(No Model.) 2 Sheets—Sheet 1.

C. T. LANDPHERE.

QUILTING MACHINE.

No. 384,264. Patented June 12, 1888.

Fig. 1.

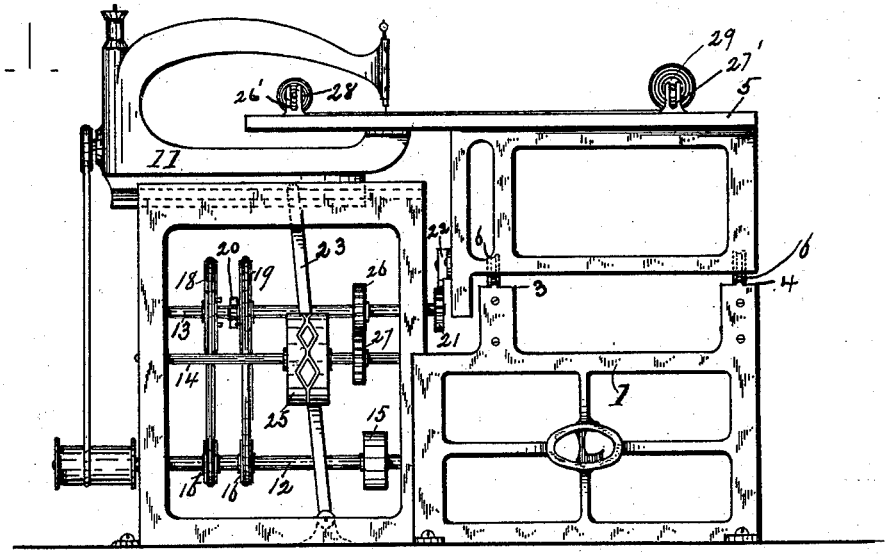
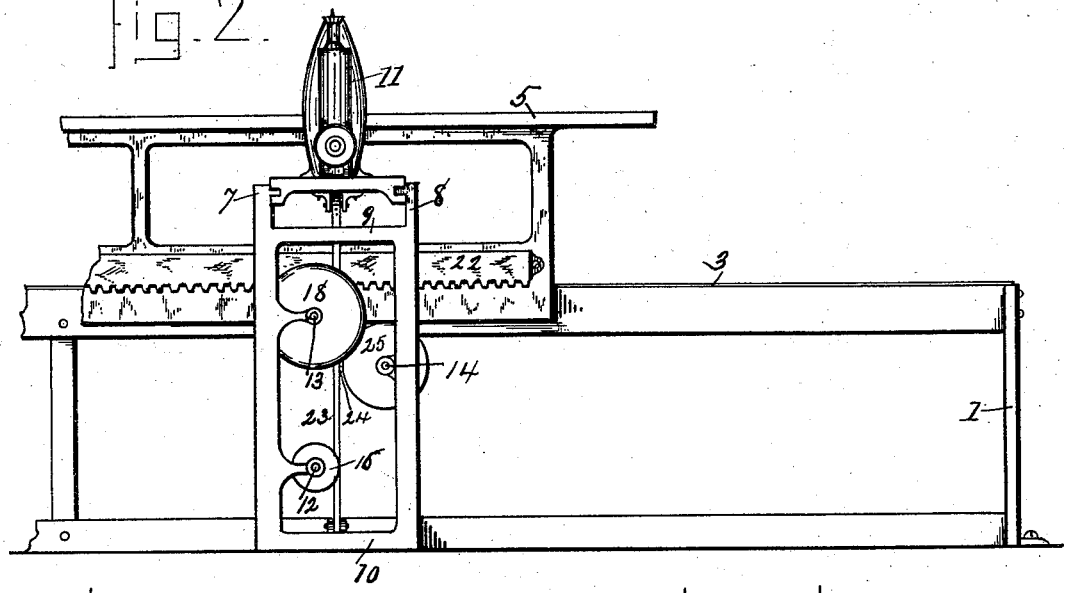


Fig. 2.



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Fred N. Lathrop

Inventor—
C. Tyler Landphere.
By his Attorney.
Frank H. Allen

(No Model.) 2 Sheets—Sheet 2.

C. T. LANDPHERE.

QUILTING MACHINE.

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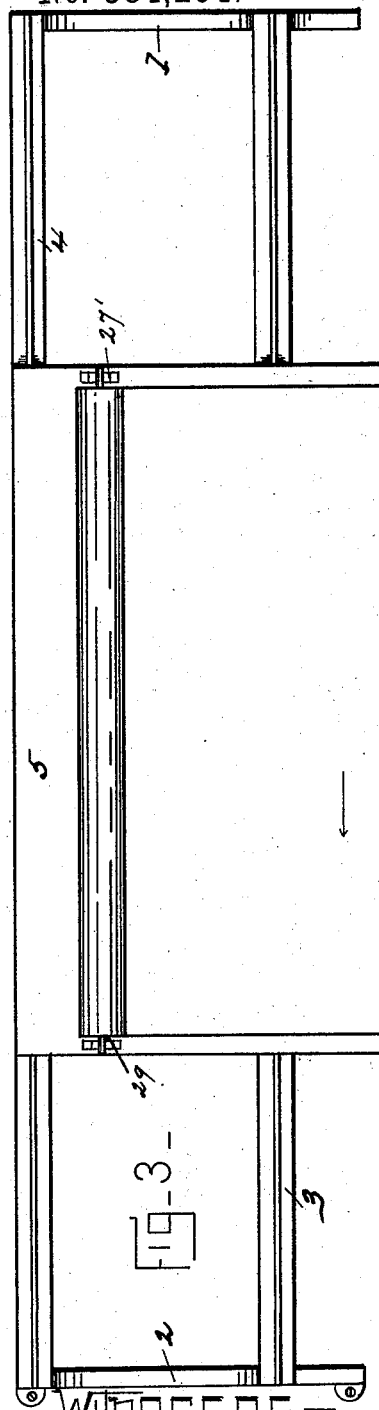

Fig. 3.

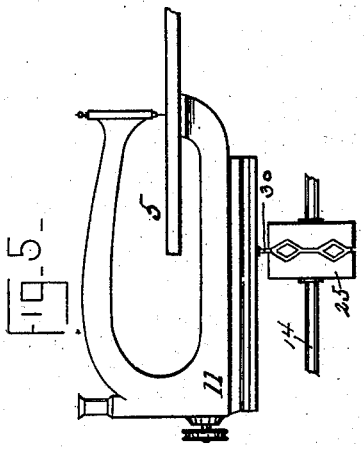

Fig. 5.

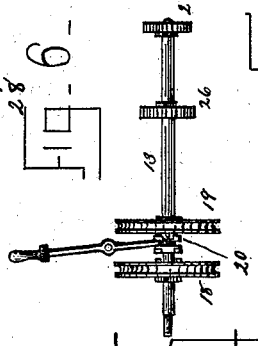

Fig. 6.

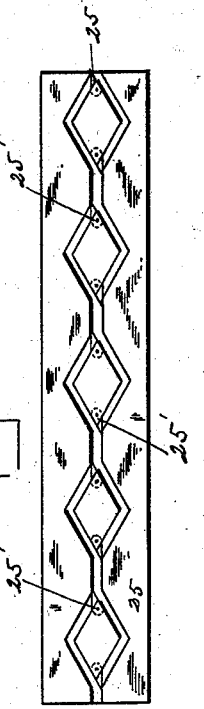

Fig. 4.

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UNITED STATES PATENT OFFICE.

C. TYLER LANDPHERE, OF MYSTIC, CONNECTICUT.

QUILTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 384,264, dated June 12, 1888.

Application filed May 11, 1887. Serial No 237,895. (No model.)

To all whom it may concern:

Be it known that I, C. TYLER LANDPHERE, a citizen of the United States, residing at Mystic, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Quilting-Machines, which improvements are fully set forth and described in the following specification, reference being had to the accompanying two sheets of drawings, in which—

Figure 1 is a side elevation of a machine of my new construction; Fig. 2, an elevation of the same from the rear of the sewing-machine, having a portion of the bed and reciprocating table removed; and Fig. 3 is a top or plan view of said machine. In Fig. 4 I have shown an enlarged development of the pattern cam-wheel which controls the movement of the sewing-machine, and in Fig. 5 a modification of my invention in which the lever 23 is dispensed with, as hereinafter described. Fig. 6 is a plan view of shaft 13, illustrating my belt-shipping mechanism.

My improvements are in that class of quilting-machines using a sewing-machine with a single needle, the several mechanical elements being so constructed and connected that said needle is automatically caused to traverse back and forth across the fabric either in straight lines or in fanciful patterns of predetermined designs.

My object is to produce quilting-machines of such simple form that they may be cheaply produced, and in which sewing-machines of ordinary construction may be utilized.

I am fully aware that there have been in use machines of various forms and principles for stitching and interstitching bed-comfortables; but, so far as I am familiar with the state of the art, many, if not all, of such devices have been of complicated and expensive construction, requiring frequent attention and repairs.

Referring to the drawings, the reference-figures 1 2 indicate end frames forming supports for the ways 3 4, on which the quilt-supporting table 5 travels, said table (or its frame, as here shown) having pivoted therein score-pulleys 6, which travel on a corresponding track on said ways.

The frame-work thus far described may be constructed entirely of wood or in part of light cast metal, as preferred. Midway of the length of the table-supporting bed, already described, is a frame consisting, preferably, of cast-metal girders 9 10 and uprights 7 8, formed at their upper ends with ways in a right angle to the line of movement of table 5, in which ways moves a sewing-machine head, 11, said sewing-machine being so located relative to the reciprocating table that the needle-bar is suspended over said table, as shown in Figs. 1 and 3.

Journaled in suitable bearings secured to or formed as parts of frame 7 8 are three shafts, 12 13 14, the former of which carries a driving-pulley, 15, and two score-pulleys, 16 17. These score-pulleys are connected by straight and crossed belts with corresponding pulleys 18 19 on shaft 13, the direction of rotation of said shaft being controlled by a clutch, 20, which may be operated by a shipper-rod, 29, under the immediate control of the operator in charge of the machine. (See Fig. 6.)

On the inner end of shaft 13 is a pinion-gear, 21, which engages a rack, 22, secured to and extending the entire length of the frame which supports table 5. It will now be understood that rotary motion of shaft 12 may be communicated to shaft 13, (in either direction,) and that such motion will cause table 5 to move forward or backward on its tramway.

To control the movement of the sewing-machine in its ways, I have provided a lever, 23, whose lower end is hinged to the floor, and whose upper end is connected to the sewing-machine in such manner that it may vibrate within certain prescribed limits and carry with it said machine. This lever has a laterally-projecting stud, 24, which enters and follows grooves of any desired pattern channeled in the perimeter of a roll, 25, on shaft 14. When an interlaced pattern is used, as herein shown, switches 25′ are provided at the intersecting points, so that when the motion of the machine is reversed stud 24 on lever 23 is caused to travel across the line of movement first traversed.

Motion is communicated to roll 25 from shaft 13 by a train of two or more gears, 26 27, the number and size of said gears being

determined by the desired speed of roll 25. Referring now to the table 5, it will be noted that I have provided bearings 26′ 27′, secured to said table and adapted to receive rolls 28 29, on which the fabric to be quilted is rolled, said fabric being transferred from one roll to the other as fast as quilted.

That portion of table 5 over which the needle travels is cut away, as indicated in dotted lines in Fig. 3. Assuming now that we have a complete machine of the form described and a quilt in position on table 5 ready for quilting, the machine is set in operation, when the table 5 begins to move slowly along on its tramway. At the same time the sewing-machine is moved in its ways with a reciprocating motion so timed relative to the movement of the table 5 that serpentine, angular, or straight rows of stitching are produced, corresponding to the grooves on the perimeter of the roll 25. At the completion of a row or line of stitching the fabric may be moved sidewise by means of rolls 28 29; or, if a double (interlaced) pattern is used, as herein shown, the clutch 20 is moved to reverse the motion, and the table 5 slowly returns to its first position. The operator then rolls the fabric to bring a new unstitched portion into line with the needle, and continues the operations described until the entire fabric is quilted.

In the modification shown in Fig. 5 a stud, 30, forming a rigid part of the sewing-machine, travels directly in the pattern-grooves of the roll 25, thus dispensing with the lever 23.

Having described my invention and the manner in which it is operated to produce the desired result, I claim—

1. A fabric-supporting table, guideways for allowing the reciprocating movement of said table, a rack attached to said table, and a pinion engaging said rack, in combination with a sewing-machine, guideways for said machine arranged transversely with regard to the guideways for said table, a lever for moving said sewing-machine, and a single set of devices for automatically operating said lever and said pinion to produce simultaneous motion of the said table and sewing-machine in the same plane, but at right angles to each other, substantially as set forth.

2. In combination with a fabric-supporting table reciprocally movable in a right line, a sewing-machine simultaneously movable in the same plane, but at right angles to the line of movement of said table, a lever, as at 23, hinged at one end and connected to the sewing-machine at its free end, and a pattern-roll engaging and controlling said lever, as described, and for the purpose specified.

C. TYLER LANDPHERE.

Witnesses:
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