

No. 654,685.

Patented July 31, 1900.

J. A. STAPLES.
UPHOLSTERING APPARATUS.

(Application filed Feb. 8, 1899.)

(No Model.)

FIG. 1

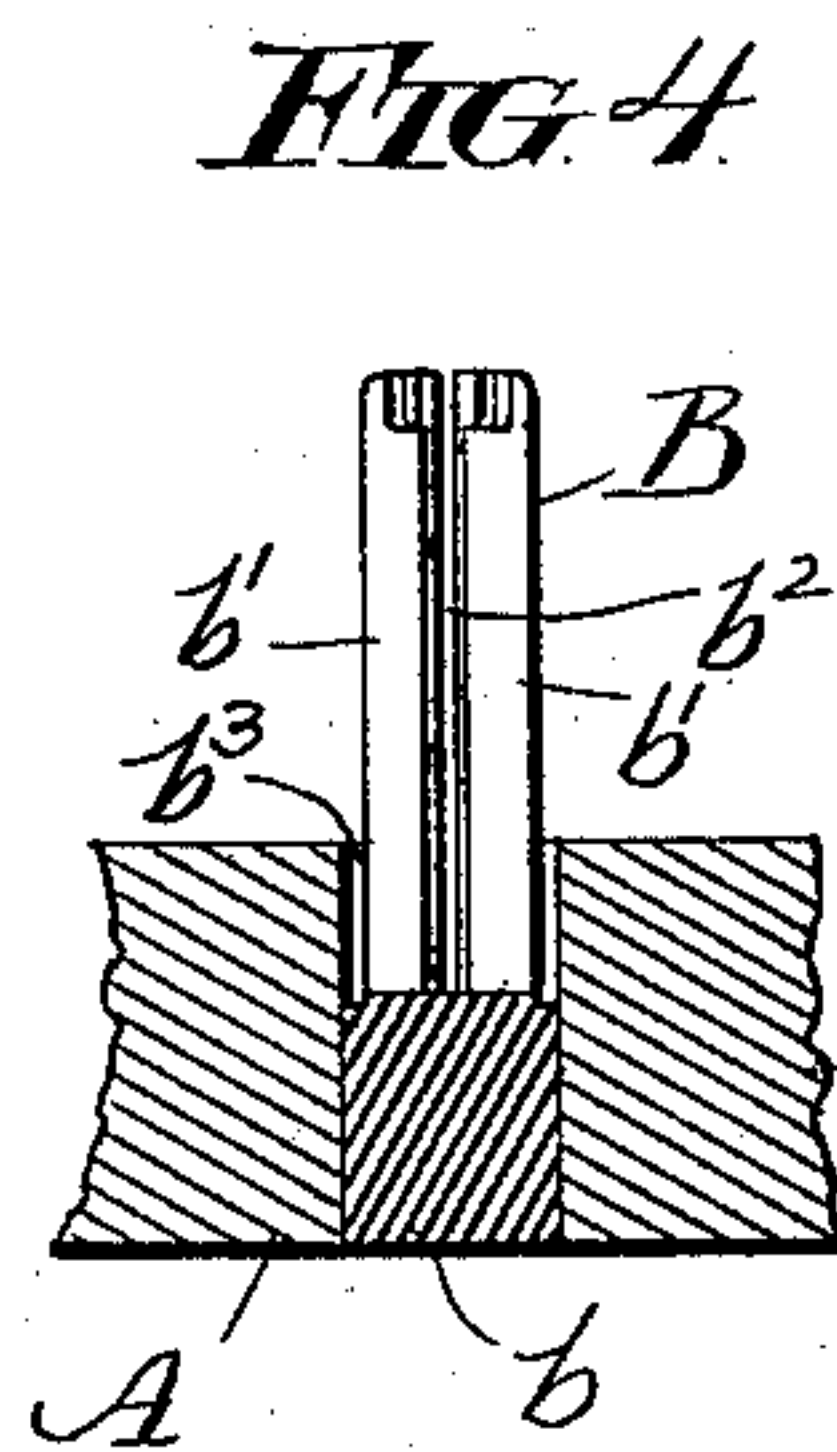
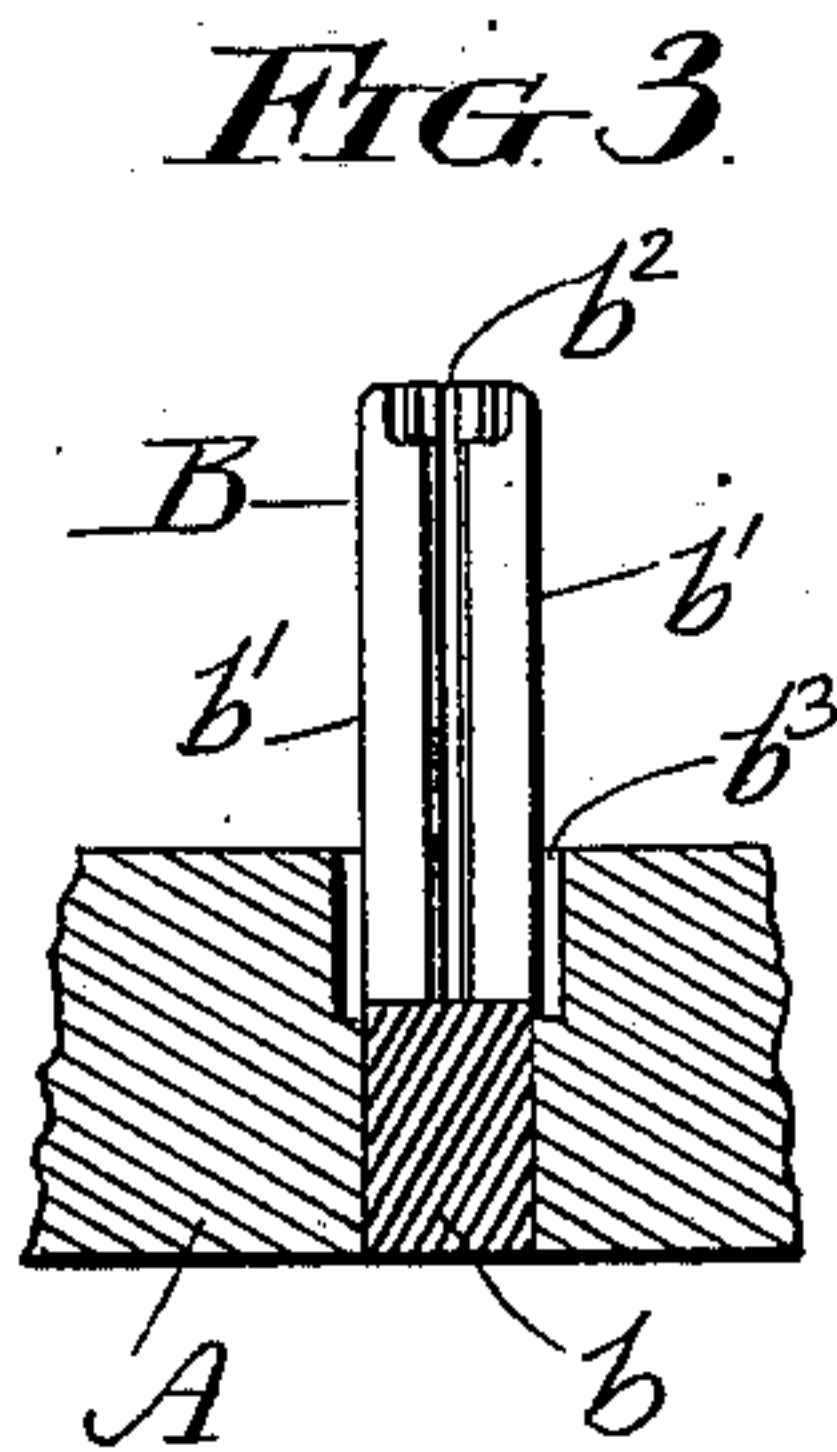
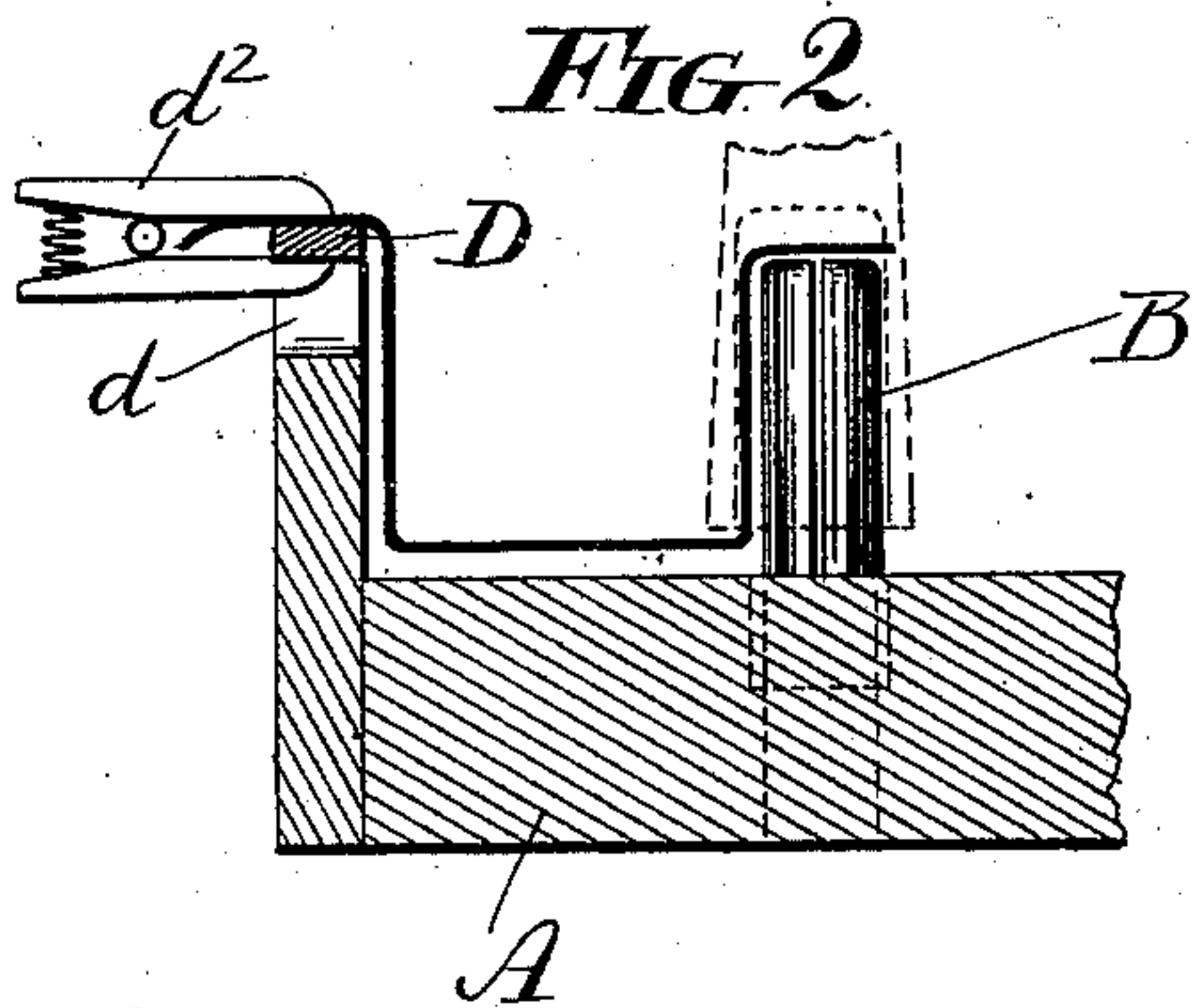
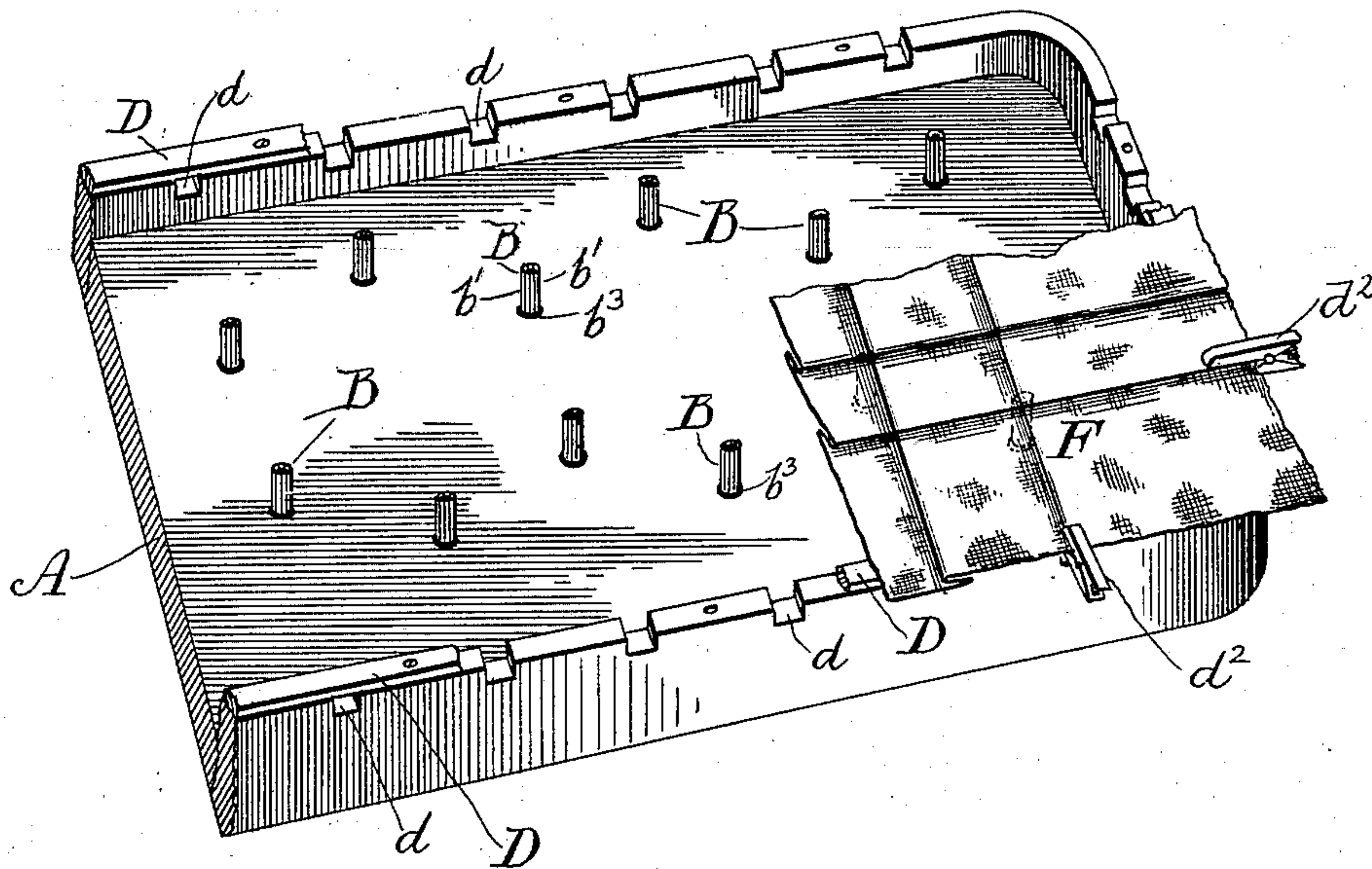
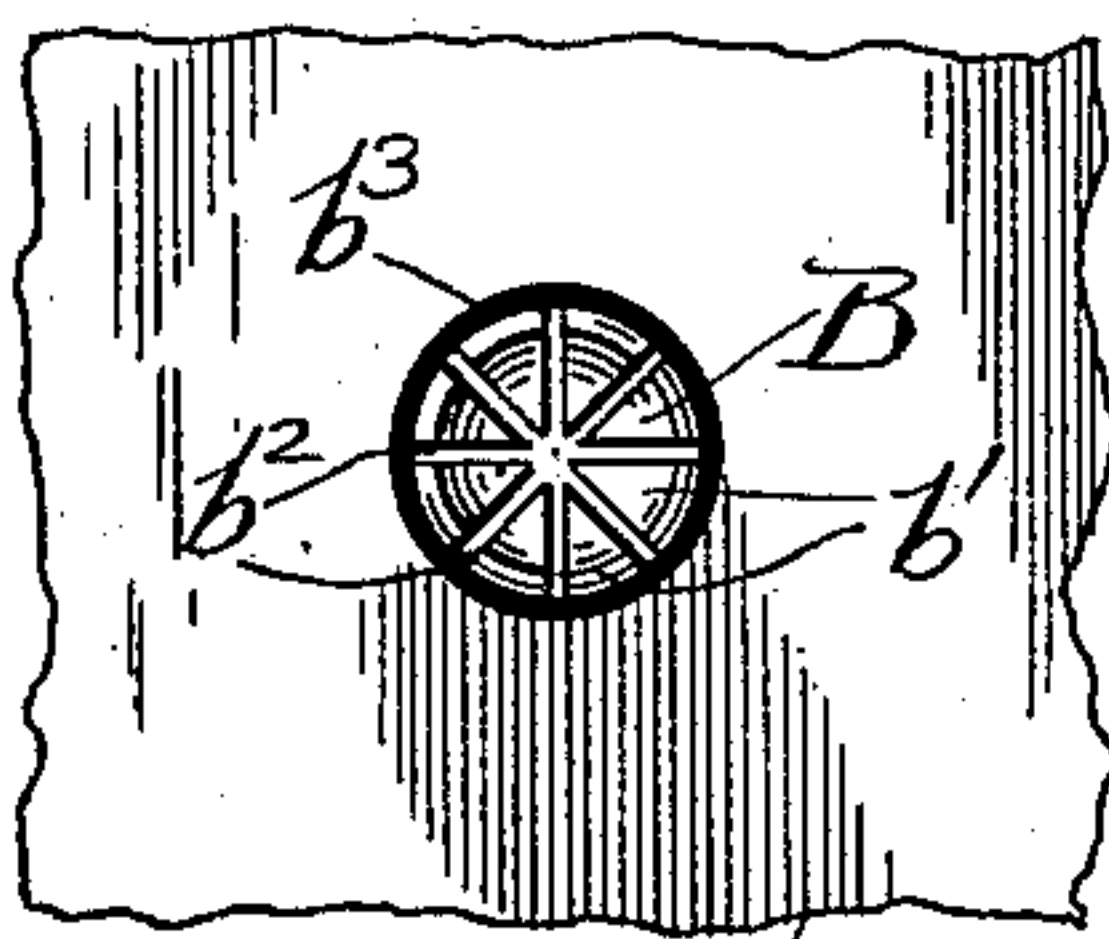


FIG. 5



Witnesses:
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by Josiah McRobert
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UNITED STATES PATENT OFFICE.

JOHN ATKINSON STAPLES, OF NEWBURG, NEW YORK, ASSIGNOR TO THE
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UPHOLSTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 654,685, dated July 31, 1900.

Application filed February 8, 1899. Serial No. 704,952. (No model.)

To all whom it may concern:

Be it known that I, JOHN ATKINSON STAPLES, a citizen of the United States, residing at Newburg, county of Orange, and State of New York, have invented certain new and useful Improvements in Upholstering Apparatus, of which the following is a specification.

This invention relates to an apparatus or machine designed for doing plaited upholstered work, and especially to upholstering-machines for forming carriage-seat cushions, carriage-seat backs, and similar cushions. Its object is to produce certain improvements in machines of this character, as will be more fully hereinafter pointed out.

In the accompanying drawings, Figure 1 is a perspective view of the mold or forming-board provided with my improvements. Fig. 2 is a fragmentary sectional view showing the position of the clamp. Figs. 3 and 4 are detail vertical sections showing the combined formers and button-holding pins, and Fig. 5 is a top plan view of one of the pins and a portion of the base of the mold.

Like letters of reference refer to like parts in the several figures.

The cushion, back, or seat which is now produced by the improved forms of upholstering-machines consists of a covering of cloth, leather, or the like, a backing or bottom of burlap, cardboard, or other suitable material, and a filling of hair, excelsior, or other similar material. The covering is tufted, and the back and cover are secured together with clench-nails or tuft-buttons, which pass through those portions of the covering and back which lie at the bottom of the tufts, and the edges of the cushion are finished off in the manner desired, according to the use for which it is intended.

The reference-letter A indicates the mold or forming-board wherein the cushion is upholstered, which is in the form of a shallow rectangular or other shaped box and of a size equal to the desired size of the proposed cushion. This mold has a series of formers or tuckers B secured rigidly in its bottom wall and projecting upwardly to locate each button in the cushion and to form the divisions or tufts of the cushion. These form-

ers may of course be varied in number and relative arrangement, according to the number of plaits desired or the form and character of the tufts. The formers are circular in shape and are composed of a base b and a number of upwardly-projecting spring-arms b' integral with the base. The arms are formed by a number of longitudinal slits b^2 , extending downwardly from the upper end thereof. In order to give sufficient spring to the arms b' , the slits b^2 extend the greater part of the length of the formers and below the upper face of the base of the mold when the formers are in position thereon. It is therefore necessary to leave a recess or well b^3 around each of the formers, so the arms may have sufficient play to move the required distance when the button is inserted in the seat provided for its reception at the top. This may be accomplished in various ways. For example, as illustrated in Fig. 3, the former may be of uniform diameter, and the seat or well in which it rests may be of unequal diameter, being larger at its top or for a portion of its depth, or, as shown in Fig. 4, the seat or well may be of uniform diameter and the upper or arm portion of the former may be reduced. Any construction by which a well or recess is provided extending to near the bottom of the slits b^2 , so that the arms may expand or spread when the head of the clench-nail or tuft-button is inserted in the seat, will accomplish the purpose sought.

In using upholstering-machines a covering F, of suitable material, such as leather or cloth, is first perforated wherever a button should be located upon it. It is then placed in the mold or forming-board in an inverted position, the outer face of the material being down, and the perforations are placed over the sharp points of the pins of the tuft-buttons, which are already in place upon the formers. The fabric is then secured in place by suitable tucking tubes or plaiters of well-known construction, which are secured to the formers in any suitable manner well understood in the art, as in Fig. 2. The plaiters bring the fabric closely against the formers, leaving a fullness of material about the formers which forms the plaits. As the ma-

terial is plaited by the tucking-tubes in a uniform design, it is desirable to have the plaits or folds in the front edge of the fabric in line with or of the same pattern as the plaits in the body of the cushion. To do this, means are provided to indicate to the workmen the location of the plaits in the body of the cushion either before or after the backing has been clenched to the cover by the tuft-buttons under the operation of the press, as is well understood, so that the plaits in the edges of the material shall be made uniform with the plaits in its body portion. This I accomplish by providing the spaced openings d along the top edge of the forming-board or mold. The edge of the mold is cut away at the predetermined points in the lines of the several series of formers, and a metal rim D is secured along the top, upon which any suitable gripping instrument d^2 , such as a clothes-pin, may be secured at the several openings. Thus after the fabric is plaited in position by the tucking-tubes, as above set forth, the edge extends over the rim D of the mold. The folds or plaitings coming in line with the openings around the same, the plaitings in the edge may be completed by the operator either before or after the filling of hair or excelsior has been put in and the covering and backing united by the tuft-buttons, as the openings d indicate the position of the plaits and locate the points of attachment for the clamps d^2 . This is clearly illustrated in Fig. 1, where a portion of the covering F is shown in the plaited position over the formers, the tucking-tubes being omitted for better illustration. As these openings are in line with the several series of formers, the operator has but to plait the edge at the openings and attach a clamp in order that the plaits in the edge of the fabric shall correspond with those in the body thereof to produce a cushion having a uniform arrangement or pattern of tufts. After the tuft-buttons have been clenched in place the operator removes the clamps and tacks the top and bottom materials to the seat-frame, with which the portions are assembled in the press. The clamps indicate the location of the plaits, at which points the tacks pass in order to secure the plaits in final position.

It will of course be understood that modifications and changes may be made without in any manner departing from the spirit of my invention. Thus, for example, the spaced edge for the mold may be used in any of the various types of upholstering-machines now in use regardless of the form or arrangement of the formers, which may be either combined formers and tuft-button holders, as here

shown, or merely formers operating in conjunction with independent button-holders. It will also be understood that the rim D may be of a single piece or a plurality of pieces, each forming one or more of the notches d , the purpose in any case being to provide a suitable part which the clamps may grip to hold the plaits in position. It is apparent that the base and wings of the button-holders may be integral or separate and united in any suitable manner. Other changes familiar to those skilled in the art may be made within the limits of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an upholstering apparatus, the combination of a mold or forming-board, with expansible button-holders seated in wells in the base of the mold, substantially as described.
2. In an upholstering apparatus, the combination of a mold or forming-board, having seats in its base, with expansible button-holders secured in said seats, one of said parts being of uniform diameter, and the other being of greater diameter for a portion of its length, substantially as set forth.
3. In an upholstering apparatus, a mold provided with formers and with seats corresponding with said formers to indicate the location of the plaits, and clamps adapted to said seats, substantially as described.
4. In an upholstering apparatus, the combination with a mold provided with formers, of means to clasp the plaits in the edge of the material, substantially as described.
5. In an upholstering apparatus, the combination of a mold or forming-board provided with formers in its base, and with notches in its edge, with a rim secured to said edge, substantially as described.
6. In an upholstering apparatus, a mold or forming-board having combined formers and button-holders in its base, notches in its edges, corresponding in location with the combined formers and holders, and a rim upon said edge, substantially as and for the purposes set forth.
7. In an upholstering apparatus, the combination of a mold having combined formers and button-holders seated in wells in its base, and a notched edge, with means to seat suitable clamps at the notches in the edge, substantially as described.

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

JOHN ATKINSON STAPLES.

Witnesses:

H. A. BARTLETT,
J. McROBERTS.