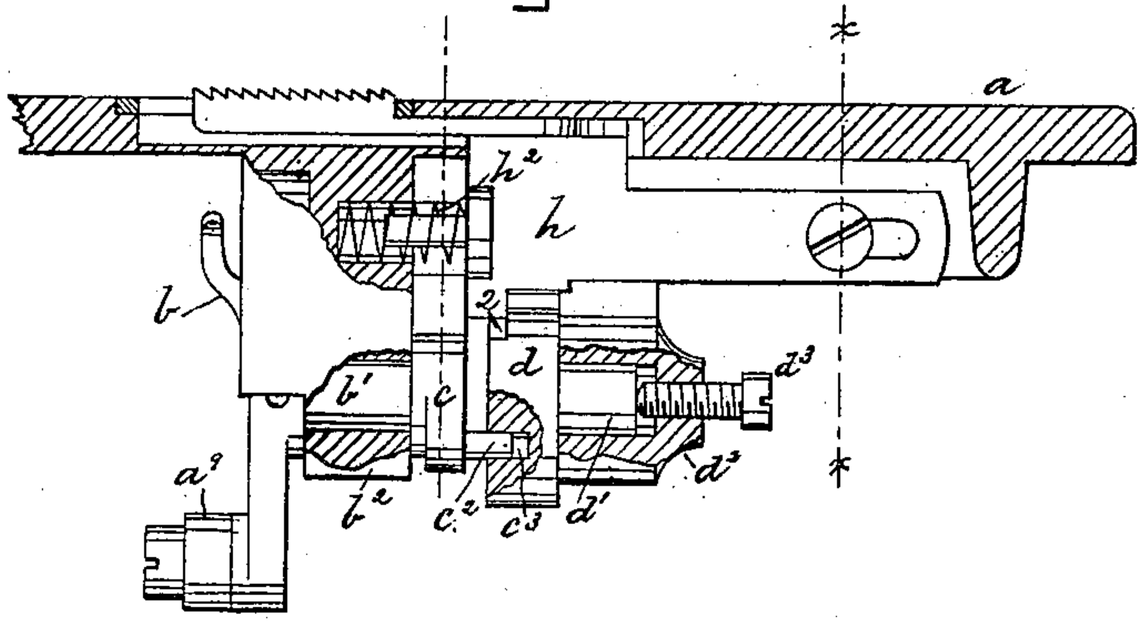


Fig: 2.

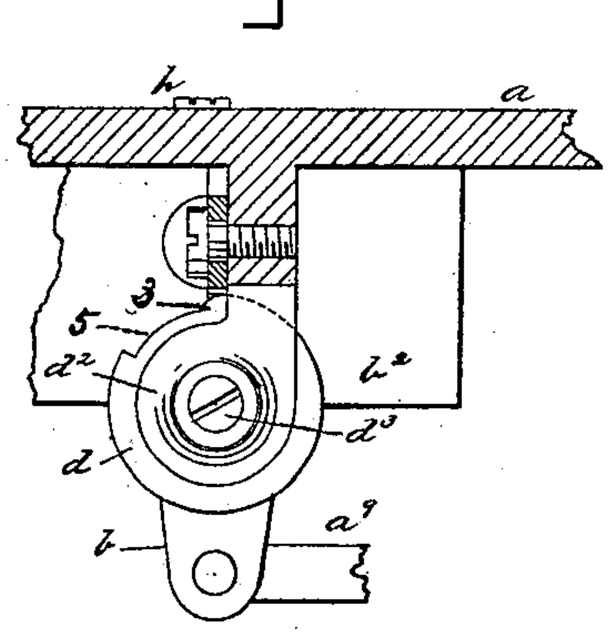


Fig: 3.

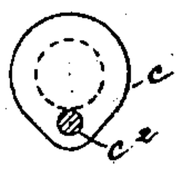


Fig: 4.

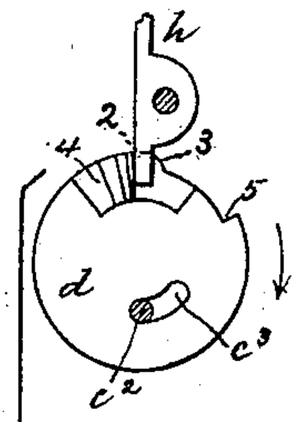


Fig: 5.

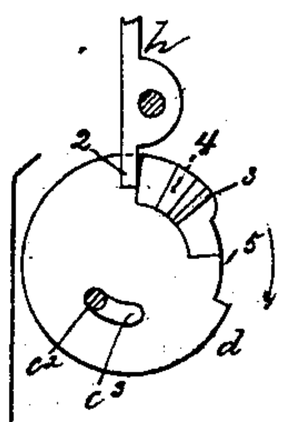


Fig: 6.

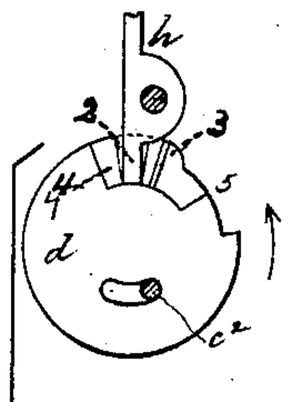


Fig: 7.

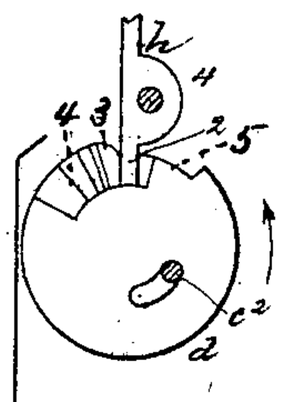
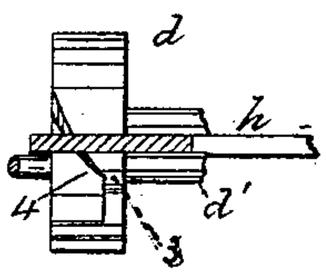
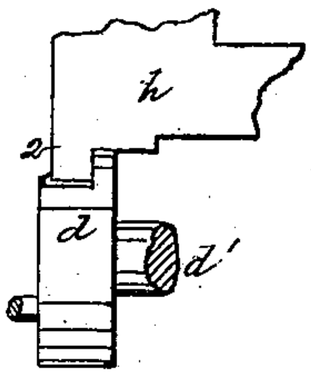
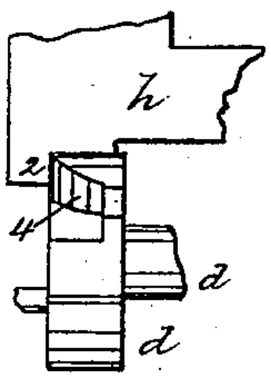
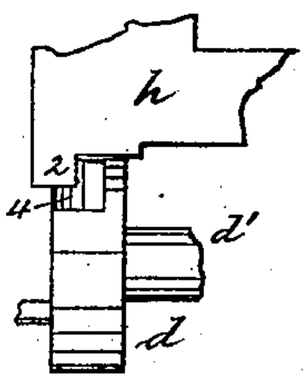


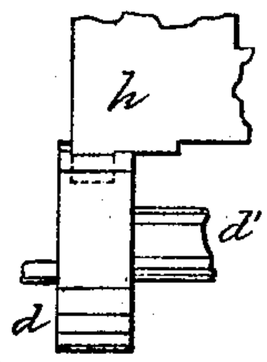
Fig: 8.











Witnesses.

L. F. Connor

Arthur Reynolds

Inventor.

Eddy T. Thomas

by Crosby & Gregory Attys

UNITED STATES PATENT OFFICE.

EDDY T. THOMAS, OF NEW YORK, N. Y., ASSIGNOR TO THE GOLD MEDAL SEWING MACHINE COMPANY, OF ORANGE, MASSACHUSETTS.

FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 245,581, dated August 9, 1881.

Application filed November 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, EDDY T. THOMAS, of the city, county, and State of New York, have invented an Improved Feeding Mechanism for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention in sewing-machines relates, chiefly, to mechanism for operating the feed-bar from a rocking shaft, the rocking shaft herein shown being one located at the center of motion of the vibrating shuttle-carrier and deriving its movement from the said shuttle-carrier.

This application is an improvement on another application, No. 20,837, filed by me for United States Patent on the 19th day of November, 1880, to which reference may be had. That application shows a vibrating shuttle-carrier adapted to move in the arc of a vertical circle and actuated by a connecting-rod, bell-crank lever, and link from the usual rotating needle-bar-operating shaft of the sewing-machine, so in this present invention I have deemed it unnecessary to fully show the actuating devices for the shuttle-carrier, as they will be the same as in the said application.

In this invention, instead of employing two independent feed-cams, I employ one oscillating disk or hub having cam-surfaces suitable to both raise and move the feed-bar forward, and this disk or hub is oscillated from the vibrating shuttle-carrier by a pin-and-slot connection, and an intermediate rocking shaft moved by the shuttle-carrier.

Figure 1 represents, in elevation, the shuttle-carrier, the feed-bar, and its operative cam, the parts being partially broken out to more clearly show their construction, the parts of the sewing-machine not shown in the said figure being supposed to be such as are common either in the said application or in other well-known sewing-machines. Fig. 2 is a section of Fig. 1 on the dotted line $x\,x$; Fig. 3, a detail of the crank shown in Fig. 1, between the feed-operating disk or hub and the rock-shaft moved by the shuttle-carrier. Fig. 4 shows details, in front and side elevation, of the disk or hub for moving the feed-bar. Figs. 5, 6, and 7 are details showing the same devices in different positions, and Fig. 8 is a top view of Fig. 6.

The shuttle-carrier b, deriving its vibrations from the connecting-rod a^9, as in my application hereinbefore referred to, and secured upon the rock-shaft b', held in the bearing b^2, depending from the cloth-plate a, has at its other end a crank, c, provided with a crank-pin, c^2, entered within a slot, c^3, made at one side of the feed-moving cam disk or hub d, which latter has a short stud, d', extended loosely into a bearing, d^2, where its end is acted upon by the feed-regulating screw or device d^3. The vibration of the shuttle-carrier causes the crank-pin within the slot c^3 to partially turn or rock the disk or hub d and cause a cammed part, 3, of its periphery to lift the feed-bar h at the proper time, while another cammed part, 4, of the said disk or hub, at its side face, acts on the leg 2 of and moves the feed-bar h forward. After the feed-bar has been raised and moved forward by the cammed portion 3 4 of the said disk or hub the disk is turned in the opposite direction, as in Fig. 6. The cam-surface 4, returning from against the rear side of the said leg 2 and the feed-bar, yet held up by the cam part 3, does not move backward, but is held in position by the pressure of the fabric against it; but as soon as the cam d has been turned back sufficiently far, as in Fig. 7, to permit the feed-bar h to fall, the spring h^2 acts to move the said bar backward.

Figs. 4 to 7, inclusive, show the extreme positions of the disk or hub and the movements it will impart to the feed-bar.

I claim—

The shuttle-carrier and the shaft with which it is connected, and the attached crank c, and the feed-bar h, combined with the slotted feed-moving disk or hub having the cammed surfaces 4 and 5, whereby vibration of the shuttle-carrier and its rock-shaft rocks the feed-moving disk or hub and actuates the feed-bar, substantially as described.

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

EDDY T. THOMAS.

Witnesses:
SPENCER C. DOTY,
BERNARD J. KELLY.