

C. H. PALMER.

Improvement in Machines for Sewing Pamphlets.

No. 124,694.

Patented March 19, 1872.

Fig. 1.

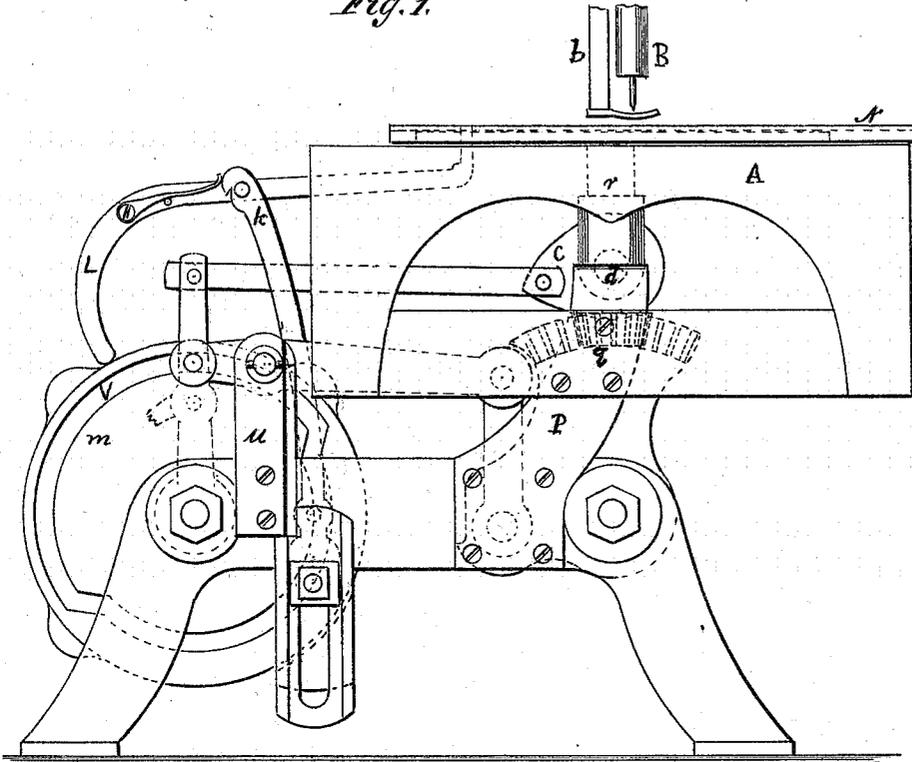
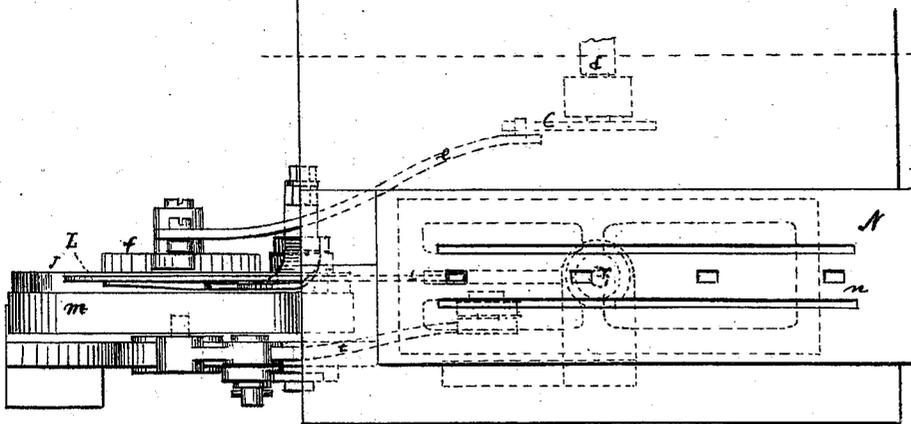


Fig. 2.



Witnesses:

Wm. H. Ransom
Geo. W. Ransom

Inventor:

Charles H. Palmer

C. H. PALMER.

Improvement in Machines for Sewing Pamphlets.

No. 124,694.

Patented March 19, 1872.

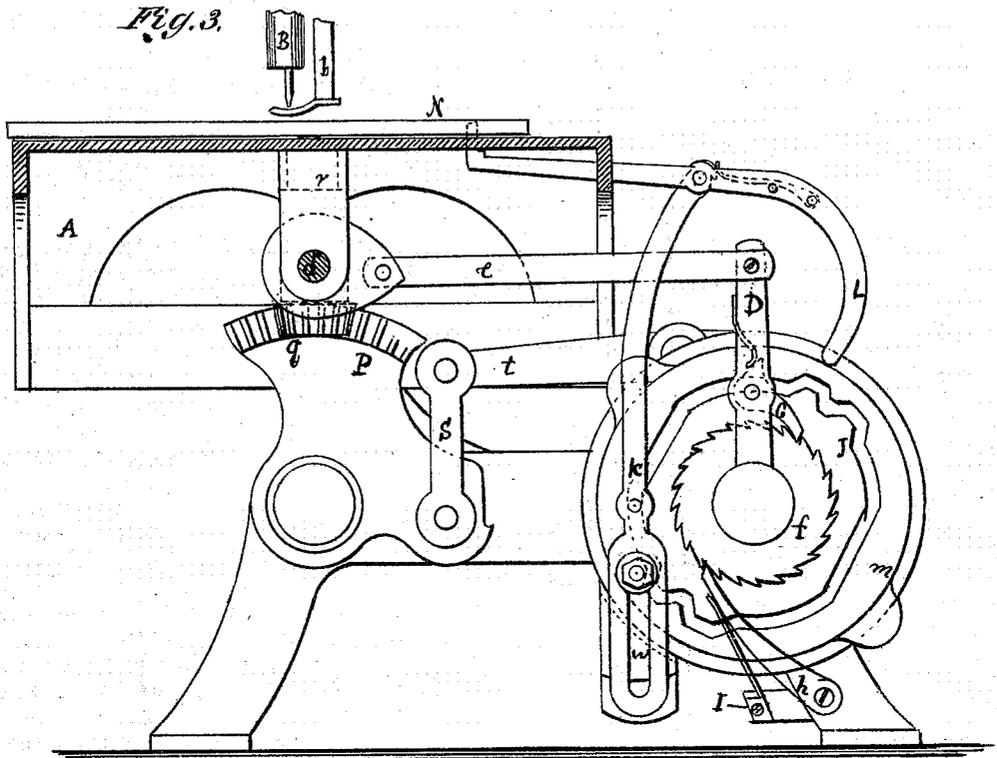


Fig. 4.

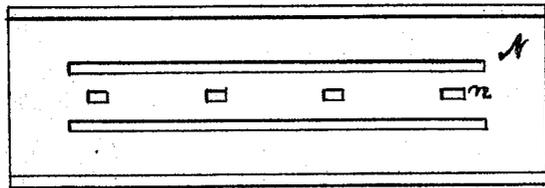
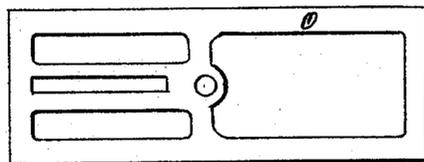


Fig. 5.



Witnesses:
A. S. Johnson
George H. Ramsay

Inventor:
Charles H. Palmer

UNITED STATES PATENT OFFICE.

CHARLES H. PALMER, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO ALFRED E. TILTON AND A. M. LORYEA, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SEWING PAMPHLETS.

Specification forming part of Letters Patent No. 124,694, dated March 19, 1872.

Specification describing an Improved Machine for Stitching or Sewing Pamphlets and similar work, invented by CHARLES H. PALMER, of the city, county, and State of New York, which improvement is clearly and fully described in the following specification, including the accompanying drawing and letters of reference marked thereon making part of the same.

Like letters refer to the same parts in each drawing or figure.

Figure 1 represents a front elevated view. Fig. 2 is a top view. Fig. 3 is a rear view of those parts forward of the cross-section represented by dotted line in Fig. 2.

A represents the frame; B, the needle-bar with needle inserted. *b* represents the pressure-foot. *d* is the driving-shaft, on which is affixed cam *c*, which is attached by joint to connecting-rod *e*, which in turn is attached by joint to lever D, while lever D is affixed to the axis on which ratchet-wheel *f* revolves. G is a pawl by which the ratchet-wheel is made to revolve. *h* and *I* are pawls by which the ratchet-wheel is held from reversing its motion. J is a cam with two pairs of spurs projecting from the rim, and said spurs operate on a round pin projecting from the front side of feed-lever *k*. These spurs, operating through the feed-lever *k* and feed-pawl L, perform the direct or forward feed-motion, while the flat portions of the rim of the cam J permit the feed-lever *k* to fall back, whereby the reverse feed-motion is effected. *m* is a positive cam-wheel, with two spurs projecting from its rim. These spurs, in their revolutions with the cam, elevate the end of the feed-pawl L, and thereby withdraw the projecting spur on the opposite end of the pawl from mortises *n* in the feed-slide N, (plan view seen in Fig. 4.) This feed-slide is fitted over the edges of the turn-table O and slides thereon. (The turn-table is shown in Fig. 5.) P is an oscillating beveled-toothed segment, geared to mesh into a beveled pinion, *q*. This pinion is fixed on a perpendicular shaft, *r*, to the upper end of which is affixed the turn-table O. Attached to the oscillating segment P is a link, S, attached at its upper end by joint to the connecting-rod *t*, which, near its opposite end, is attached by joint to a fixed bar, *u*. The extreme end of *t*, however, has a spur pro-

jecting in and fitted to the groove V in the positive cam *m*. This groove V in the cam-wheel *m* is cut so that one portion thereof is at a greater distance from the axis of the shaft than the other, as shown, whereby, through connecting-rod *t* and link S, reverse motion is imparted to the oscillating segment that operates on pinion-wheel *q* and shaft *r*, and causes turn-table O and feed-slide N to reverse their positions twice for each revolution of cam *m*. In the lower end of feed-lever *k* there is a slot, *w*, by which the length of stitch is regulated.

The stitch made by this machine, when all the necessary parts for forming the stitch are attached, is the ordinary double-thread lock-stitch. My invention consists in means for making the stitches of the different lengths, as hereinafter specified; the reverse stitch, and the manner in which they are made.

Having thus in detail described the various parts, the results of their combined operations are as follows: Sitting in front of the machine, the revolution of the driving-shaft *d* imparts motion to the ratchet-wheel *f*, which carries with it cam-wheel J and positive cam-wheel *m*. Double projections on cam-wheel J cause feed-lever *k* to throw pawl L toward the right, by which the feed-slide N is pushed toward the right, twice in succession; the length of two long stitches. Then, by a quarter revolution of said cam, the flat surface of the rim thereof comes in conjunction with lever *k*, thus permitting it to fall back toward the left sufficient to allow a short reverse stitch to be produced. In the mean time, the connecting-rod *t*, operated by the groove V in the positive cam *m*, imparts motion through link S to wheels P and Q, and shaft *r* and the turn-table O, in order that the turn-table may be brought again to its original position to receive a new pamphlet. In operation the pamphlet is placed lengthwise on the further side of the turn-table with its back to the needle, which descends, has its thread locked, and is then raised above, and the pamphlet is moved by the plate a short distance to the left, when the needle again descends and rises. Then the plate and pamphlet are twice moved to the right for the two long stitches, and then again to the left for a short stitch. In the mean time another pamphlet is placed on the front side of the turn-

table, with its back to the back of the stitched pamphlet when the table reverses its position, whereby the second pamphlet is brought under the needle in the precise position in which the first pamphlet was at the commencement of the work. A small cutting-spur may be attached to the needle-bar to sever the pamphlet just stitched from a second pamphlet that has had one stitch taken in it.

I claim—

1. The sliding table, combined with the pawl and lever, operated substantially as described

to move the said table, as and for the purpose set forth.

2. In combination with the elements of the above clause of claim, I claim the turn-table, provided with a pinion and operated by the segmental gear, substantially as and for the purpose set forth.

CHARLES H. PALMER.

Witnesses:

ALONZO R. CUSHMAN,
GEO. M. RAMSAY.