W. E. BUSER.

TUFTING MACHINE.

APPLICATION FILED JAN. 11, 1908.

911,376.

Patented Feb. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

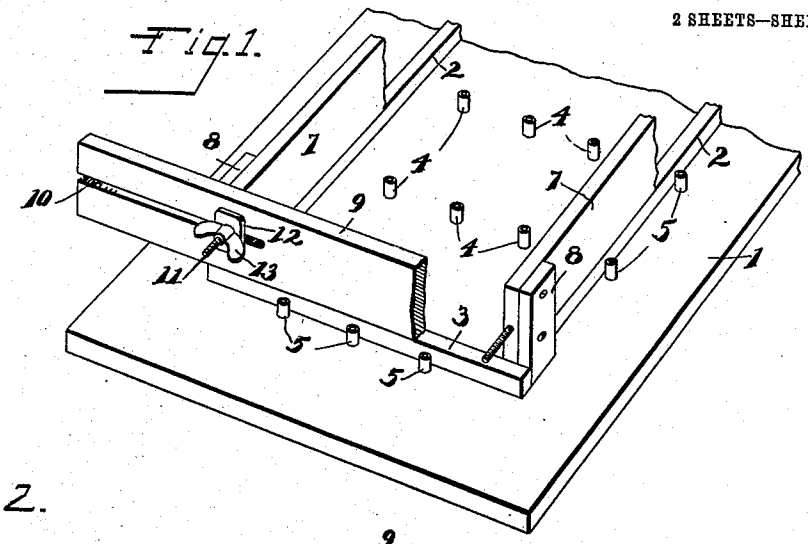
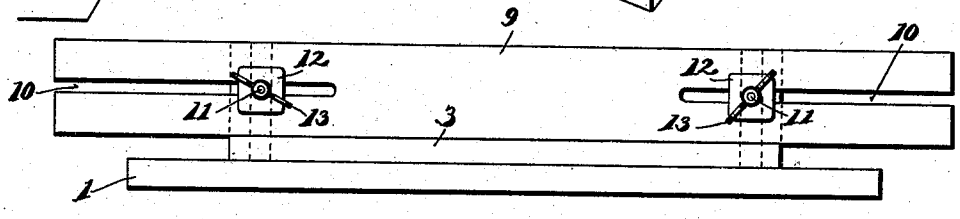


Fig. 2.



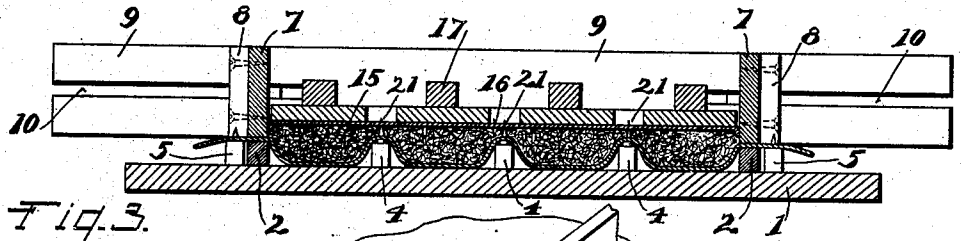
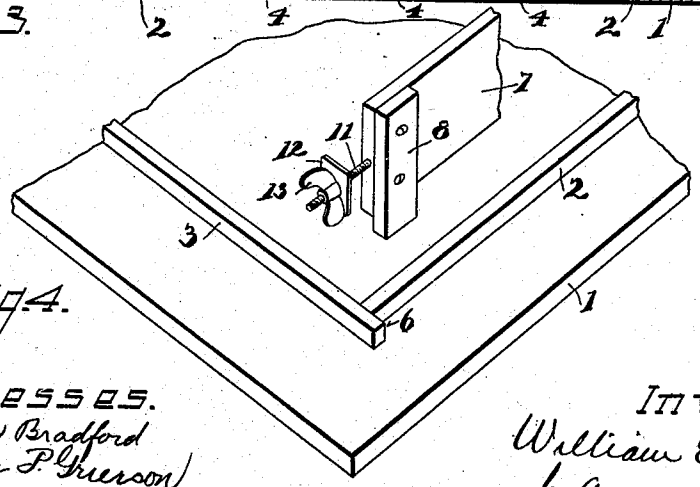


Fig. 3.

Fig. 4.



Witnesses.
Homer Bradford
Elmer P. Emerson

Inventor:
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2 SHEETS—SHEET 2.

Fig. 5.

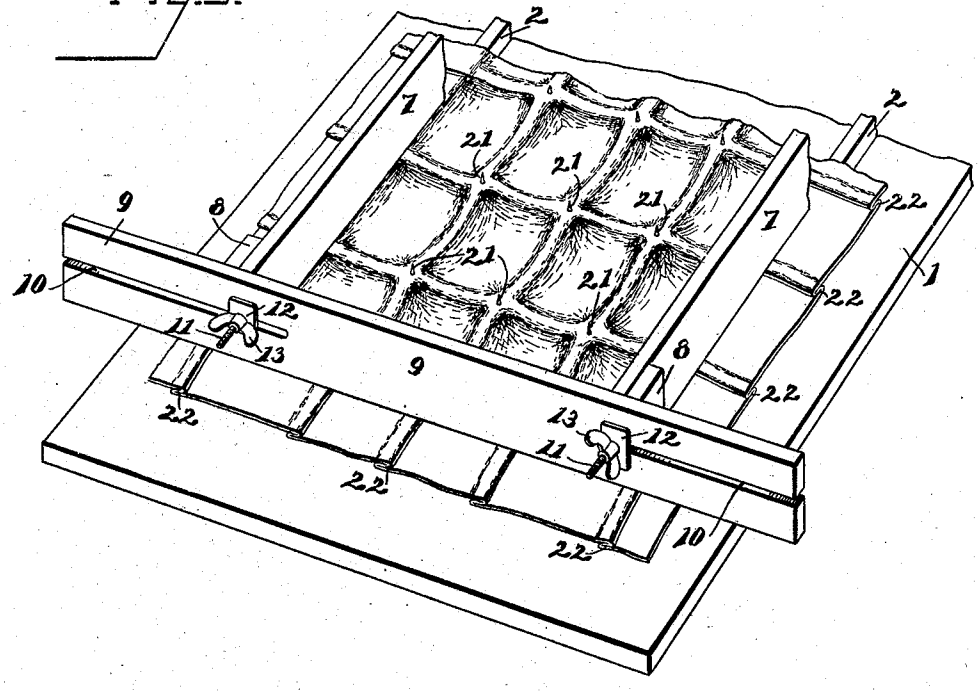


Fig. 6.

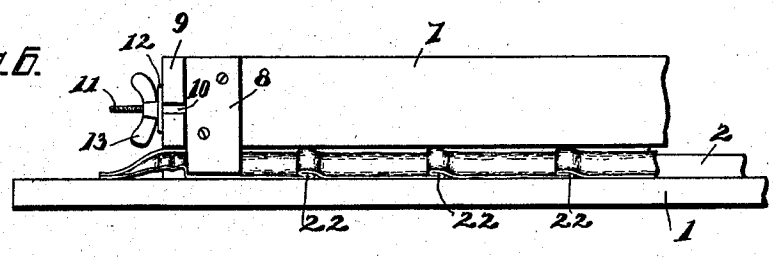
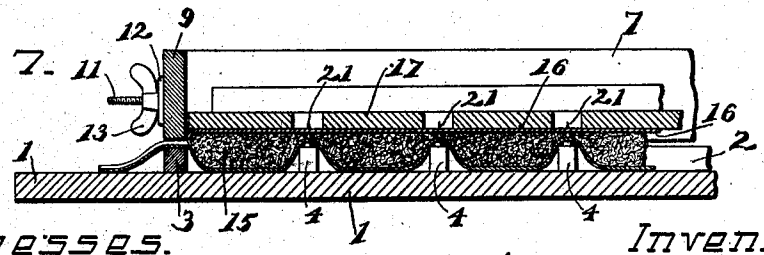


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM E. BUSER, OF CHILLICOTHE, OHIO.

TUFTING-MACHINE.

No. 911,376. Specification of Letters Patent. Patented Feb. 2, 1909.

Application filed January 11, 1908. Serial No. 410,424.

To all whom it may concern:

Be it known that I, WILLIAM E. BUSER, a citizen of the United States, residing in Chillicothe, county of Ross, and State of Ohio, have invented certain new and useful Improvements in Tufting-Machines, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, forming part of this specification.

My invention relates particularly to improvements in the construction and manner of adjustment of the frame work which surrounds the tufting machine proper, and which is intended to serve as a holder for the filling material or tow, and as a guide for the follow board of the machine.

One purpose of my invention is to provide an extension follow board guide and tow guide which can be used readily and easily with machines of varying width.

Another purpose is to provide a construction in which the follow board guide, in connection with the side strips of the mold may serve as a holder or retainer for the plaits necessary in forming the tufts with certain kinds of upholstering material, and in which there shall be no obstruction at the corners of the mold which will prevent the spreading out and the securing of the upholstering material outside of the mold.

In the drawings:—Figure 1 is a perspective view of one end of a mold board with my improved follow board guide in place, one end of the extension board being broken away. Fig. 2 is an end elevation to my improved construction. Fig. 3 is a central transverse section of the machine in process of tufting. Fig. 4 is a perspective view in detail of one end of one of the sides of my extension frame in position to be secured to the mold board. Fig. 5 is a perspective view of one end of the tufting machine showing the plaited goods held in position by the follow board guide. Fig. 6 is a side elevation of same. Fig. 7 is a cross section of a portion of the machine in process of tufting with leather goods.

1 is the base of the ordinary mold board construction as used in tufting machines, and this base consists of a solid board of the desired width and length, upon which are secured the side strips 2, 2, and end strips 3, 3, forming a shallow receptacle constituting the mold proper and within which receptacle, the button holders 4, 4 are mounted in regular position to form the tufting corners and upon which button holders, the tufting buttons are supported in the usual way. These button holders can, of course, be arranged to form a diamond, square or other patterns. Button holders 5, 5 are also secured in proper position on the mold board only outside of the mold proper for securing the upholstering material at the edges. The strips 2, 2 and 3, 3 forming the shallow receptacle, are preferably of about the height of the button holders 4. For some mold boards which are intended to be used in tufting with cloth, button holders 5, 5, are also provided outside of the mold proper.

To hold the tow or other filling material within the mold, and to form a suitable guide for the follow board, I provide as follows:—The end strips 3, 3 of the mold are extended at the ends beyond the side strips 2, 2, so as to leave an outside corner 6 at each corner of the mold. 7, 7 are side boards of a suitable height to form a proper tow receptacle and guide for the follow board, and these boards extend the length of the side strips 2, 2 and are provided at the ends with cleats 8, 8 which extend beyond the bottom edge of the board the depth of the corners 6. 9, 9 are the end boards which form with the sides 7, 7 the tow guide and follow board guide. These ends 9, 9 are provided with horizontal slots 10, 10 which extend inward a considerable distance, and the ends of the side boards 7, 7 are provided with screw threaded pins 11, 11 which take through these slots, while 12 is a washer plate, and 13 a thumb nut for securing the ends 9, 9 to the sides 7, 7.

It will be understood that the mold boards for tufting machines are usually of uniform length for any particular factory, but that the mold boards will vary in width to conform to the articles to be upholstered and heretofore it has been necessary to provide a tow guide and follow board guide of the proper size for each mold board.

With my construction, as above described, it will be evident that the single set of side and end boards 7, 7 and 9, 9 are all that will be necessary for the upholsterer to have on hand for his varying widths of mold boards.

The end extensions 9, 9 are furnished of sufficient length to inclose the widest of the

mold boards and the slots therein are of sufficient depth to allow of adjustment for the narrowest widths of mold boards.

In using the invention, we proceed as follows:—When the tufting work is to be provided in leather, which is not as pliable as cloth, the tufting buttons 21, are first placed in the button holders with their points uppermost, and the holders having been previously punched or indicated in the leather at the proper points to receive the prongs of the buttons to give the necessary fullness of the material to be taken up in the tufts, the leather, finished side down, is placed over the buttons at the places indicated, and the leather is then plaited as shown in Fig. 5, with the plaits 22, 22.

Heretofore with leather goods, it has been necessary to hold the plaits outside of the mold with separate clamps for each plait to hold the plaits in place when tufting, and in addition to this it has been very difficult at the corners of the mold to dispose of the surplus goods. With my improvements, however, when the plaits have been formed, the side boards 7, 7 are then located in place, resting on top of the side strips 2, 2 of the mold, with the cleats 8, 8 engaging the external corners.

When cloth is used for upholstering, as this is a much more pliable material than leather, buttons are placed in the outside row of the button holders 5, 5 and the cloth is then passed over and held by the points of these buttons, and plaits are not needed. In as much as the strips 2, 2, and 3, 3 are of the height of the button holders, and as the side and end boards rest only on top of these strips, the goods can be laid smoothly outside of the mold and there is no obstruction at the corners. The ends 9, 9 are then located in place on top of the end strips 3, 3 of the mold and the end strips secured in place by the thumb nuts 13. The filling material or tow 15 is then filled in, the canvas back 16 is located in place and the filling pressed down into the pockets of the mold by the follow board 17 actuated by any suitable press.

The sides 7, 7 and the ends 9, 9 form a guide for the follow board in its descent and the tow is also held in place by this side frame.

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

1. In a tufting machine, the combination with the mold board and button holders mounted thereon, and strips about the height of the button holders to form the sides and ends of the mold, with the end strips extending beyond the side strips to form external corners, of side and end boards resting on said strips to form a tow and follow board guide, the side boards having cleats to fit down in said external corners, the end boards extending beyond the side boards, and means for securing the end boards to the side boards for varying widths of the mold boards.

2. In a tufting machine, the combination with the mold board and button holders mounted thereon, and strips about the height of the button holders to form the sides and ends of the mold, with the end strips extending beyond the side strips to form external corners, of side and end boards resting on said strips to form a tow and follow board guide, the side boards having cleats to fit down in said external corners, the end boards extending beyond the side boards, and provided with horizontal slots with pins on the side boards to engage said slots, and nuts to secure the parts together for any width of mold board.

Signed at Chillicothe, Ross county, Ohio, this 31st day of December, 1907.

WILLIAM E. BUSER.

Witnesses:

ETHEL M. DIXON,

JOHN W. GOLDSBERRY.