No. 871,315. PATENTED NOV. 19, 1907.

A. WITTWER.

QUILTING FRAME.

APPLICATION FILED APR. 12, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

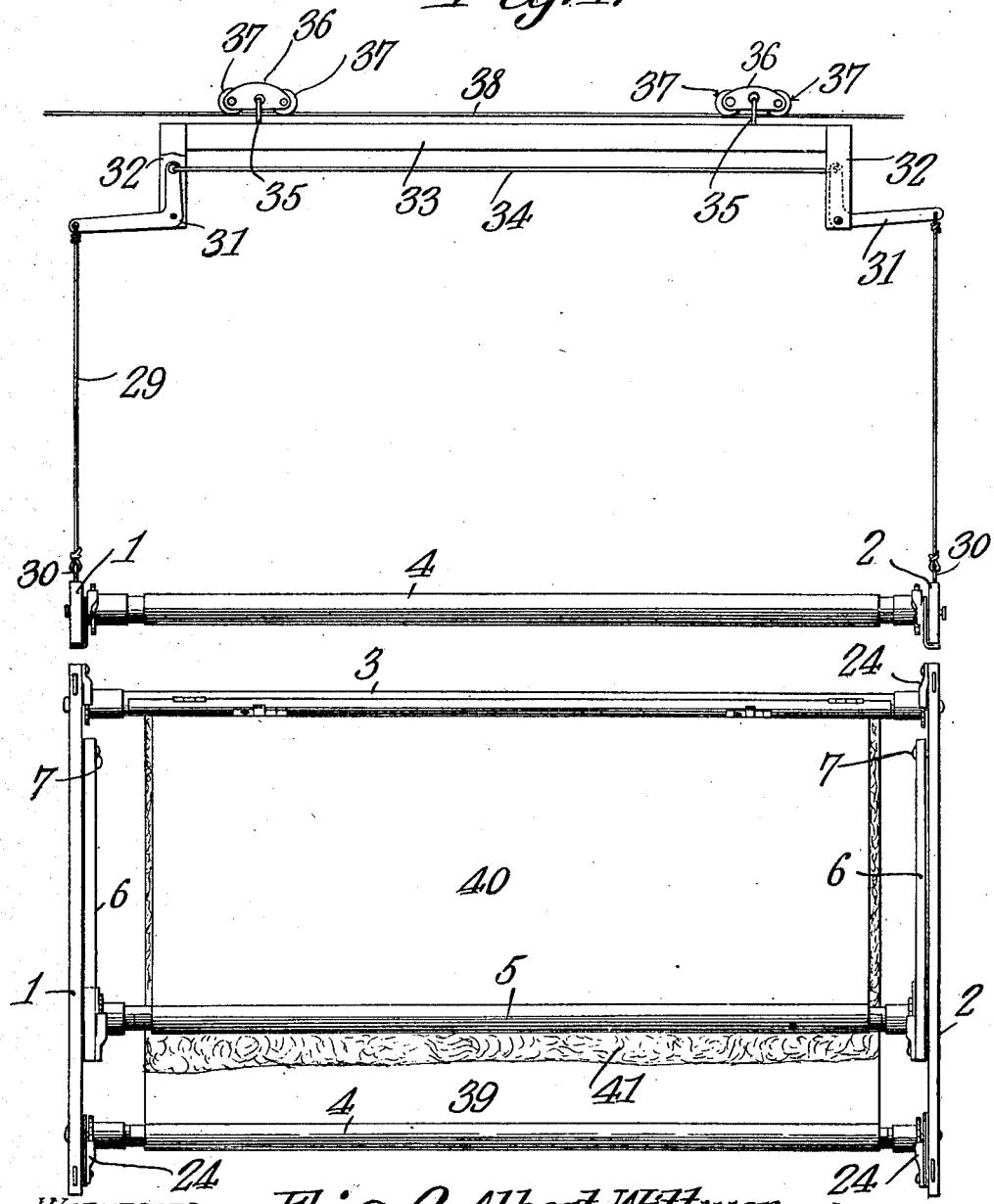


Fig. 2. Albert Wittwer, INVENTOR

WITNESSES:

E. J. Adams

F. T. Chapman

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ATTORNEYS

THE NORRIS PETERS CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 7.

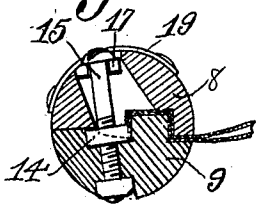


Fig. 4.

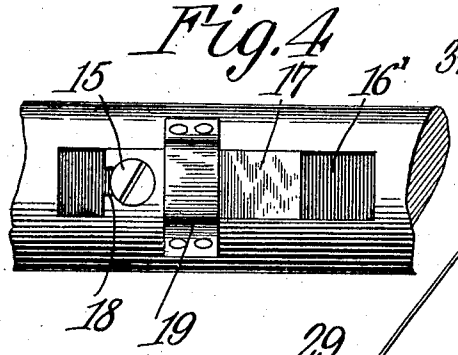


Fig. 3.

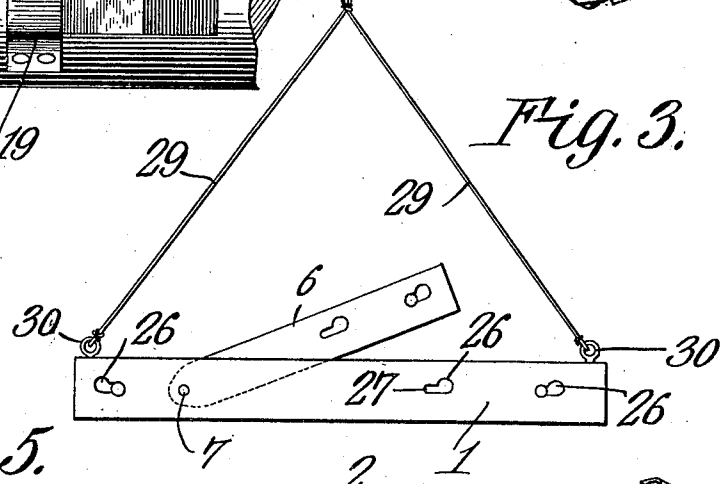


Fig. 5.

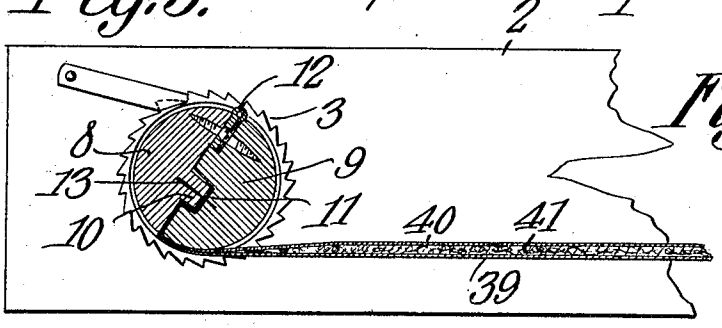
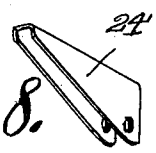


Fig. 8.



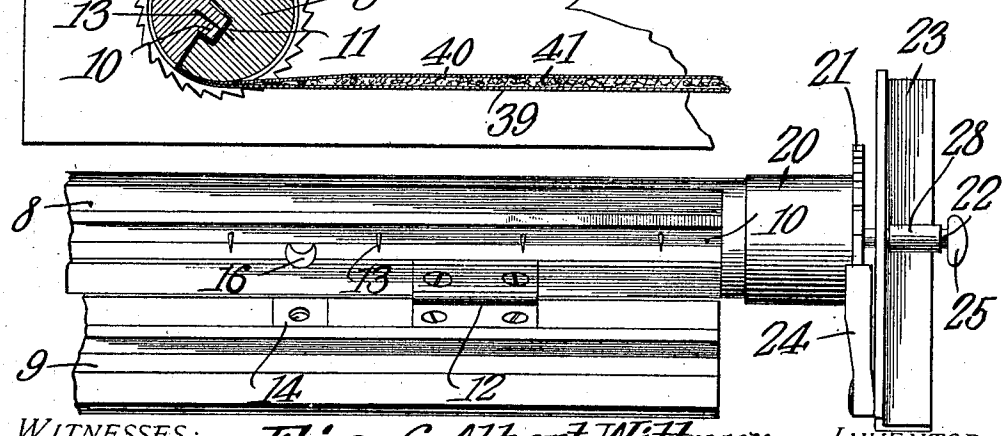


Fig. 6.

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F. J. Chapman

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UNITED STATES PATENT OFFICE.

ALBERT WITTWER, OF NEMAHA TOWNSHIP, RICHARDSON COUNTY, NEBRASKA.

QUILTING-FRAME.

No. 871,315. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed April 12, 1907. Serial No. 367,739.

To all whom it may concern:

Be it known that I, ALBERT WITTWER, a citizen of the United States, residing in Nemaha township, in Richardson county and State of Nebraska, have invented a new and useful Quilting-Frame, of which the following is a specification.

This invention has reference to improvements in quilting frames, and it is designed to provide a means whereby a quilt may be readily manipulated during the operation of sewing and the proper tension may be maintained upon the cloth webs and the intermediate material so that the making of the quilt is greatly facilitated.

The invention consists essentially in a suitable frame hung from a traveler in such manner as to be moved in all directions so as to facilitate the stitching of the quilt in various designs, and this frame is supplied with reels designed to hold the cloth webs under such tension as may be found most desirable, with provision for inserting the cotton batting or other filling between the webs, and also providing for the finishing of the short ends of the quilt without reducing the tension thereon.

The invention will be fully understood from the following detailed description taken in connection with the accompanying drawings forming part of this specification, in which,—

Figure 1 is a side elevation of the quilting frame, with parts broken away; Fig. 2 is a plan view of the same; Fig. 3 is a side elevation; Fig. 4 is a detail view of a portion of one of the quilt-holding reels; Fig. 5 is a section through one of the reels showing the manner of holding the ends of the cloth webs preparatory to sewing the quilt, and also showing a portion of one of the sides of the frame; Fig. 6 is a view of a portion of one of the reels at one end thereof, with the reel open to show the interior construction. Fig. 7 is a cross section through one of the reels to show the manner of locking the sections together, and Fig. 8 is a perspective view of one of the pawls.

Referring to the drawings, there is shown two side bars 1—2 in which are mounted the ends of reels 3—4 at each end with an intermediate reel 5 mounted upon supplemental side bars 6—6 pivoted to the main side bars by pivot pins 7 close to the reel 3.

Each reel consists of two half sections 8—9, the section 8 having formed on the face adjacent to the section 9 a longitudinal tongue 10 and the section 9 having a matching longitudinal groove or mortise 11. The two half sections 8 and 9 are hinged at one edge by a suitable number of hinges 12, so that when these two sections are closed together the tongue 10 will enter the groove 11.

Projecting from the tongue 10 are a number of points or sharpened studs 13 arranged to enter suitable holes formed in the bottom of the groove 11. Each section 9 is provided with two or more nuts 14 fast in it to one side of the groove 11, and in these nuts are secured screws 15 with their heads arranged to pass through perforations 16 in the section 8, and each section 8 has adjacent to the outer end of each perforation a longitudinal groove 16′ in which is arranged to slide a metallic block 17 having one end forked, as shown at 18, to straddle the shank of the screw 15 and to engage under the head thereof. The block or plate 17 is slidable in the groove 16′ which is made of sufficient length for the purpose so as to be moved under the head of the screw 15 or away therefrom, and a clip 19 extending over the groove 16′ serves to hold this plate 17 in place. When the two sections 8 and 9 are brought together the headed screw 15 projects above the bottom of the groove 16′ and the plate 17 is then moved so that its end 18 straddles the shank of screw 15 under its head and the two parts 8 and 9 are thereby securely locked together. Usually, two of these locking devices are all that are necessary but more may be used if so desired.

When the reels 3, 4 and 5 are made of wood, as they may be, the ends are strengthened by ferrules 20. On each end of each reel there is a ratchet wheel 21, and projecting beyond each end of the reel is a stud 22 constituting a journal bearing therefor. On this stud is a plate 23 made of a short piece of angle iron, as shown, for a purpose which will hereinafter appear, and this plate 23 carries a pawl 24 arranged to engage the teeth of the ratchet wheel 21. This pawl 24 is preferably made U-shape in cross section where it engages the teeth so that it may straddle the same and grasp the sides with sufficient force to prevent the pawl from being accidentally disengaged from the teeth. The stem 22 on each end of the reel is formed with a head 25 arranged to pass through the enlarged portion of one of a number of slots 26 formed in the side bars 1 and 2 and the

supplemental bars 6 of the frame. Each slot 26 has an extension 27, of less width, arranged to receive the stem 22 but too small to allow the passage of the head 26. When the stems 22 are placed in the slots 26 and moved into the portions 27 thereof, the reels are securely supported by the frame so as to turn with the stems 22 as journals, but are prevented by the heads from being disengaged from their seats in the frame. When the frame is made of wood it is advisable to surround the stems 22 with metallic sleeves 28 to protect the walls of the slots 26 from wear. When the reels are in place with their stems in the slots 26 the angle plates 23 rest with their sides against the side bars and their angle extensions under these side bars, thus constituting means for holding the pawls 24 from movement with the ratchets 21, and at the same time these angle pieces 23 may be moved from place to place in the frame when the reels are moved from one set of slots 26 to another.

The side bars 1 and 2 are supported by ropes or cord or wire 29 coming from each end thereof where they may be secured to the side frame by suitable eyes 30 or otherwise, and these cords or wires 29 are fast upon the outer arm of bell-crank hangers 31 pivoted in the down-turned ends 32 of a frame 33. The other or shorter ends of the bell-crank levers 31 are up-turned and pass through slots in the down-turned ends 32, and these up-turned ends are connected together by a wire or cord 34 for synchronous motion. The frame 33 has secured to its upper edge by means of eyes 35, and near each end thereof, brackets 36 carrying pairs of rollers 37 arranged to roll upon a cord or wire 38 stretched overhead to constitute a track for the entire frame to travel to and fro on. The bell-crank levers 31 will permit a rocking movement of the frame.

In making a quilt the reel 4 has one end of a web of cloth 39 fastened by means of being passed into the groove 11 of the section 9 of the reel and having the other section 8 brought down upon it so that the studs 13 pass through it and the whole edge of the cloth is firmly clamped by the tongue 10 in the groove 11 The cloth to a sufficient quantity is wound on this reel and the other end is carried to the reel 3. Another web of cloth 40 is secured to and wound upon the reel 5 in like manner and the other end of this web 40 is carried to the reel 3 and the two webs are fastened to this reel in the manner clearly indicated in Fig. 5. The reel 3 is secured in the slots 26 at one end of the frame sides 1—2, say, at the extreme left as shown in Fig. 3. The reel 4 is secured in the slots 26 at the other end of the side bars 1—2 of the frame, while the reel 5 is secured in the end slots of the supplemental pivoted bars 6. The reel 3 is then secured from rotation by the pawls or dogs 24 provided for the purpose and the reel 4 is turned in the appropriate direction to bring the web 39 as tight as desired, when the pawls or dogs 24 belonging to this reel and engaging the ratchet wheels thereof will hold it in the adjusted position. The web 40 is also wound up on the reel 5 until its tension is that desired. Now, by lifting the reel 5 upward around the pivot 7 ample room is left for the introduction of the cotton batting 41, or other filling material, between the webs 39 and 40, after which the reel 5 may be again depressed until the webs 39 and 40 are close together, when the quilt may be sewed in the usual manner, the support for the quilting frame being such that the various movements of the quilt to bring it into proper relation with the machine used for sewing are provided for. When the exposed portion of the quilt has been sufficiently sewed the pawls 24 may be released and the finished portion of the quilt rolled up on the reel 3, after which more filling material 41 may be introduced and the next section of the quilt may be sewed, and so on until the quilt is finished. The additional slots 26 are provided so that a short section, such as will occur as the quilt is being finished, may be readily held in the frame and the sewing action performed without difficulty.

The length of the reels will in practice be sufficient for the greatest width of quilt to be manufactured, and sufficient cloth may be carried upon the reels to provide for several lengths of quilts, so that one quilt after another may be finished without the necessity of putting fresh cloth upon the reels for each quilt, thus avoiding the waste ends which would otherwise occur were but one quilt provided for by one filling of the reels.

I claim:—

1. In a quilting frame, reels for carrying the cloth and finished quilt, each provided with ratchet teeth, a pawl and a pawl-carrier supported by the reel, the said pawl-carrier being constructed to engage the frame when the reel is mounted therein to hold the pawl against rotation, and to be disengaged from the frame with the reel when the latter is removed from the frame.

2. In a quilting frame, means for supporting the same comprising another frame, bell-crank levers mounted thereon, connections from one lever to the other for causing the levers to move in synchronism, connections from each lever to the quilting frame, and rollers carried by the supporting frame and arranged to move upon a supporting track.

3. In a quilting frame, a reel composed of two parts hinged together along one edge, one provided with a longitudinal groove and the other with a longitudinal matching tongue.

4. In a quilting frame, a cylindrical reel composed of two parts hinged together along one edge, one part having a longitudinal groove and the other part having a longitudinal tongue with projecting teeth or spikes and arranged to coact with the groove of the first-named part.

5. In a quilting frame, a two-part reel having a headed stud on one part, a perforation in the other part, and a sliding member on the perforated part arranged to engage the headed stud on the other part when the two parts of the reel are brought together.

6. A quilting frame composed of side members having a number of slots provided with enlarged and narrow portions, supplemental members hinged to the side members and also provided with slots having enlarged and narrow portions, reels adapted to receive cloth webs and having bearings adapted to the slots in the side and supplemental members, a supporting frame, rollers on said frame arranged to move on a supporting track, levers mounted at each end of the supporting frame, connections between one end of each lever and the side members of the quilting frame, and a connection between the other ends of the levers, whereby the said levers are constrained to move in unison.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ALBERT WITTWER.

Witnesses:
W. R. WAGGENER,
C. B. EMMERT.