

(No Model.)

3 Sheets—Sheet 1.

# C. E. KISTNER. CUSHION MAKING MACHINE.

No. 537,688.

Patented Apr. 16, 1895.

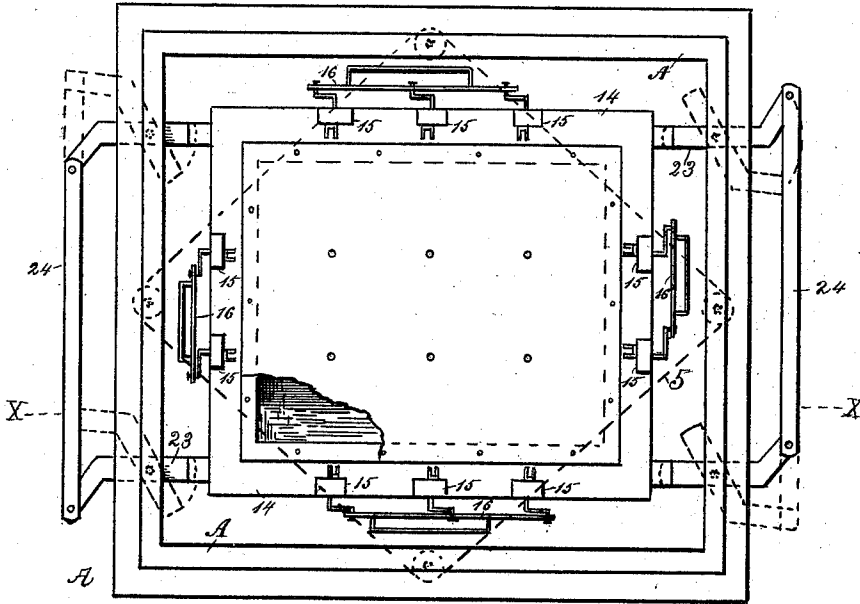


Fig. I.

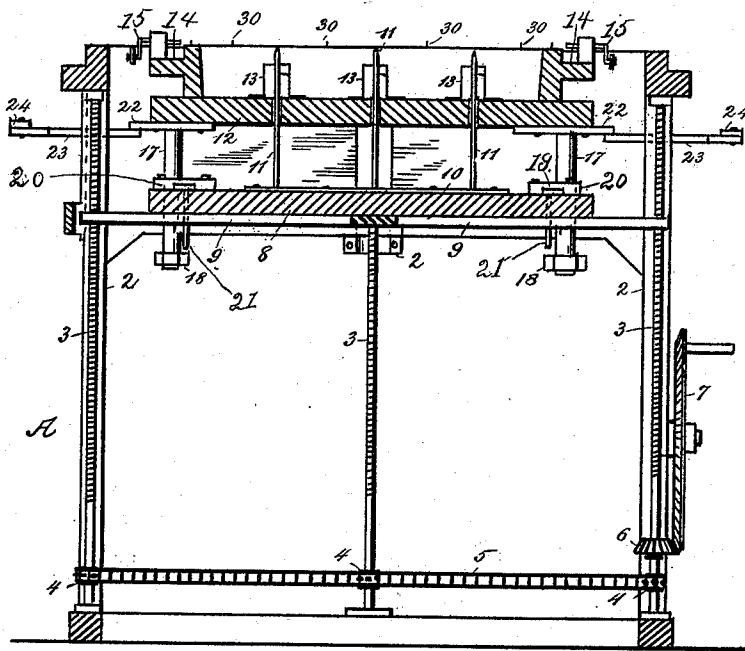


Fig. II.

Witness

*R. S. Miller*  
*L. M. Adams*

Inventor

*Chas. E. Kistner*

By *Wm. Bailey*

(No Model.)

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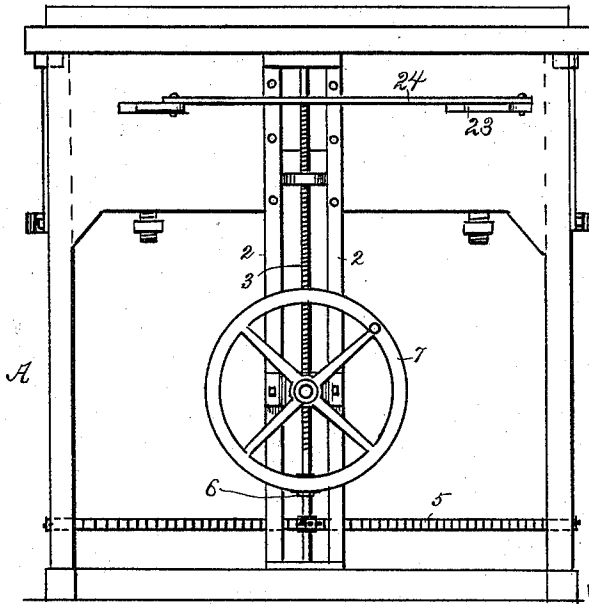


Fig. III.

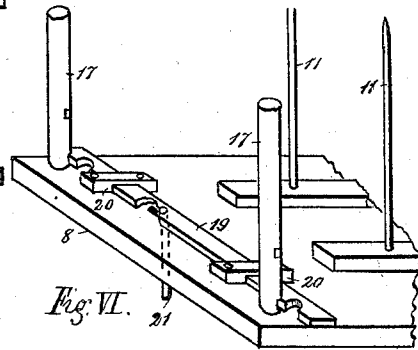


Fig. VI.

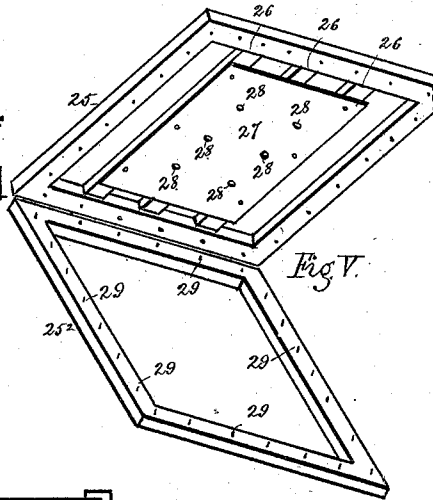


Fig. V.

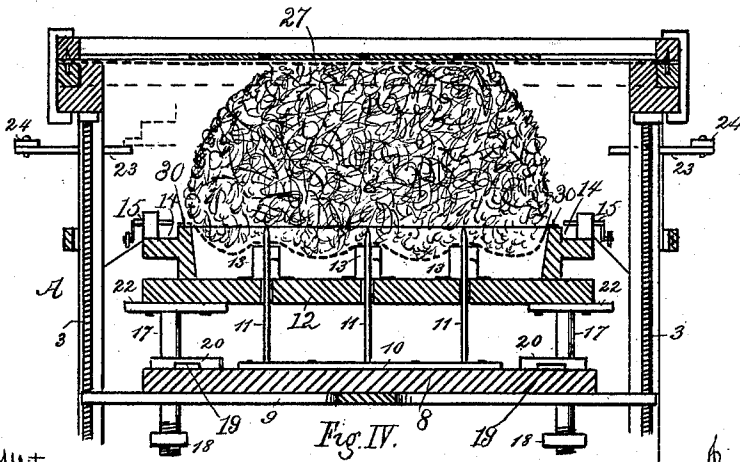


Fig. IV.

Witnesses

R. S. Miller  
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by Bailey

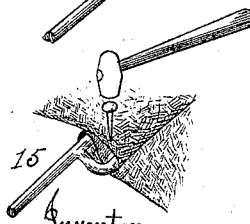
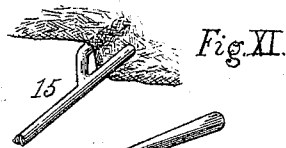
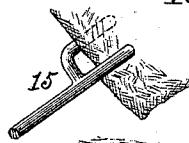
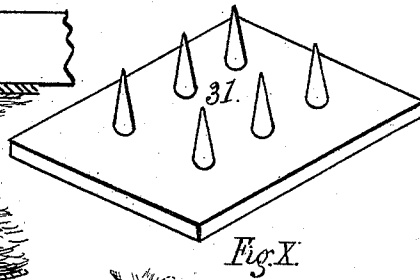
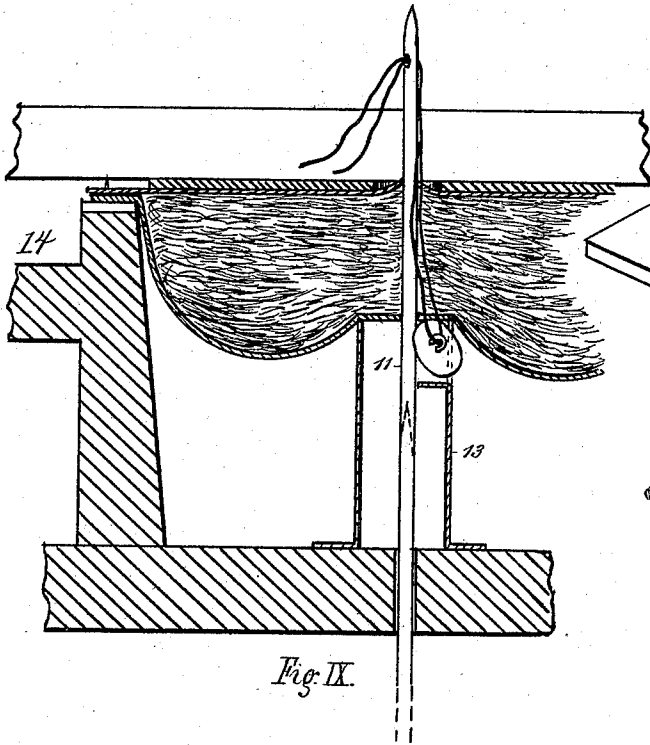
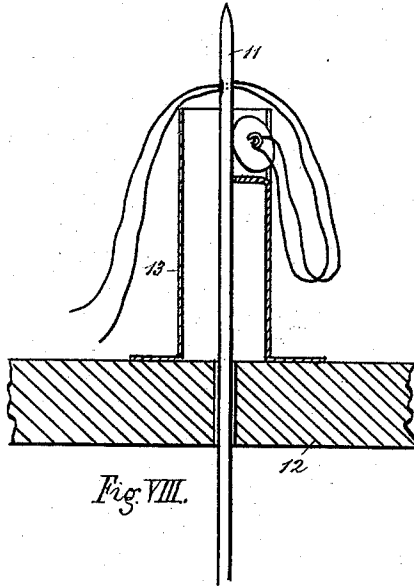
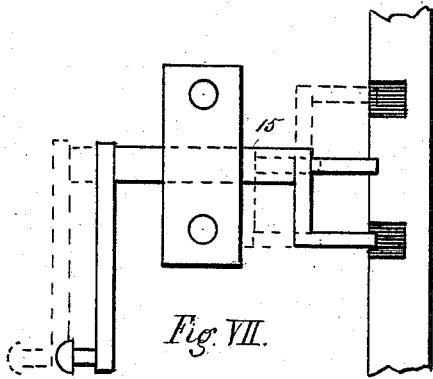
(No Model.)

3 Sheets—Sheet 3.

C. E. KISTNER.  
CUSHION MAKING MACHINE.

No. 537,688.

Patented Apr. 16, 1895.



Witnesses  
*R. S. Millar*  
*L. M. Adams.*

Inventor  
*Chas. E. Kistner*  
 By *[Signature]*

# UNITED STATES PATENT OFFICE.

CHARLES E. KISTNER, OF CINCINNATI, OHIO.

## CUSHION-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 537,688, dated April 16, 1895.

Application filed February 23, 1894. Serial No. 501,240. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. KISTNER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Cushion-Making Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a plan view of my improved cushion making machine—the top frame being removed; Fig. 2, a vertical longitudinal section on line  $xx$  in Fig. 1; Fig. 3, an end elevation; Fig. 4, a vertical longitudinal central section with top frame and burlap section in position; Fig. 5, a perspective view of the double top frame; Fig. 6, a perspective detail of the needle platform; Fig. 7, an enlarged detail view of one of the plaiters; Fig. 8, a detail view of a needle with thread and button initially placed; Fig. 9, a detail of the needle when forced through the cushion, and Fig. 10, an auxiliary device for perforating thick layers of cotton filling. Fig. 11, is a view showing the different steps of the plaiting operation to which the covering material is subjected in forming the cushion, and the operation of tacking or securing together the folds of the plaits after completion.

25 The object of my invention is to provide a novel and efficient device designed to facilitate and expedite the operation of making seat cushions and similar articles.

30 The invention consists of a rectangular frame of suitable dimensions, containing a tray to receive the stock or material for the cushion, an exterior frame in which the said tray is secured and beneath these a needle platform which may be raised or lowered by a series of screws simultaneously operated by a sprocket belt and cranked bevel gear, and having a series of vertical needles which being duly threaded are forced upward through the material composing the cushion and carry the threads to a position where the extremities may be attached to retaining buttons or otherwise made secure.

35 The invention also embodies means for turning the plaits and for the operations incident to the process as will be hereinafter described.

Referring to the accompanying drawings, A represents the main frame or box of the machine, the four sides of which are provided with rectangular vertical metallic frames 2 55 within which project screws 3, each provided with a small sprocket wheel 4 around which runs the endless chain 5. On one of the vertical screws is a small bevel gear 6 driven at multiplied speed by a crank bevel gear 60 wheel 7.

Within the opening of the main frame A is a needle platform 8 secured upon a four armed metallic support 9 the projecting extremities of which have threaded apertures which engage the screws 3. Upon the platform are secured base bars 10 from which vertical needles 11 rigidly project. Above the needle platform is a tray or trough 12 having in its bottom a series of perforations through which the needles pass, the shanks of which are encircled by thimbles 13 whose use will be hereinafter explained.

A ledge 14 extends around the edge of the trough on which are secured plaiting devices 15, a detail view of which is shown in Fig. 7. Each plaiting stem is cranked and the plaiters arranged in series with the cranks connected by bars 16 to secure simultaneous motion of each series. On the under side of the trough frame 12 near the respective corners are secured depending rods 17 which pass freely through apertures in the needle platform. The lower extremities of the rods are provided with nuts 18 to limit the separation 85 of the needle platform and the trough.

Referring to Fig. 6 it will be observed that a flat bar 19 is arranged to slide within keepers 20. This bar has notches in its edge adjacent to the rods 17 and serves to lock the same, or if the notches be moved to coincide with the apertures for the rods the latter are free to slide up or down. The said flat bar is shifted by the depending stem 21 which moves in a slot in platform 8 provided for that purpose as seen in Fig. 6. It will be seen that the said rods are T shaped, each one having outwardly projecting portions 22 which are engaged by pivoted latch arms 23 whose outer ends are united by bars 24 whereby they may be simultaneously operated to release the platform and permit its descent. 100

The removable top frame, Fig. 5, is composed of two rectangular sections 25 and 25<sup>3</sup> hinged together, the upper section having cross bars 26 with a metal plate 27 secured to its under side. This plate is provided with apertures 28 which register with the needles. The lower section 25 is provided with pins or studs 29 whereby the section of burlap is secured and the frames are then closed.

The operation of the machine is as follows: The tray or cushion trough being elevated to the position shown in Fig. 2, the needle points projecting sufficiently above the thimbles to receive the thread, see Fig. 8, the buttons are placed on the inturned ledges of the thimbles. The section of stock forming the seat top having been previously perforated is then put in the tray with the needles projecting through the apertures, and the edges of the section are secured on the pins 30 around the edges of the tray. The spaces between the perforations are so arranged that the section will be quite slack as indicated by the dotted line in Fig. 4. The plaiting devices are then advanced to engage the edges at points midway between the pins, the plaits are formed and folds thereof secured by tacks or other means. The plaiters being then retired, the screws are operated to lower the platform and trough to the position indicated in Fig. 4. The filling, properly massed is then put in. The hinged double frame containing the burlap section is placed on top and clamped, the burlap being directly under the perforated plate which confines it. The needle platform and the trough are meanwhile secured in fixed relation by the locking bar 19 engaging with the notches in the bars 17. The screws being now turned to raise the platform and trough, the latter compresses the filling toward the upper plate until the tray has reached the position shown in Fig. 2, when the latch arms 23 are engaged and retain the trough. The bars 19 are then shifted to unlock the bars 17. The needle platform being thus released is moved up independently to the position shown in Fig. 9 the needles projecting entirely through the cushion. The threads are then withdrawn and the platform

lowered to the limit of the nuts, leaving the trough supported by the latch arms. This movement retires the needles to the dotted point indicated in Fig. 9 when the button is clear to be drawn to a seated position within the thimble aperture and the thread is duly provided with the opposite retaining button. The edges of the stock forming the seat top and the burlap being then united by tacks, rivets or stitching, the upper frame is released and the cushion taken out.

The tool 31, as shown in Fig. 10, is for effectually puncturing or perforating the thick layers of cotton-filling to facilitate the passage of the needles therethrough.

What I claim as new is—

A cushion making machine comprising a rectangular exterior frame containing the herein described vertically movable tray in which the cushion stock or material is disposed and compressed upwardly against a double frame in which the burlap section is clamped; said double frames, a series of plaiting devices attached at regular intervals upon the edges of the tray, and perforations in the bottom of the tray to admit a series of needles; a needle platform beneath the tray, a series of needles having their lower ends secured therein; thimbles attached to the tray, encircling the shanks of the needles, and provided with ledges on which the fastening buttons of the cushions are initially placed and supported; said needle platform adapted to be raised or lowered by the simultaneous action of four screws provided with sprocket wheels connected by a chain belt and driven by a cranked bevel gear wheel; latch arms for holding the tray in fixed position when the cushion is compressed and means for releasing the needle platform from the tray, all combined and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 22d day of December, 1893, in the presence of witnesses.

CHARLES E. KISTNER.

Witnesses:

R. S. MILLAR,  
E. T. ADAMS.