No. 606,915. Patented July 5, 1898.

E. H. BUTLER.

QUILTING FRAME.

(Application filed Aug. 30, 1897.)

(No Model.)

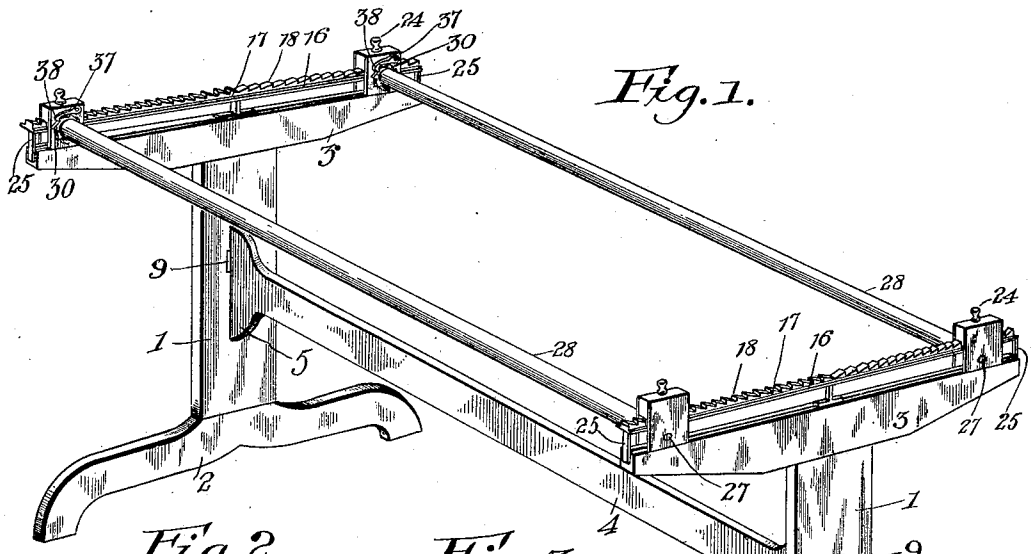


Fig. 1.

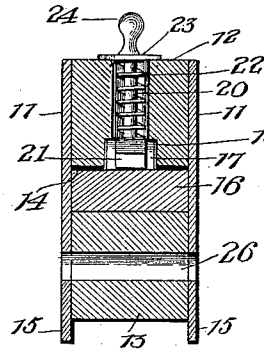


Fig. 2.

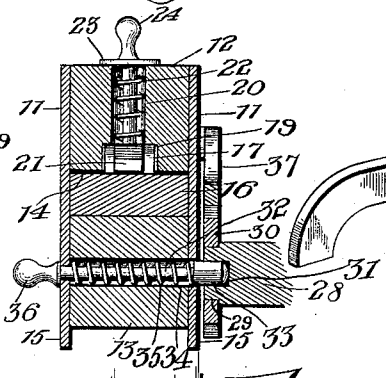


Fig. 3.

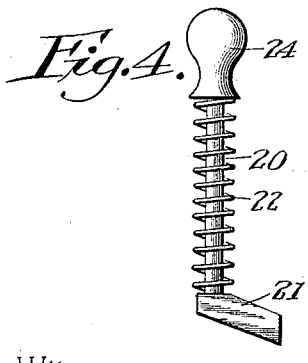
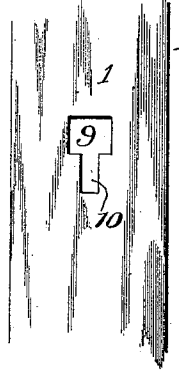


Fig. 4.



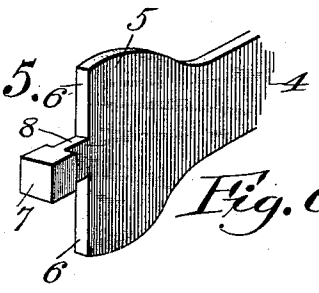


Fig. 5.

Fig. 6.

Witnesses

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QUILTING-FRAME.

SPECIFICATION forming part of Letters Patent No. 606,915, dated July 5, 1898.

Application filed August 30, 1897. Serial No. 650,019. (No model.)

To all whom it may concern:

Be it known that I, EUGENE H. BUTLER, a citizen of the United States, residing at Grayson, in the county of Carter and State of Kentucky, have invented a new and useful Quilting-Frame, of which the following is a specification.

This invention relates to quilting-frames, its object being to provide a frame that may be easily and quickly put together or taken apart and in which the bearings of the winding-shafts on which the material is wound may be easily, quickly, and uniformly adjusted to move the shafts toward or away from each other and maintain them in parallel relation to each other.

With these objects in view the invention consists of the several details of construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a quilting-frame made in accordance with my invention. Fig. 2 is a vertical transverse section through one of the sliding boxes shown at the right-hand end of Fig. 1. Fig. 3 is a similar view of one of the sliding boxes shown at the other end of the frame. Figs. 4 and 5 are views of detached details. Fig. 6 is a detail view of one end of the tie-bar.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates the standards, 2 the feet, and 3 the cross-bars for the respective ends of the frame. The standards are tenoned into the feet and cross-bars and may be either firmly or detachably secured thereto, as preferred.

4 indicates the tie-bar for connecting the end standards together, and the ends of this bar are enlarged, as indicated at 5. The enlarged ends are cut to form the square shoulders 6 and a tenon having a head 7 on its outer end and a neck 8 between the head 7 and shoulders 6. Each standard is provided about midway its width with an opening having an enlarged upper part 9 and a contracted lower part 10.

In setting the frame up the head 7 of the tenons will be inserted through the enlarged upper part 9 of the opening in the standard, and the tie-bar will then be dropped down until the neck 8 of the tenon will seat in the contracted part of the opening in the standard, and the shoulder 6 will engage the inner face of the standard, and the parts will thus be firmly locked together.

On each of the cross-bars 3 sliding boxes are supported to move longitudinally of the bar, and these boxes are preferably formed of two metal plates, (indicated by 11,) between which are secured upper and lower blocks, (indicated, respectively, by 12 and 13,) a space 14 being left between the two blocks. The plates will project below the lower block and form flanges 15, which will engage the opposite faces of the cross-bar 3 and prevent the boxes from twisting out of position on the bars.

16 indicates a bar which extends through the spaces 14 in the boxes at the respective ends of the frame, and each bar is provided with a central rib 17, projecting upwardly from its upper face, and a series of teeth are formed on the rib, which incline in opposite directions from the middle portion of the rib toward each end. A groove 19 is formed in the lower face of each of the blocks 12 to receive the toothed rib 17.

20 indicates a pin provided with a foot 21 at its lower end to fit in the teeth 18, and 22 indicates a coiled spring which is fitted around the pin 20 and seated in a vertical opening in the block 12. This spring bears at one end on the foot 21 and at its other end against the under face of the plate 23, secured to the upper face of the block 12, and through which plate the pin projects and is provided with a head 24 on its outer end. The spring 22 tends normally to force the foot 21 of the pin into engagement with the teeth 18, and when so engaged the box will be locked against movement on the bar 16 in one direction, but will be free to move in the other direction, as the foot 21 will ride up the inclined faces of the teeth. The bar 16 is supported by brackets 25 at each end and also at its central portion, which brackets may be secured to the bar 16 and the cross-bar 3 in any suitable manner.

As far as described, all the boxes are similar in construction. At one end of the frame, as illustrated at the right-hand end, the plates 11 and the lower block 13 of each box are pro-

vided with horizontal openings 26, which serve as bearings for spindles 27 on one end of the respective winding-shafts 28. The other end of each shaft is made angular, as indicated at 29, to receive a ratchet-wheel 30, and these ends are also each provided with a socket 31 for a purpose to be hereinafter referred to.

32 indicates a pin having an enlarged end 33, and this pin is supported in an opening 34, formed in the lower block and the inner plate 11. A coiled spring 35 surrounds the smaller portion of the pin 32 and bears at one end against the enlarged end of the pin and at its other end against the inner face of the outer plate 11. The pin 32 projects through the outer plate 11 and is provided with a head 36. The spring 35 tends normally to force the enlarged end through the opening in the inner plate 11, and this end of the pin is intended to project into the socket 31 in the end of the shaft to support the latter, so that it may turn thereon.

37 indicates a gravity-dog pivoted on the inner plate 11 of each box and is provided at its free end with a hook 38 to engage the teeth of the ratchet-wheel and lock the shaft against turning in one direction.

From the foregoing description it will be seen that when the frame is set up the winding-shafts can be moved toward each other by lifting the locking-pins 20 to disengage their feet from the teeth 18 and that they can be moved apart by simply applying force to the winding-shafts or the sliding boxes to pull them away from each other, and that when the material is stretched between the two winding-shafts the normal tendency of the shafts to move toward each other will be effectually prevented by the locking-pins 20 in the respective boxes. It is also obvious that the shafts will be locked against their normal tendency to rotate when the material is stretched between them by the dogs 37 and the ratchet-wheels 30. In order to take the frame apart, the pins 32 will be drawn outwardly against the force of the springs 35 to disengage them from the sockets in the end of the winding-shafts, when the shafts can then be removed from the boxes at the other end of the frame, and the tie-bar 4 can also be quickly disconnected from the standards, and the several parts can then be stored away in a very compact manner.

It will be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. In a quilting-frame, the combination with a winding-shaft having a spindle at one end and a socket in its other end, of a sliding box supported at each end of the frame, one of said boxes having a horizontal opening to receive the spindle and a spring-actuated pin supported in the other box to enter the said socket, substantially as described.

2. In a quilting-frame, the combination with a winding-shaft having a spindle at one end and a socket in its other end, of a sliding box supported at each end of the frame, one of said boxes having a horizontal opening to receive the spindle, a spring-actuated pin supported in the other box to enter the said socket, ratchet-teeth on one end of the shaft and a dog pivoted on the sliding box to engage said teeth, substantially as described.

3. In a quilting-frame, the combination with a winding-shaft having a spindle at one end and being angular and provided with a socket at its other end, of a ratchet-wheel secured on said angular end, boxes slidably supported on the ends of the frame, one of said boxes having a horizontal opening to receive the shaft-spindle, a horizontally-disposed spring-actuated pin supported in the other box to enter said socket, and a gravity-dog pivoted on the last-named box to engage the teeth on the ratchet-wheel, substantially as described.

4. In a quilting-frame, the combination with toothed bars supported at the ends of the frame, boxes mounted to slide on said bars, locking-pins in said boxes to engage the teeth in the bars, and winding-shafts journaled in said boxes, substantially as described.

5. In a quilting-frame, the combination with the end cross-bars, of the frame, of boxes slidably supported on the cross-bars, each box comprising spaced blocks secured between plates and the upper block having a groove in its lower face, a bar supported at each end of the frame and loosely fitting in the space between the blocks of the respective boxes, and having a toothed rib on its upper face projecting into the grooves in the upper blocks, a locking-pin supported in the upper block of each box to engage the teeth on said rods, and winding-shafts journaled in said boxes, substantially as described.

6. In a quilting-frame, the combination with the end cross-bars of the frame, of boxes slidably supported thereon, a toothed bar extending through openings in the boxes on the respective bars and having its teeth reversely inclined from its middle toward its respective ends, brackets secured to said cross-bars and toothed bars at their ends and middle portions, spring-actuated locking-pins in each box to engage the teeth of the toothed bar, and winding-shafts supported by said boxes, substantially as described.

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

EUGENE H. BUTLER.

Witnesses:
HENRY F. IRWIN,
W. N. CRAWFORD.