No. 624,134. Patented May 2, 1899.

H. VOIGHT.

UPHOLSTERING APPLIANCE.

(Application filed Jan. 27, 1899.)

(No Model.) 3 Sheets—Sheet 1.

FIG. 1.

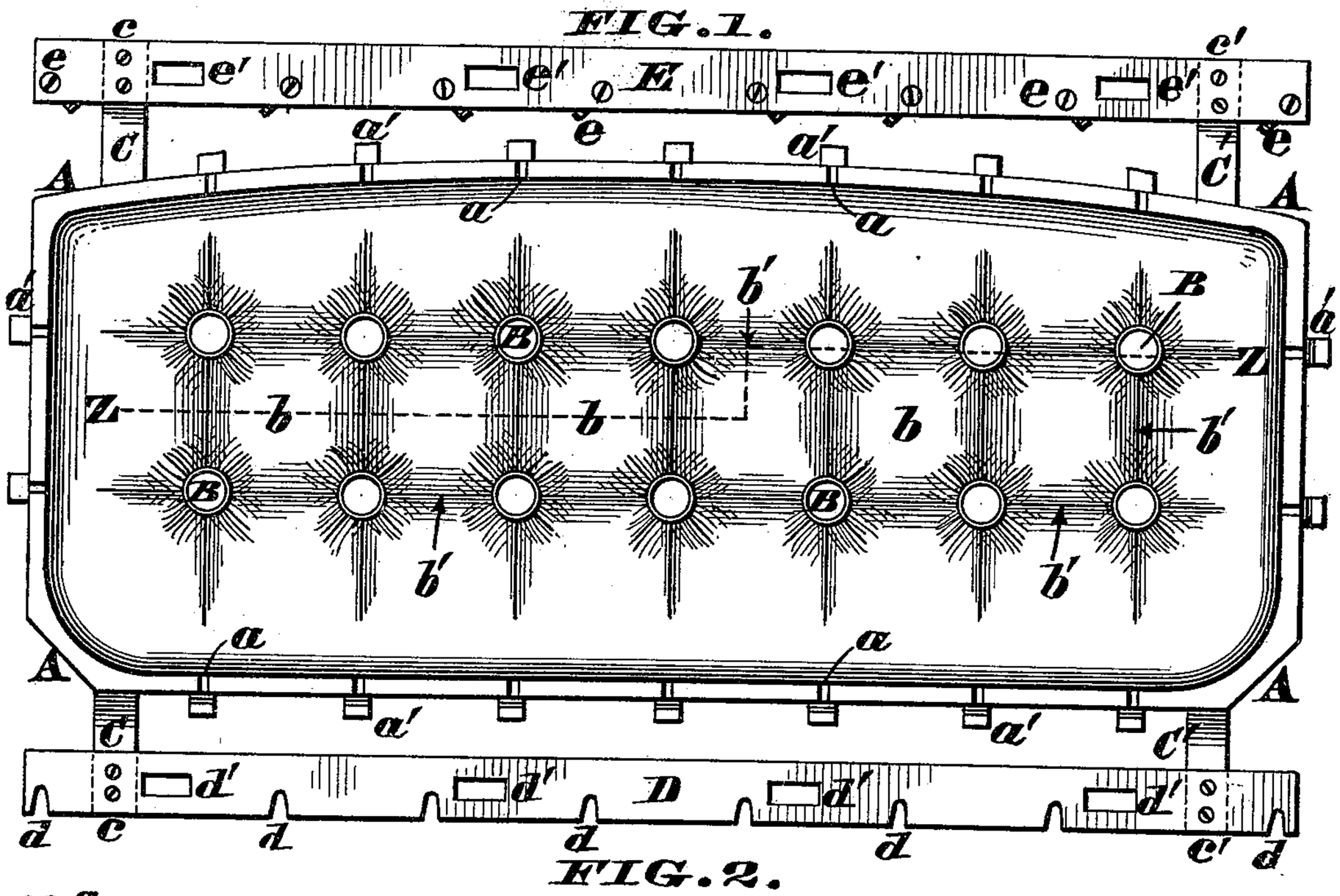
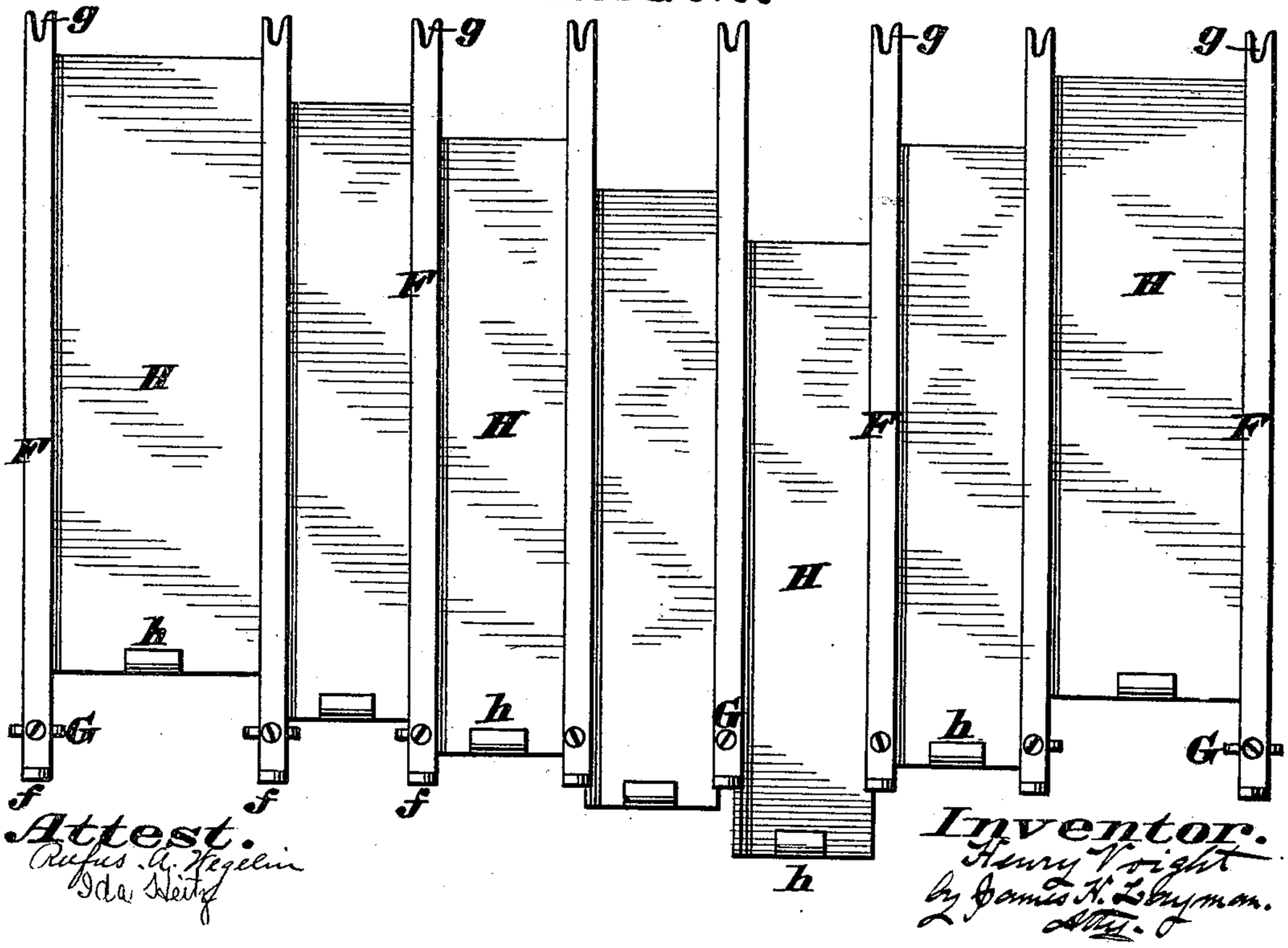


FIG. 2.



Attest.
Rufus A. Hegelein
Ida Deitz

Inventor.
Henry Voight
by James K. Lowman.
Atty.

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(No Model.) 3 Sheets—Sheet 2.

FIG. 3.

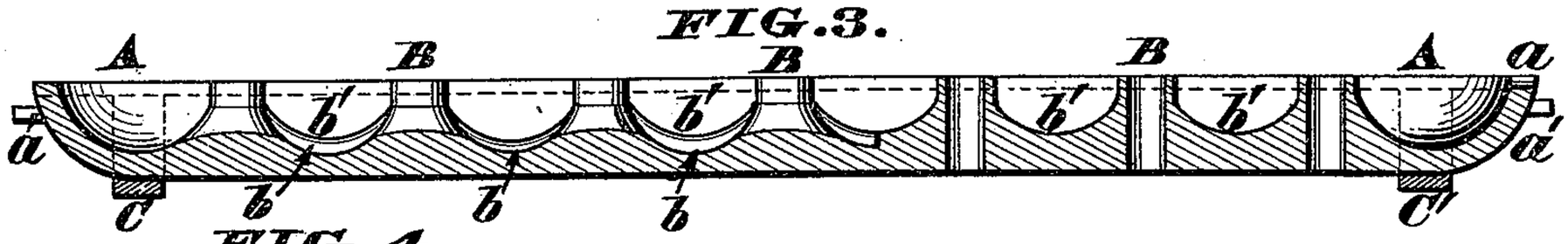


FIG. 4.

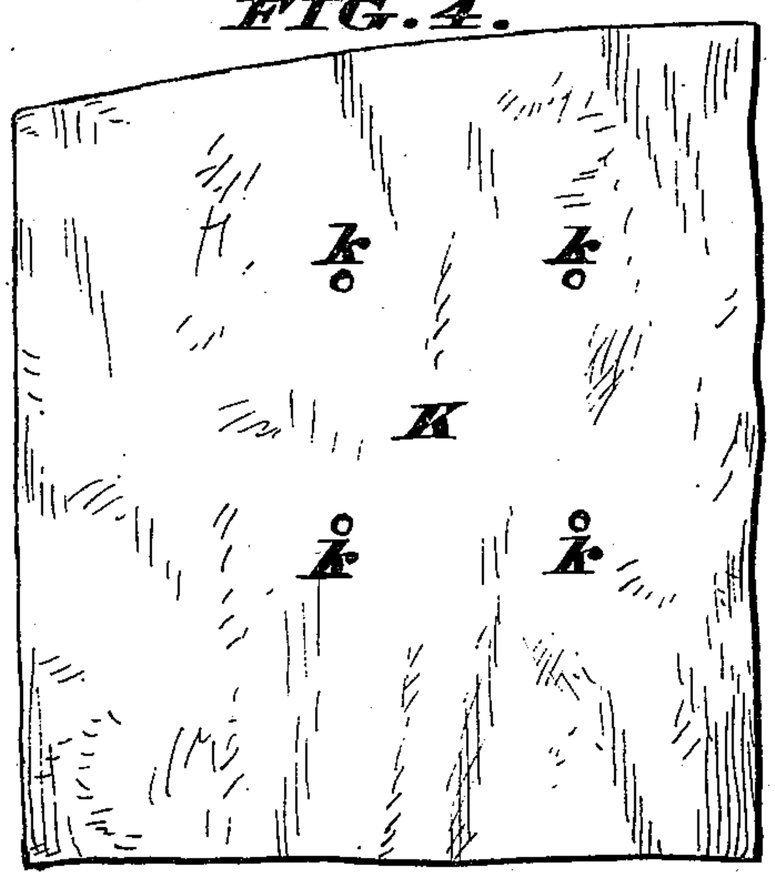


FIG. 5.

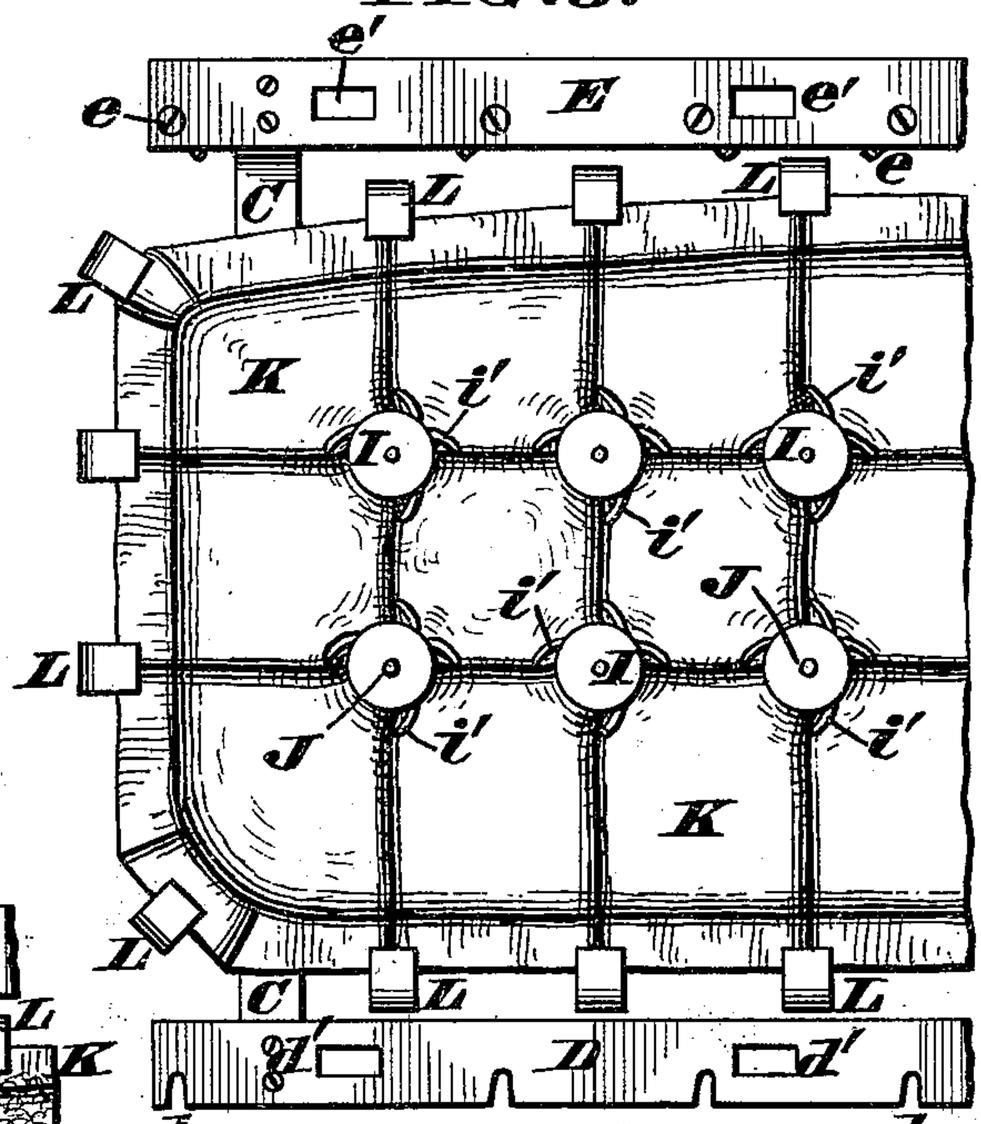


FIG. 6.

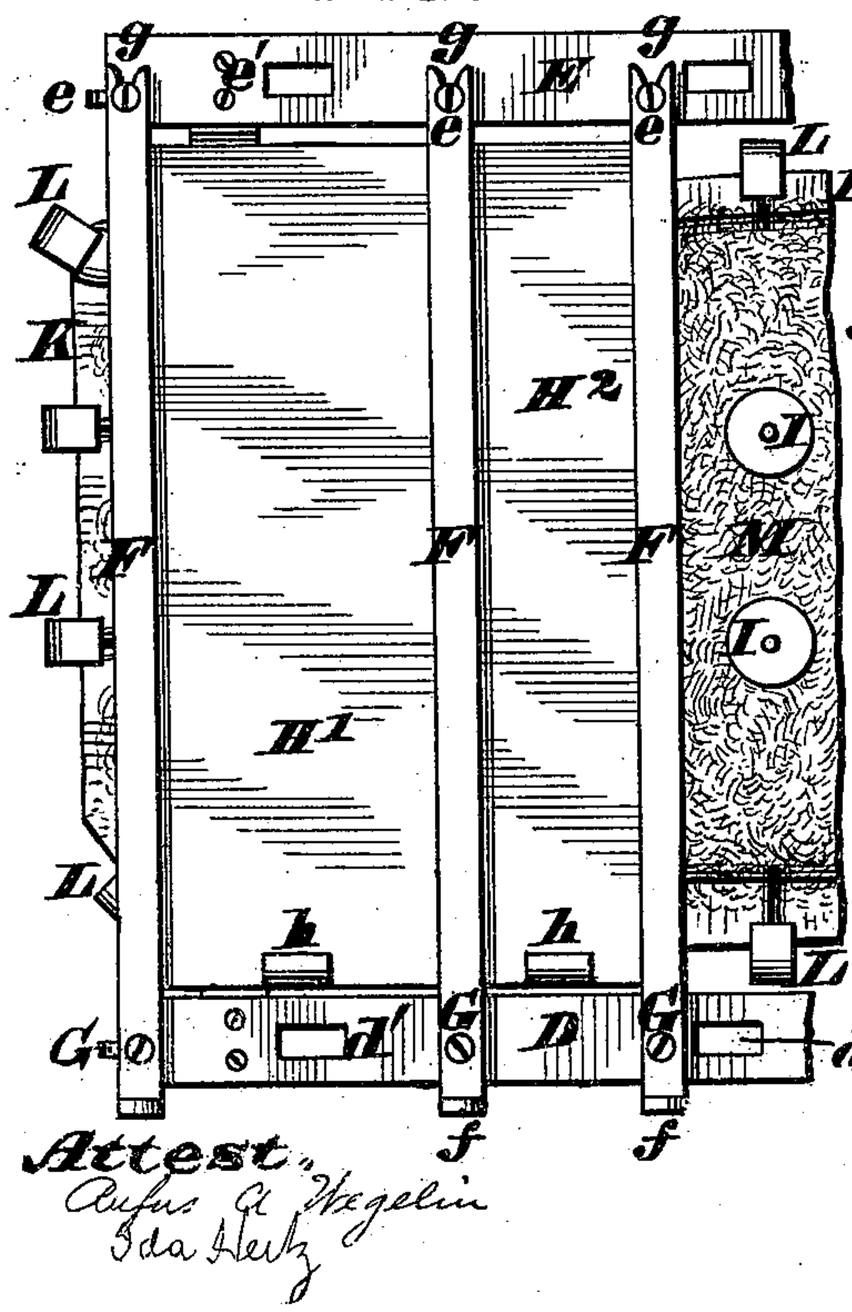


FIG. 7.

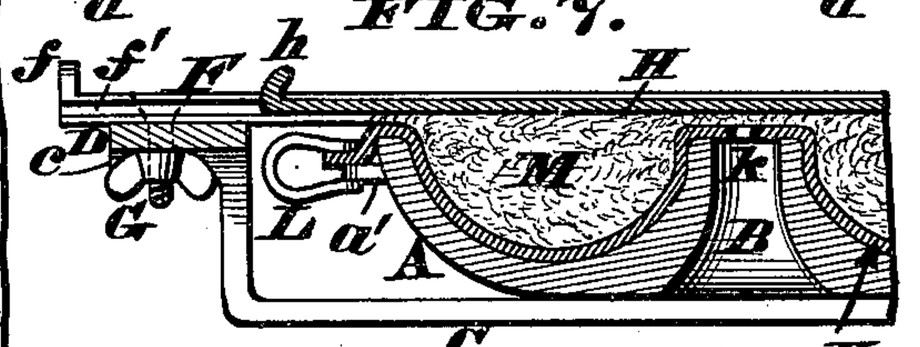


FIG. 8.

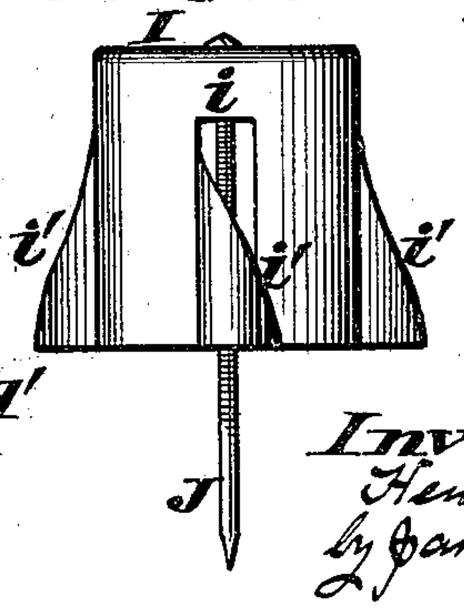
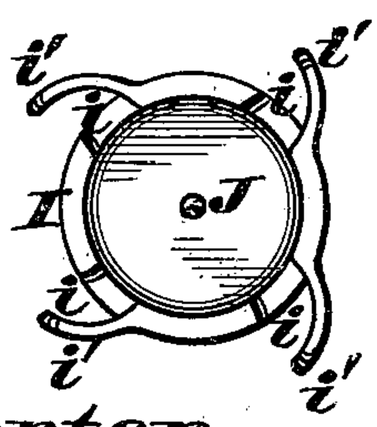


FIG. 9.



Attest,
Augus. G. Wegelin
Ida Hertz

Inventor.
Henry Voight
by James N. Zaymon.
Atty.

No. 624,134. Patented May 2, 1899.

H. VOIGHT.

UPHOLSTERING APPLIANCE.

(Application filed Jan. 27, 1899.)

(No Model.) 3 Sheets—Sheet 3.

FIG. 10.

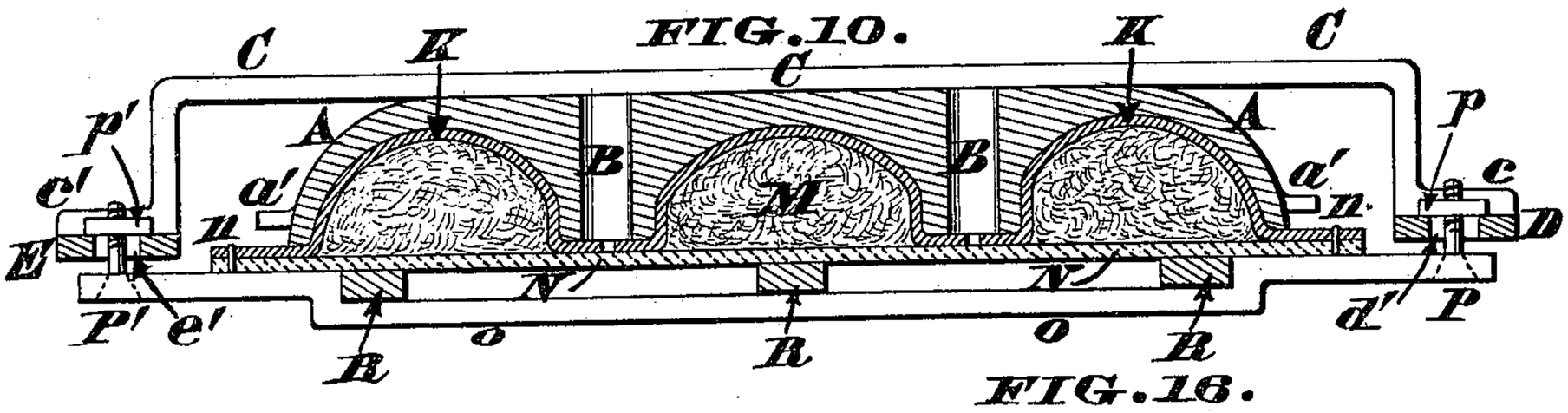


FIG. 16.

FIG. 11.

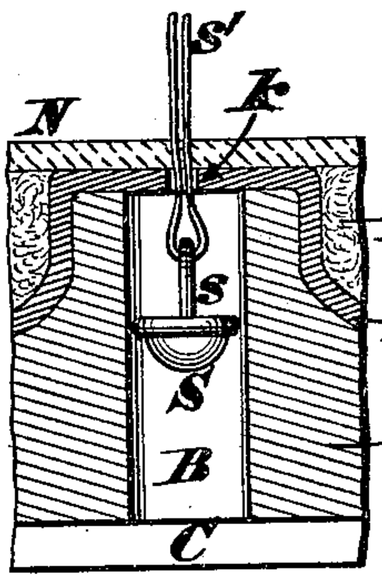
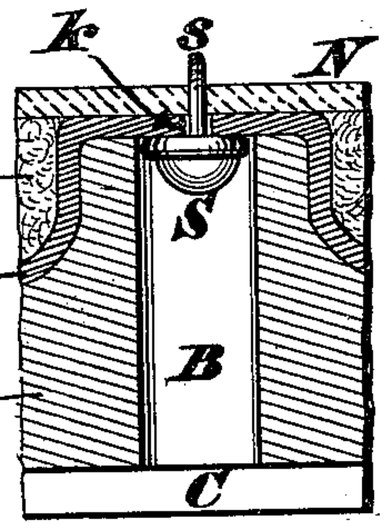


FIG. 12.



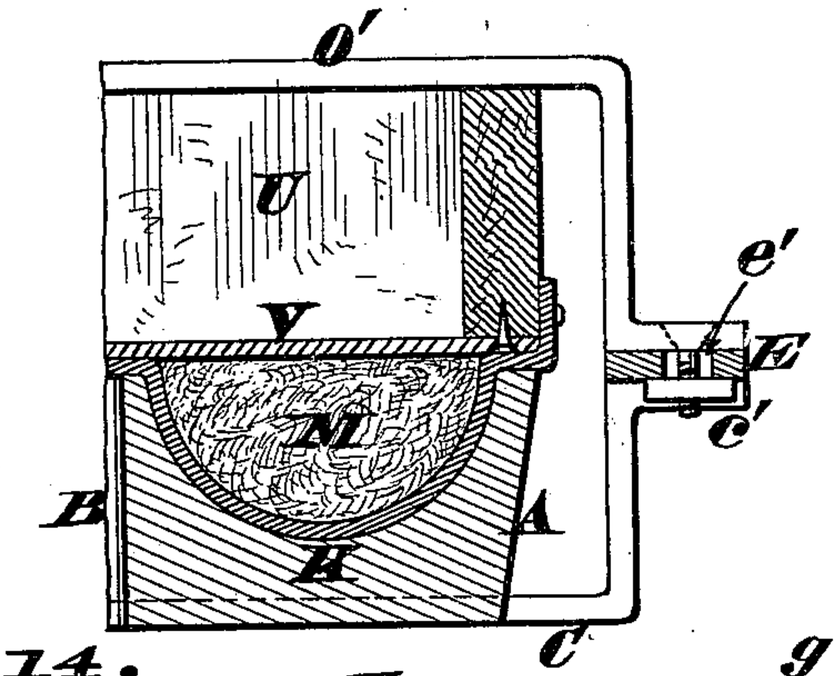


FIG. 14.

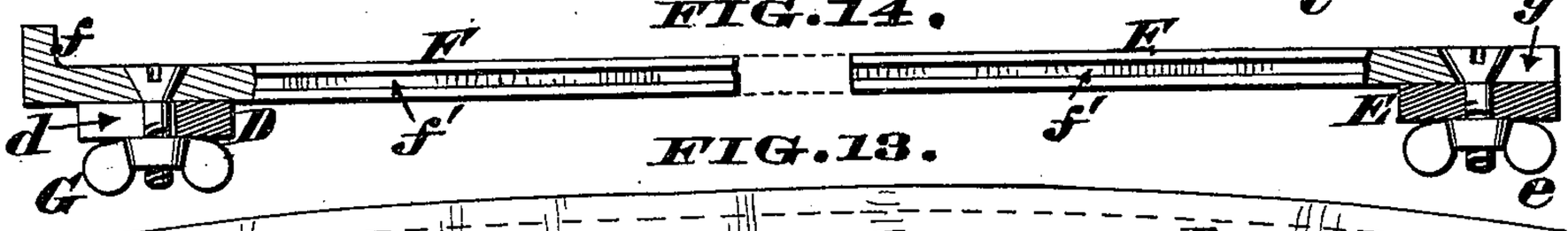


FIG. 13.

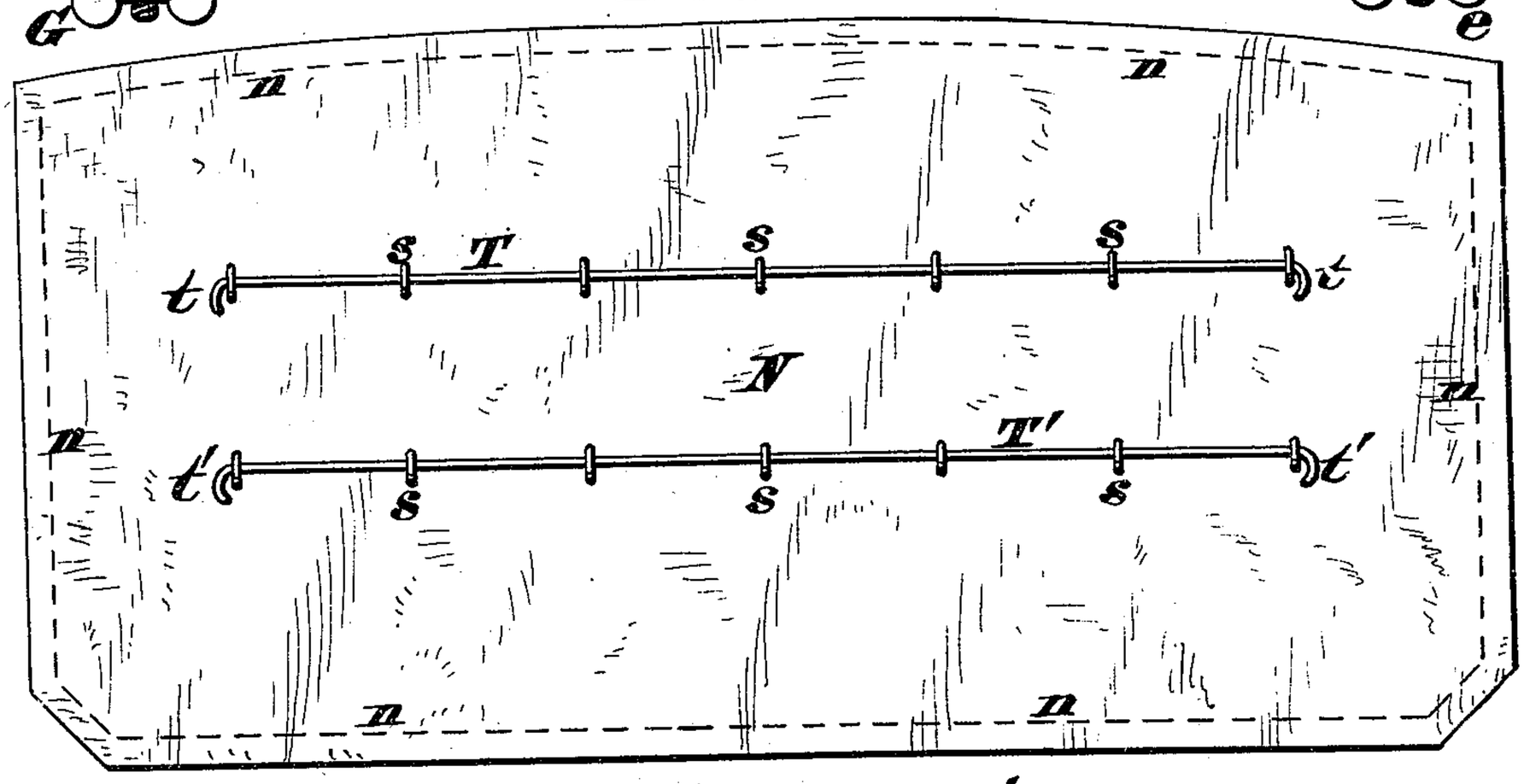
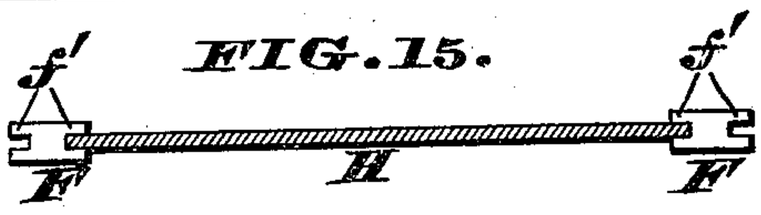


FIG. 15.



Attest.
Rufus. A. Hazelin
Ida S. Leitz

Inventor.
Henry Voight
by James N. Layman.
Atty.

UNITED STATES PATENT OFFICE.

HENRY VOIGHT, OF CINCINNATI, OHIO.

UPHOLSTERING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 624,134, dated May 2, 1899.

Application filed January 27, 1899. Serial No. 703,559. (No model.)

To all whom it may concern:

Be it known that I, HENRY VOIGHT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Upholstering Appliances; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form a part of this specification.

My invention comprises a hand-operated appliance for expediting the manufacture of tufted upholstery-work or cushions to be used for furniture-seats, carriage-backs, &c., the details of said appliance and the method of manipulating it being hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of the mold of the aforesaid appliance. Fig. 2 is another plan showing a set of grooved cross-bars and slides detached from said mold, said slides being shown in different positions to indicate that they are capable of independent adjustment. Fig. 3 is a longitudinal section of the mold, taken at the dotted line Z Z of Fig. 1. Fig. 4 is a plan of a portion of the facing of a cushion of a carriage-back to be formed in the mold. Fig. 5 is a plan showing said facing secured within said mold and the cushion-plaits formed in the facing. Fig. 6 is a plan showing the first and second sections of the mold filled and covered with their respective slides, the third section being also filled, but uncovered. Fig. 7 is an enlarged transverse section through one side of a section of the mold. Fig. 8 is an enlarged side elevation of a slotted and winged cap used for laying the plaits in the facing. Fig. 9 is an inverted plan of said cap. Fig. 10 is a transverse section showing the charged mold inverted, the facing stitched to a pasteboard back, and the back temporarily held in place by one of a number of transverse clamp-irons and three longitudinal bars. Fig. 11 shows the first step in inserting a button within a guide of the mold. Fig. 12 shows the succeeding step in applying said button. Fig. 13 is a plan of the back of a finished cushion made in said mold. Fig. 14 is an enlarged sectional elevation of one of the longitudinally-grooved cross-bars, the central part of said bar being broken away. Fig. 15 shows a slide engaged with a pair of said grooved bars. Fig. 16 shows the method of forming a seat-cushion on said mold.

The principal member of my upholstering appliance is a mold A of any suitable size, shape, and material, but preferably made of aluminium, so as to be light and capable of ready manipulation, as the entire appliance is to be operated solely by hand. Furthermore, this mold is provided with a number of button-inserting guides B, arranged in any desired manner and at any suitable distance from each other, although in the present case said guides are disposed in squares and are four inches from center to center. Again, central pits or depressions *b* are formed between these guides, the most elevated portions or divisions between said pits forming ridges, as shown at *b'* in Figs. 1 and 3. These ridges may be angular or more or less rounded, according to the shape it is desired to impart to the plaits or folds of a cushion-front. The upper edge of the mold has notches *a* in line with said ridges, and below each notch is an outwardly-projecting lug *a'*, for a purpose that will presently appear.

Secured to the under side of the mold are transverse bars C C', bent up and then terminating with horizontal extensions *c c'*, as more clearly shown in Fig. 10, the duty of these extensions being to support a front side bar D and a back side bar E. These bars D E are parallel with each other and a sufficient distance from the opposite sides of the mold to enable certain manipulations to take place. Bar D has notches *d* in its front edge and a number of longitudinal slots *d'*. Bar E has a number of thumb-screws *e* and a set of longitudinal slots *e'* in line with the slots *d'*.

F represents a number of readily-detachable cross-bars having upturned flanges or pulls *f* at their front ends. Each cross-bar is grooved longitudinally on its edges, as shown at *f'* in Fig. 15, and has near its front end a thumb-screw G and at its rear end a slot *g*, as more clearly shown in Fig. 14. Adapted to traverse these grooves *f'* are slides H, made of sheet metal and having at their front ends flanges or pulls *h*. I are cylindrical caps

open at bottom, but closed at top and provided with four longitudinal slots *i*, flanked with wings *i'*, arranged in the manner shown in Fig. 9, the diameter of said caps being somewhat greater than that of the button-inserting guides B, so as to afford between said caps and guides sufficient room for the facing material. J are pins occupying axial positions within said caps and secured to their closed heads, which heads are preferably marked with a star or other device to indicate similar sides or parts of said caps, and thereby facilitate their proper and expeditious application to the button-guides B.

K in Fig. 4 is a piece of leather or other flexible material suitable for the facing of a padded or stuffed cushion, and *k* are holes punched in said facing, one for each button to be applied to the cushion. Furthermore, these holes *k* are four and three-quarters of an inch apart, in order that there may be sufficient "fullness" in said cover to form the desired plait or folds.

L are spring-clasps adapted to grasp the margins of the facing K and retain it in its proper place within the mold.

My upholstering appliance is operated in the following manner: In the first place the mold A is free from all the bars F and slides H, as shown in Fig. 1, and is laid horizontally upon a table or work-bench, with its pitted side *b b'* up, so as to facilitate the application of the facing K. This facing is inverted for the purpose of turning its prepared or finished surface down, care being taken to bring its perforations *k* over the centers of the button-inserting guides B. The caps I must next be properly fitted over said guides, and as these caps are precisely alike a description of the method of applying one of them will answer for the entire set. The operator inserts the pin of the first cap in one of the small holes *k* of the facing and notices that the mark or other indicator on said cap is presented toward him, and further observes that one slot *i* of said cap is in line with a front notch *a* of the mold while another slot is in line with an end notch of the same. Having taken these precautions, the cap is at once properly "centered" with reference to the guide and is forced down until it rests squarely upon the facing covering the top of said guide. During this act of applying the cap a certain amount of fullness naturally gathers in the facing K, which fullness can escape only through the slots *i* in the sides of said cap, and as the material emerges at these four openings the curved wings *i'* turn the folds over in the proper direction, thereby initiating the formation of the plaits, their completion being effected by hand. When the plaits are laid out as far as the edge of the mold, a pair of spring-clasps L are brought into service and clamp the free ends of said plaits to the lugs *a'*. The second cap is then applied in a precisely similar manner, and so on until all the guides are covered and all the spring-clasps engaged with the lugs and facing-plaits, thereby preventing any shifting of the facing within the mold while the filling operation is in progress. Fig. 5 shows how a number of the caps are applied and how their wings *i'* act as plait-turners and render it almost impossible to lay the folds in the wrong direction. Fig. 7 shows how a clasp L binds the facing K to the mold while the cushion-filling in being inserted. This filling or padding M is preferably inserted at the left end of the mold and is evenly applied by hand until the facing is covered from said end about as far as the position of the second cross-bar F, at which time the first and second bars are connected to the side bars D and E, which connection is effected in the following manner: The slotted end *g* of the first bar is first engaged with the thumb-screw *e* of bar E and the thumb-screw G of said bar is engaged with the notch *d* of bar D, after which act said screws are tightened, so as to hold said bar F immovably in place. (See Figs. 6 and 14.) The second cross-bar F is now secured in the same way, and then the first slide H' is engaged with said bars, being inserted within their longitudinal grooves *f'*. This insertion takes place at the back of the mold, and as said slide is drawn forward or toward the bar D the two caps I are successively detached from the button-inserting guides. Consequently when said slide is drawn entirely across the mold the filling in its first section is concealed and securely held in place. The second section of the mold is then charged in the same manner, the third cross-bar F secured in place, and the second slide H^2 engaged with the second and third cross-bars, and so on until the mold is completely filled with the padding, which of course may be of any desired material. Evidently no part of the mold is now visible, the appliance exposing at this time nothing but the side bars D E, cross-bars F, slides H, and the clasps L at the end of said mold. The next act consists in attaching the facing K to a strawboard back N, (shown in Figs. 10, 11, 12, and 13,) which proceeding is accomplished as follows: This backing is large enough to project about half an inch beyond the sides and ends of the mold and is laid flatly upon the aforesaid cross-bars and slides, after which act a clamp-iron O (shown in Fig. 10) is at once attached to the side bars D E and the first slide H' is bodily withdrawn toward the operator. Consequently the backing N now takes the place of the slide in retaining the filling M within the mold. This clamp-iron has near its opposite ends screws P P', provided with nuts *p p'*, which nuts are of the same oblong shape as the slots *d' e'* of the aforesaid side bars, but not quite so long or wide, as said nuts must pass freely through said slots. They are first disposed lengthwise of said slots, and after being passed

through them said nuts are turned around crosswise and cannot accidentally work loose. Again, the clamp-iron O is bent up at *o* to permit two or more bars R being inserted between it and the backing N, said bars R being arranged to extend the entire length of the mold. The slide in line with the slots *d' e'*, the second pair from said bar C, is next withdrawn, and the second clamp-iron is secured by passing its screws through said slots, and so on until all the clamp-irons are thus applied. Now remove all the remaining cross-bars F, insert the longitudinal bars R between said bars F and the backing N, and then tighten up the nuts *p p'*, so as to cause the bars O and R to clamp said backing immovably upon the edge of the mold. Next remove a few of the clasps L and stitch the margin of the facing K to the backing N, as indicated at *n* in Fig. 10, or this attachment can be effected with tacks, if desired. Other clasps are then removed and the stitching proceeded with and is carried around the entire backing, as shown in Fig. 13. One end of a cord *s'* (shown in Fig. 11) is then passed through the eye of a tufting-needle, then through the shank *s* of a button S, and finally back through said eye, so as to double said cord. The needle is then passed up through one of the guides B, caused to traverse a hole *k* of facing K, and make a passage through the backing N for said cord to be pulled through. The cord is now disengaged from the needle and is pulled on by the operator until the button bears snugly against the under side of backing N, and so on until all the buttons are in place, and then the cords are drawn out of their shanks. Wires T T' are then passed through the shanks, and the ends of said wires are bent, as at *t t'* in Fig. 13, and the cushion is at once ready to be released from the mold. To do this it is necessary only to unscrew the nuts *p p'*, take off the clamp-irons O and longitudinal bars R, and then lift the cushion bodily out of the mold. The detached cushion can now be trimmed and finished in any manner to suit the demands of the trade.

Fig. 16 shows the method of making a seat-cushion, a wooden frame or box U being secured upon the mold with a clamp-iron O' and having a thick piece of duck V stretched across its top. This cushion is formed in the same manner as the padded back above described, the only material difference being that in the present case the edge of the facing K is tacked to the exterior of the box U.

In Figs. 10, 11, and 12 the guides B are shown as cylindrical passages running straight through from the top to the bottom of the mold; but in Fig. 7 the guide is increased in diameter at its receiving end. Therefore the exact shape of these passages is immaterial, provided they so guide the buttons or tufts as to cause their shanks or eyes to traverse the backing at or near the facing-holes *k*. Again, as a matter of convenience the caps are spoken of as having marks in front; but they can just as well have these indicators on their backs or sides, as the sole object of such marks is to enable all the caps to be applied in the same way to the respective guides of the mold.

Finally, in the drawings the grooved bars F and slides H are arranged transversely of the mold; but it is evident that they may in some cases be disposed longitudinally of it, and such a slight change is to be considered as within the scope of my invention.

I claim as my invention—

1. An upholstering appliance including a mold provided with button-inserting guides, and a series of shiftable slides, for the purpose stated.

2. An upholstering appliance including a mold provided with button-inserting guides, a series of longitudinally-grooved cross-bars, and laterally-shiftable slides traversing said grooves, for the purpose described.

3. An upholstering appliance including a mold provided with button-inserting guides, fixed side bars secured along said mold; longitudinally-grooved cross-bars coupled to said side bars, and laterally-shiftable slides traversing said grooves, for the purpose described.

4. An upholstering appliance including a mold provided with button-inserting guides, fixed side bars secured along said mold, and provided with longitudinal slots, and a clamp-iron having thumb-screws that engage with said slots, in the manner described, and for the purpose stated.

5. An upholstering appliance including the mold A provided with button-inserting guides, B, a side bar D secured to the front of said mold, and notched at *d;* a side bar E, secured to the back of said mold, and provided with thumb-screws *e*, a longitudinally-grooved cross-bar F *f' f'*, slotted at *g*, and provided with a thumb-screw G, and coupled to said side bars D, E, in the manner described, and a slide H, traversing said grooves *f' f'*, all as herein set forth.

6. In an upholstering appliance including a mold having button-inserting guides, the detachable cap I, closed at top, but open at bottom, and provided with longitudinal slots *i*, lateral wings *i'*, and an axial pin J, which pin projects down from said closed top, all as herein described, and for the purpose stated.

7. In an upholstering appliance including the mold A, provided with button-inserting guides B, the transverse bars C, C', secured to said mold and having extensions *c*, *c'*, the notched and longitudinally-slotted side bar D *d d'*, carried by the front extensions, and the longitudinally-slotted side bar E *e'*, carried by the rear extensions, said bar E being provided with thumb-screws *e*, as herein described, and for the purpose stated.

8. In an upholstering appliance including the mold A, provided with button-inserting guides B, the longitudinally-slotted side bars D *d'*, E *e'*, the clamp-iron O, attached to said

bars in the manner described, and a set of longitudinal bars R, adapted to be inserted between said iron and a cushion-backing, in the manner described, and for the purpose stated.

9. An upholstering appliance including a mold; longitudinally-grooved and readily-detachable bars applied to said mold, and a slide traversing the grooves of said bars, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY VOIGHT.

Witnesses:
JAMES H. LAYMAN,
RUFUS A. WEGELIN.