No. 661,302. Patented Nov. 6, 1900.

C. BERNHARDT & W. H. LUELF.

CUSHION MAKING APPARATUS.

(Application filed Mar. 24, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

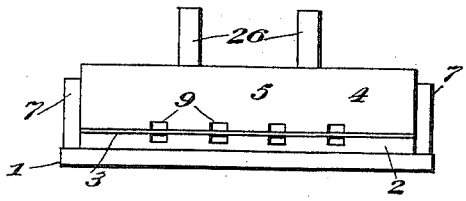


Fig. 2

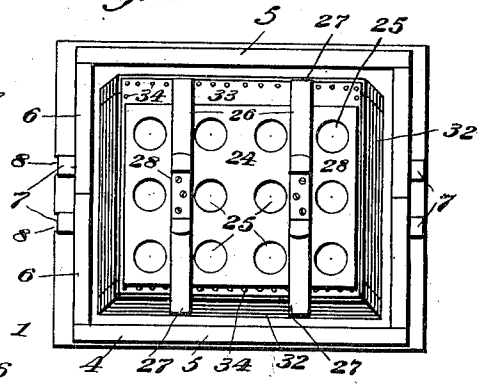


Fig. 3

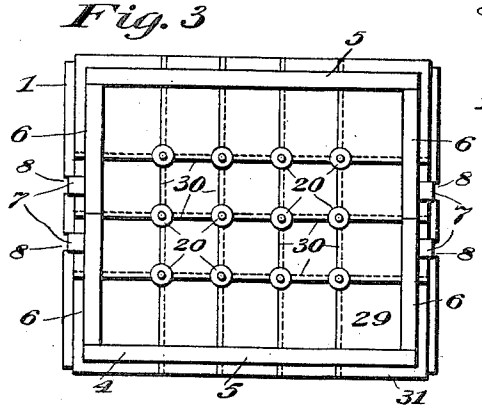


Fig. 4

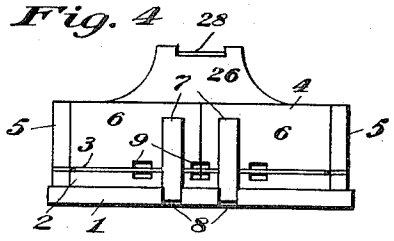


Fig. 5

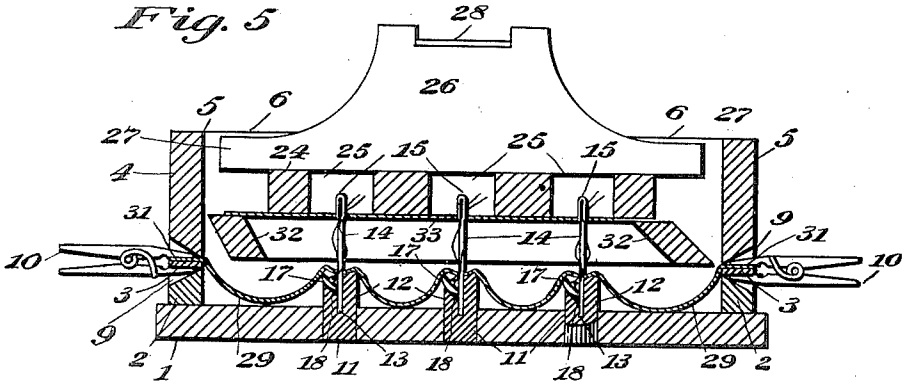
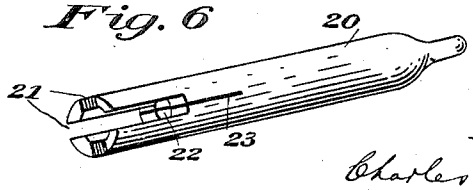


Fig. 6



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Fig. 7

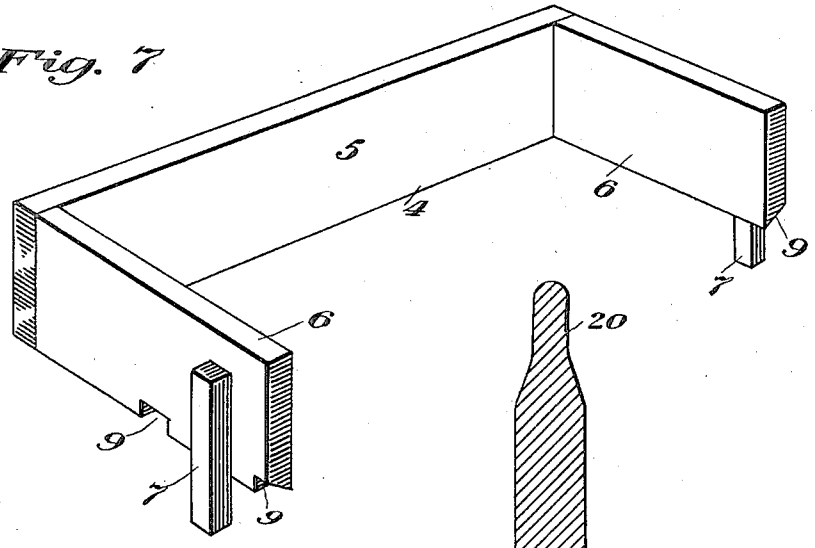


Fig. 8

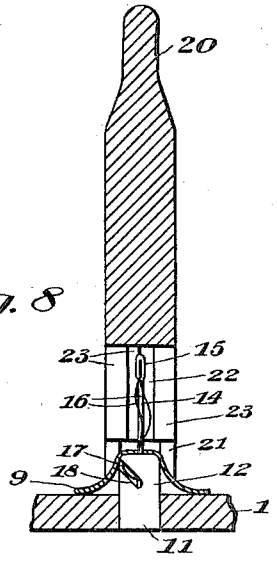


Fig. 9

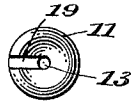
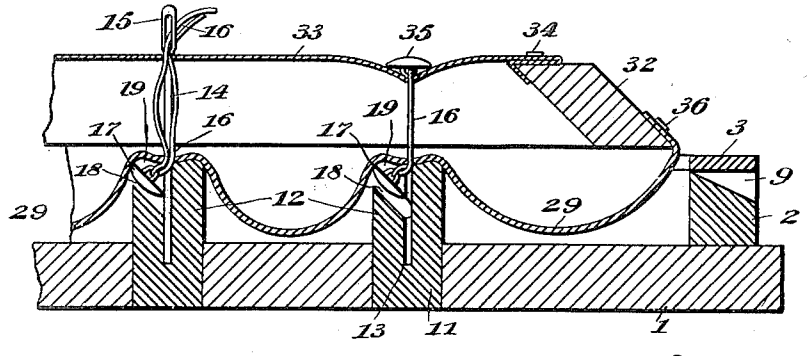


Fig. 10



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UNITED STATES PATENT OFFICE.

CHARLES BERNHARDT AND WILLIAM H. LUELF, OF CINCINNATI, OHIO.

CUSHION-MAKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 661,302, dated November 6, 1900.

Application filed March 24, 1900. Serial No. 10,110. (No model.)

To all whom it may concern:

Be it known that we, CHARLES BERNHARDT and WILLIAM H. LUELF, citizens of the United States of America, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cushion-Making Apparatus, of which the following is a specification.

This invention relates to certain improvements in apparatus for making tufted cushions, and especially carriage-cushions; and the object of the invention is to provide an apparatus of this character of a simple, inexpensive, and durable nature by means of which the cushions may be made more easily and quickly and in a more uniform and satisfactory manner than has heretofore been possible.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved cushion-making apparatus, whereby certain important advantages are attained and the devices are made simpler, cheaper, and otherwise better adapted and more convenient for use than various other similar devices heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate our invention, Figure 1 is a side elevation of an apparatus embodying our invention, and Fig. 2 is a plan view of the same. Fig. 3 is a plan view similar to Fig. 2, but showing the apparatus for a plaited leather or other cushion-cover in place, the press-plate or follower of the apparatus being removed. Fig. 4 is an end view of the apparatus. Fig. 5 is an enlarged vertical section taken transversely through the apparatus and showing the needle and button holding devices carried by the bed. Fig. 6 is a perspective view showing one of the plaiters preferably employed as part of the apparatus. Fig. 7 is an enlarged perspective view showing one of the removable frame-sections detached. Fig. 8 is an enlarged fragmentary section showing one of the plaiters as it appears when in use. Fig. 9 is a plan or end view of one of the needle-holding pins of the bed. Fig. 10 is an enlarged fragmentary sectional view taken transversely through the apparatus in substantially the same plane as Fig. 5, but showing the cushion in a more nearly finished condition.

In the views, 1 indicates the base or bed of the apparatus, made in flat rectangular form, having a raised edge wall 2, along the top of which is secured a metal reinforcing-strip 3.

4 indicates as a whole a rectangular frame resting on the wall 2 of the bed, being formed in two similar halves or sections 5 5, each of the form shown in Fig. 7, and provided at each end 6 with a depending lug or post 7, secured to it in position to enter a recessed opening or notch 8, located in the edge of the bed 1 at the end of the same. At its ends the bed 1 is extended out beyond the wall 2 sufficiently to permit of forming the openings 8 for the posts or studs 7. The lower edge of the frame 4 and the upper edge of the wall 2 of the bed are provided at suitable intervals with registering openings or notches 9 above and below the reinforcing-strip 3, so as to permit of applying clamping devices 10 (see Fig. 5) over said strip to hold the edge of a leather or other cushion-cover when it has been plaited.

In the interior space of the bed 1, within the wall 2, are arranged a plurality of pins 11, the upper ends of which are extended above the bottom of the bed, as shown at 12 in the drawings, being designed to hold the cushion at the points to be tufted above the bottom of the bed, and said pins are provided with vertical axial openings 13 to receive needles 14, the lower ends of which are, as herein shown, blunt, while the upper ends are formed with eyes 15, through which are passed the ends of looped twines 16, as clearly shown in Fig. 10. Upon the lower looped end of the twine 16 of each needle is strung an eye-button 17, which is adapted to be held in an angular or inclined notch or recess 18 in one side of the corresponding pin 11, the eye of the button and the twine 16 being adapted to be passed from said notch 18 up into and through a vertical slot 19, extended across the top of the pin from the central opening 13 outward, as shown in Fig. 9. This slot permits the twine to be drawn perfectly taut and in a substantially straight line from the button 17 through

the cushion in knotting the twine, as hereinafter explained, and also serves to prevent the button from being pulled from the notch 18 when the twine is drawn lengthwise.

In connection with the pins 11 plaiters 20 are provided, being preferably of the construction shown in Figs. 6 and 8, made in the form of rounded pins, the lower ends of which have central openings to receive the pins 11, and are vertically slotted at right angles, as shown at 21, for the passage of the plaits when formed by pressing the plaiters down on the pins over the leather resting thereon. The pins 11 are of course arranged in parallel and regular series, so that the plaits formed in the leather will also be regular. The plaiters 20 are also provided with axial openings or chambers 22 to receive the upper ends of the needles 14, and above the slots 21 are formed cuts 23 to give greater elasticity to the four arms formed by said slots.

A press-plate or follower 24 is also provided, formed of a rectangular piece, of dimensions adapted to be loosely received within the frame 4 and provided with openings 25, so spaced and arranged as to register with the needles 14 when the follower is in position.

The follower or plate 24 is provided at opposite sides of its center with upwardly-extended cross-bars or cleats 26, the upper edges of which are centrally notched, as shown at 28, to receive the bar of a press (not shown) by means of which the follower is pressed down in the frame 4 in the operation of the apparatus. The ends of the cleats 26 project beyond the sides of the follower 24, as shown at 27, so as to adapt the follower for use in making either spring or plain cushions, the follower, in the case of a spring-cushion, taking inside the cushion-frame and the projecting ends 27 of the cleats resting on the sides of said frame. In the case of a plain cushion the follower 24 rests on the under side of the cushion-frame 32, as shown in the drawings.

29 indicates the leather or other cushion-cover, arranged across the bed 1 over the pins 11, the needles 14 carrying twines 16, and buttons 17 having first been secured in the pins 11, as shown in the drawings, after which the sheet 29 is pressed down, so as to cause the needles 14 to pass through the leather, as shown in Figs. 5 and 10. The plaiters 20 are then applied over the pins 11, and the plaits, after having been properly and evenly laid, as indicated at 30 in Fig. 3, are secured to the reinforcing-strip 3 by means of the clamps 10, which take into the recesses 9 at the ends of the plaits. The frame 4 is next applied to the bed, after which the space within said frame is filled with the hair, moss, or the like, (not indicated in the drawings,) the plaiters remaining in position to avoid disarrangement of the twines 16.

The frame having been filled, the plaiters 20 are removed from pins 11, and the cushion-frame 32, covered on its under side with duck or the like, as shown at 33, and secured by tacks 34, is applied in inverted position on top of the moss or hair filling, the follower 24 being then applied over said cushion-frame. Pressure is then applied to the follower, preferably by means of an ordinary hand-press, (not shown,) to cause the cushion-frame 32 to be pressed down to the position shown in Figs. 5 and 10, compressing the filling beneath it and causing the needles 14 to pass up through the duck bottom 33 of the cushion, carrying with them the ends of the twines 16. The needles 14 are then withdrawn upwardly through the cushion, and eye-buttons, such as shown at 35 in Fig. 10, are strung on the free upper ends of the twines 16, after which the ends of each twine are knotted together and drawn tightly down, so as to cause the button 35 to clamp the ends of the twine against the duck bottom 33 and hold the tuft formed by said twine and its buttons 17 and 35 in place. The frame 4 is then removed without relaxing the pressure on the follower, this being permitted by making said frame in two independent sections. By the removal of the frame the edges of the cushion are exposed, and the clamps 10 being removed the edges 31 of the plaited leather 29 may be drawn up over the outside of the cushion-frame 32 and secured thereto by tacks or the like, as clearly shown at 36 in Fig. 10.

From the above description it will be seen that the apparatus constructed according to our invention is of an extremely simple and inexpensive nature and is especially well adapted for use, since it permits of a considerable saving of time and labor in the manufacture of the cushions, there being but one pressing operation needed, and also permits of an economy in the use of duck and leather and of a further economy in the omission of springs such as are commonly required in cushions as heretofore made. The eye-buttons are also more economical than the staple-fasteners heretofore employed and give a better result, and the apparatus also insures a uniform hardness to the cushions made as above described. It will also be obvious from the above description that our improved apparatus is capable of considerable modification without material departure from the principles and spirit of the invention, and for this reason we do not wish to be understood as limiting ourselves to the precise form and arrangement of the several parts herein set forth.

Having thus described our invention, we claim—

1. In an apparatus for the manufacture of cushions, the combination of a bed to receive the cushion, a follower for pressing the cushion on the bed and a frame inclosing the follower with its lower edges rested on the edges of the bed, but removable therefrom and when in position on the bed adapted to clamp between its said lower edges and the edges of the bed the cushion-cover, substantially as set forth.

2. In an apparatus for making cushions, the combination of a bed to receive the cushion and provided with a raised edge wall, a follower for pressing the cushion on the bed and a frame inclosing the follower with its lower edges rested on the raised edge wall of the bed but removable therefrom and when in position on the bed adapted to clamp between its said lower edges and the raised edge wall of the bed the cushion-cover, substantially as set forth.

3. In an apparatus for making cushions, the combination of a bed having a raised edge wall notched at intervals and provided with a reinforcing-strip over said notches, a follower for pressing the cushion on the bed and a frame inclosing the follower with its lower edge rested on the raised edge wall of the bed over the reinforcing-strip thereof and formed with notches corresponding in arrangement with the notches of said raised edge wall, said frame being removable from the bed and being adapted when in position on the bed to clamp the cushion-cover between its lower edges and the reinforcing-strip of the edge wall of the bed, substantially as described.

4. In an apparatus for making cushions, the combination of a bed to receive the cushion, pins on the bed and projecting above the face thereof and provided with openings to receive needles and also provided with notches in their sides to receive buttons, the upper ends of the pins being provided with slots communicating with said notches and adapted for the passage of twines, and a follower for pressing the cushion on the bed, substantially as set forth.

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