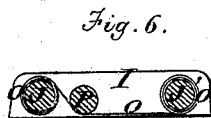
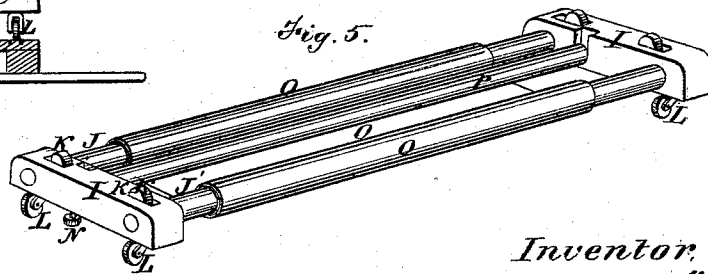
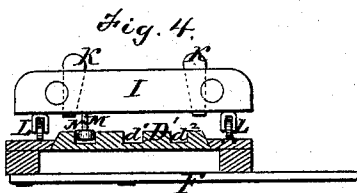
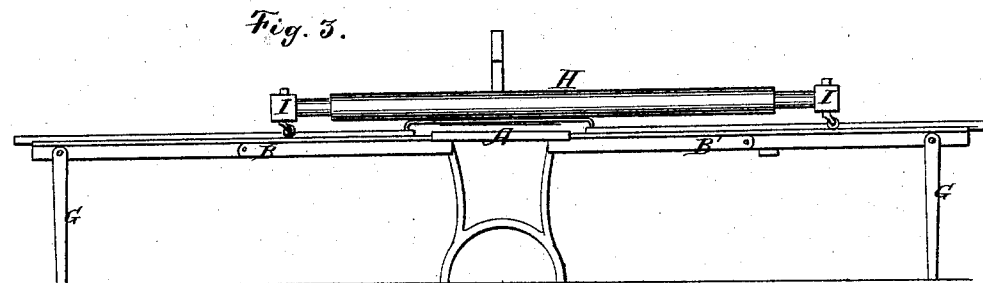
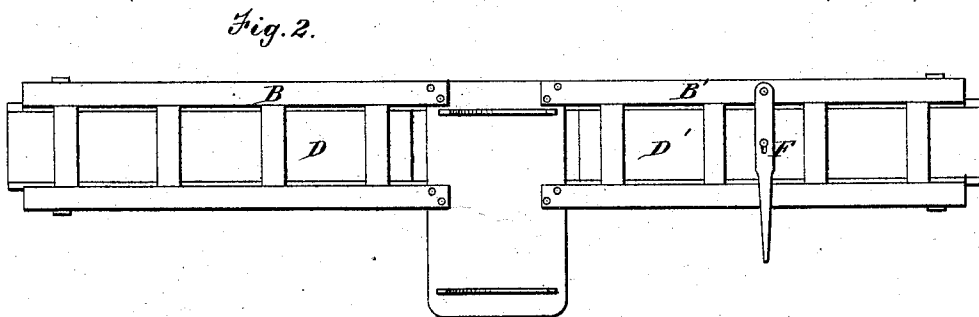
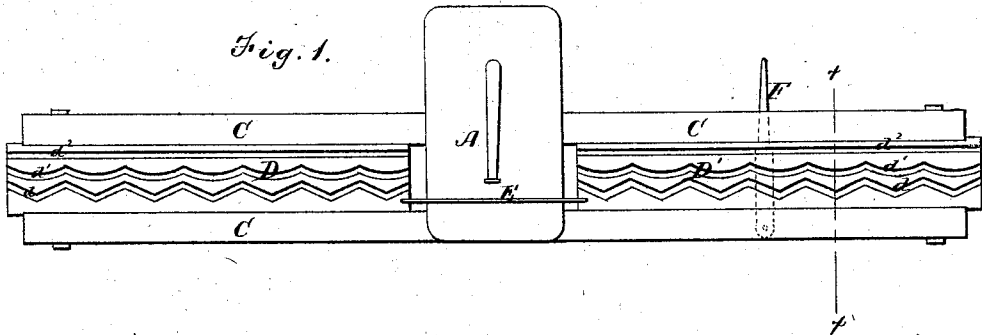


W. H. HEFFLEY.

Quilting-Attachments for Sewing-Machines.

No. 138,399.

Patented April 29, 1873.



Witnesses.

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M. J. Ellsworth.

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By his Attys.

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Fig. 7.

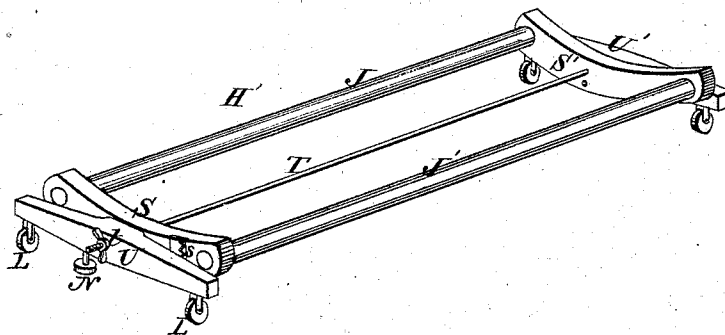
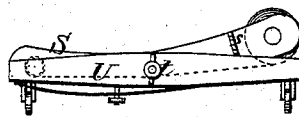


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM H. HEFFLEY, OF ROCHESTER, INDIANA, ASSIGNOR OF ONE-HALF
HIS RIGHT TO CHARLES ASA MITCHELL, OF SAME PLACE.

IMPROVEMENT IN QUILTING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **138,399**, dated April 29, 1873; application filed
July 19, 1872.

To all whom it may concern:

Be it known that I, WILLIAM H. HEFFLEY, of Rochester, in the county of Fulton, and the State of Indiana, have invented a new and Improved Quilting Attachment for Sewing-Machines; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top-plan view showing the tracks or ways attached to a sewing-machine. Fig. 2 is a bottom-plan view of the same. Fig. 3 is a side elevation, showing the carriage in position. Fig. 4 is a section through line *x x*, Fig. 1, showing the end of the carriage. Fig. 5 is a perspective view of the carriage; Fig. 6, a transverse section of the same; and Figs. 7 and 8 are views of a modification of the carriage.

Similar letters of reference in the accompanying drawing denote the same parts.

This invention has for its object to provide an attachment for any ordinary sewing-machine, whereby a quilt or other similar article can be easily guided across the table of the machine for the purpose of stitching the fabric in rows, which may be straight, parallel, zigzag, curved, or otherwise shaped, as desired; and it consists in the employment of two tracks or tram-ways attached to a sewing-machine on opposite sides of the same, said tram-ways holding removable plates provided with variously-shaped longitudinal grooves in their upper surfaces, with which grooves engage projections from a carriage mounted on casters traveling in the tram-ways across the table of the machine, and guided by the grooves with which it is engaged. It also consists in the peculiar construction of the carriage, as I will now proceed to describe.

Referring to the drawing, A represents the table of a sewing-machine, and B B' two horizontal wooden frames or tram-ways bolted or otherwise attached to the opposite sides of the same in such manner as to extend transversely of the machine in line with each other, as shown in Figs. 1 and 2. On the upper side of each tram-way are two dovetail

longitudinal guides, C, between which are held the removable sliding plates D D', whose edges are correspondingly dovetailed, as shown in Fig. 4. The plates D D' have longitudinal grooves *d d' d''* cut in their upper sides, said grooves extending in any desired line, either straight, zigzag, curved, or in any ornamental pattern. A rod, E, passing across the table of the machine, connects the plates D D', as shown in Fig. 1. F represents a lever pivoted at one end to the lower side of the tram-way B', attached at its center to the plate D', and having a projecting handle for the purpose of moving the plates D D' longitudinally, the object of which will be described hereinafter. The frames B B' are supported at their outer ends by legs G, which are pivoted so as to fold against the frames when not in use. The legs at one end may be made longer than those of the other for the purpose of giving an inclination to the track, if desired. H represents a carriage which runs on the frames B B' across the table of the sewing-machine, as shown in Fig. 3. Said carriage is composed of the two end pieces I I, and the parallel rollers J J', the ends of the latter being located in sockets in the former and held by wedge-shaped keys K, which are inserted in slots in the end pieces and bear against the grooves in the sides of the rollers, as shown in dotted lines in Fig. 4. Each of the end pieces I is provided with two casters, L, on which the carriage runs, and between the casters with a downwardly-projecting pin or bolt, M, carrying on its end a horizontal friction-roller, N, which latter is of sufficient diameter to enter one of the grooves *d*, as shown in Fig. 4.

The fabric O to be quilted is moved upon the roller J' in such manner as to pass from the lower side of the same to the upper side of the roller J. A removable roller P, whose ends rest in slots in the end pieces I, bears upon the upper side of the quilt between the rollers J J' and nearest the roller J, as shown. By this means, that portion of the quilt which is stretched between the rollers J J' is kept perfectly smooth, as its upper side cannot become creased or wrinkled by

the excess of tension on its lower side, and the consequent slackening of the upper side, which would result if it were wound under the roller J, while at the same time the stretched portion is held in a horizontal position by the roller P, and can therefore be readily subjected to the action of the sewing-machine. The carriage H, with the quilt or fabric disposed upon it in the manner above described, is placed upon the frames or tramways B B across the table of the machine, the parts being so located as to bring that portion of the quilt between the rollers P and J under the needle. The friction-rollers N are engaged with one of the grooves *d* of each plate D D', and the machine is set in motion in the usual manner, the carriage being moved by hand, and fed across the machine as fast as the stitching progresses. A row of stitching is thus formed across the quilt corresponding to the pattern of the grooves with which the carriage was engaged; for instance, if the friction-rollers N enter the grooves *d*, a zigzag row of stitching is produced, and by afterwards sliding the plates D D' a suitable distance, by means of the lever F, and properly adjusting the quilt upon the rollers, the next row formed will, in connection with the first, constitute a row of diamond-shaped figures, with which the entire quilt may be covered in the same manner.

It will be seen that a great variety of patterns may thus be expeditiously worked upon a quilt, the same set of plates D D' being capable of producing several different effects, while it will be practicable to substitute others differently grooved at any time.

The inclination of the frame B B' above mentioned assists the operator, the carriage passing along almost without assistance. In this case the stitching is performed only while the carriage is moving downward. The bolts M can be removed and readjusted in the end pieces I for the purpose of engaging the carriage with the different grooves of the plates D D' without altering the relative position of the carriage.

H', Fig. 7, represents a modification of the carriage H, in which the use of the pressing-roller P is dispensed with, and the apparatus rendered capable of being adjusted in such manner that, when the greater part of the quilt is wound upon one of the rollers, the increase in bulk of the same will not cause it to interfere with the table of the sewing-machine. This result is effected by locating the rollers J J' in two curved blocks or end pieces S S', the whole constituting a frame which is pivoted by a metal rod T to blocks U U', the rod T passing through the blocks about midway of the same parallel with the rollers J J'.

The blocks U U' are provided with casters L, and friction-rollers N, which engage with the plates D D'. The blocks S S' are curved upward at each end, as shown, and are provided with ratchets S on their outer sides, which engage with projections on the adjacent sides of the blocks U U'. As will be readily seen, the frame, which is composed of the curved blocks S S' and rollers J J', can be readily adjusted in such manner as to elevate one of the rollers and correspondingly depress the other, as shown in Fig. 2. The rod T is provided with a thumb nut, *t*, on one end, by which it is caused to bind the blocks U U' against the curved blocks S S', the adjustment above mentioned being effected by loosening the nut, turning the blocks S upon the rod T as far as is desired, and engaging the toothed plates *s* with the projections of the blocks U U', which hold the whole in place, the nut *t* being afterwards tightened; hence, when one of the rollers becomes largely increased in bulk by the winding of the quilt upon it, it is prevented from projecting downward so far as to come in contact with the table of the machine by raising it as shown in Fig. 8. The rod T supplies the place of the press-roller P, and the keys K are dispensed with, the operation being in all other respects similar to that of the other form of carriage.

I am aware that lateral tracks with carriages for holding a quilt or other article have been applied to sewing-machines. I do not therefore desire to claim the idea, broadly.

What I claim as new is—

1. A pair of removable plates grooved in various patterns, applied to a sewing-machine, and guiding a carriage or frame provided with rollers upon which a quilt or other article is held while being stitched or quilted, substantially as described, for the purpose specified.

2. The grooved plates D D' connected by the rod E and operated by the lever F, in combination with the frames B B' and carriage H, substantially as described.

3. The carriage H' provided with the rocking adjustable quilting frame substantially as described, for the purposes specified.

4. The rocking adjustable quilting-frame having the curved end pieces S S' supported by the end blocks U U', substantially as described, for the purpose specified.

5. The combination of the rocking adjustable quilting-frame and the end blocks U U' adapted to be locked in any required relation to each other by means of the ratchet *s* and the screw-rod T, or their equivalents, substantially as described, for the purpose specified.

WILLIAM H. HEFFLEY.

Witnesses:

CORNELIUS WELCH,
ISAIAH CONNER.