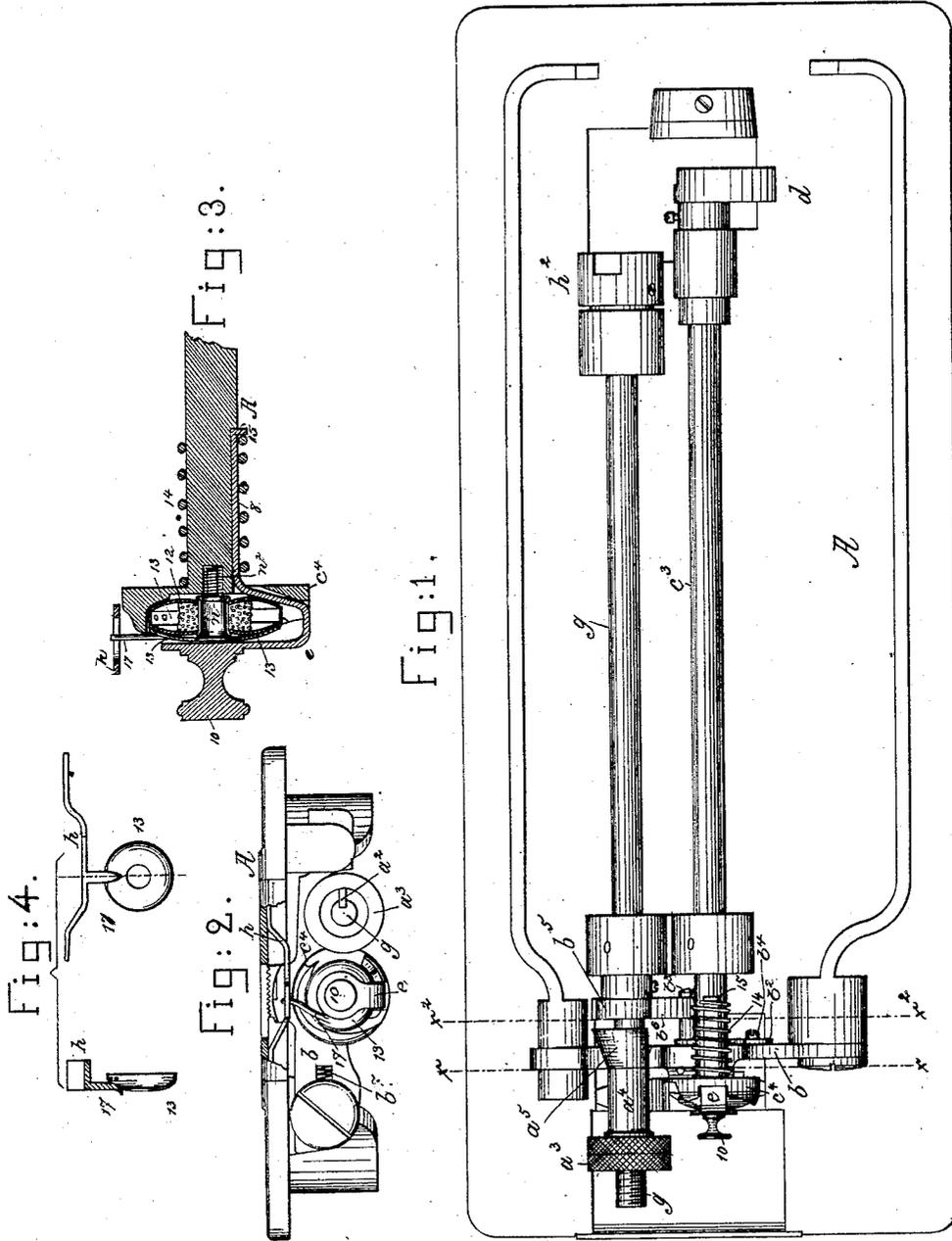


(No Model.)

E. T. THOMAS.
SEWING MACHINE.

No. 310,477.

Patented Jan. 6, 1885.



Witnesses.

Arthur Lippert.

John F. C. President

Inventor.

Eddy I. Thomas.

by Crosby & Gregory Attys

UNITED STATES PATENT OFFICE.

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

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 310,477, dated January 6, 1885.

Application filed January 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDDY T. THOMAS, of New York, county and State of New York, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object certain improvements in means for holding a disk-bobbin and bobbin-case within an oscillating hook, as will be hereinafter described.

My present improvements are shown as embodied in a machine substantially such as described in United States Letters Patent No. 276,503, granted to me April 24, 1883.

The different features and combinations in which this invention consists will be specifically set forth in the claims at the end of this specification.

Figure 1 represents an under side view of a sewing-machine containing my improvements; Fig. 2, a front or left-hand end view of Fig. 1; Fig. 3, a detail of the shaft, hook, and sliding yoke for holding the bobbin-case and bobbin in the hook, and Fig. 4 represents a modification of the bobbin-case and its holder.

The feed-bar operating shaft *g*, arm *h*², and hook-operating shaft *c*³ and its slotted arm *d* are substantially the same as shown and described in Patent No. 276,503, referred to, where the same devices are described by like letters, and herein the said shafts will be operated as in the said patent; or they may, if desired, be operated as in United States Letters Patent No. 277,084, granted to me May 8, 1883.

The feed-operating mechanism herein shown forms the subject-matter of another application, No. 128,221, filed by me. The oscillating shaft *c*², having at its end the hook *c*¹, to engage the thread of the usual eye-pointed needle, (not shown,) is grooved or splined longitudinally to receive the shank 8 of the bobbin-holding yoke or slide *e*, shaped substantially as shown, and provided preferably with a knob or finger piece, 10, to be engaged when the operator desires to pull the yoke out away from the face of the hook to remove or replace the usual disk-bobbin, 12, and the bobbin-case

13, the spiral spring 14, surrounding the shaft *c*², back of the hook *c*¹, and with its inner end resting against the lip 15 of the shank 8, acting normally to draw the yoke toward the right in Fig. 1, to hold the bobbin-case and bobbin in working position and with the bobbin pressed against the face of the hook with a yielding pressure. Tension upon the bobbin-thread will be produced by drawing the same through suitable holes or eyes in the bobbin-case 13, (see Fig. 3,) the latter being restrained from oscillating with the hook by means of a suitable bobbin-holder composed, as shown in Figs. 2 and 3, of a finger, 17, extended from the said bobbin-case into a slot in a plate, *h*, supported by the bed-plate and extended across above the hook, as shown in the said Fig. 7.

As a modification, the plate *h* may have a projecting finger, 17, (see Fig. 4,) to enter a slot in the bobbin-case. The hook *c*¹ is shown as notched (see Figs. 1 and 2) to receive the rear portion of the yoke *e*. Restraining the bobbin-case from oscillating to the same extent as the hook or holding the said case substantially stationary enables the tension to be maintained more evenly on the bobbin or under thread. The outer end of the shaft *c*² or the central part of the hook *c*¹ (see Fig. 3) is provided with a spring-actuated center or pad, *n*, the spring being marked *n*².

I do not desire to limit my invention to the exact plan described for producing tension on the bobbin-thread.

I claim—

1. The oscillating shaft *c*², its attached hook *c*¹, and the disk-bobbin and bobbin-case, combined with a longitudinally-movable spring-held sliding yoke carried by the said shaft and oscillating with it, substantially as described.

2. The oscillating shaft *c*², its attached hook *c*¹, and the disk-bobbin and bobbin-case, combined with longitudinally-movable spring-held sliding yoke carried by the said shaft and oscillating with it, and with means to restrain the bobbin-case from oscillating to the same extent as the said hook, substantially as described.

3. The oscillating shaft *c*², its recessed hook *c*¹, and the bobbin-holding yoke *e*, placed in and oscillating in unison with the said hook, and provided with a shank, combined with a

spring to operate upon the said yoke and keep the bobbin in the recessed face of the said hook, substantially as described.

4. The oscillating hook-shaft and hook, and the spring-pressed center or pad *n*, to act against the bobbin, combined with the bobbin and bobbin-case, and with the bobbin-holding yoke connected with and serving to retain the bobbin in the hook, and oscillating in unison with the said hook, substantially as described.

5. The oscillating shaft, its attached oscillating hook to engage the needle-thread, and the disk-bobbin and bobbin-case, provided with means for altering and regulating the tension upon the thread proceeding from the bobbin, combined with the bobbin-holding yoke connected and oscillating in unison with the said hook, and means for holding the bobbin-case and bobbin in the said hook, and with means to prevent the oscillation of the bobbin-case

with the said hook, as and for the purpose described.

6. In a sewing-machine, the oscillating shaft and its attached hook, shaped and operated to enter the loop of thread contained in the usual eye-pointed needle, and to spread and carry the said loop about the bobbin-case, and the bobbin and the bobbin-case, and the bobbin-holding yoke connected and oscillating in unison with the said hook, combined with means, substantially as described, to prevent the oscillation of the bobbin-case with and to the same extent as the hook, for the purposes set forth.

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

EDDY T. THOMAS.

Witnesses:

W. H. HICKS,
A. A. WALTERS.