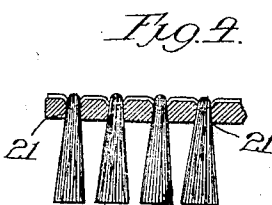
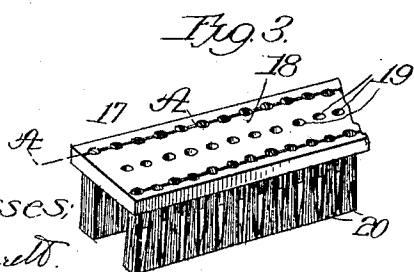
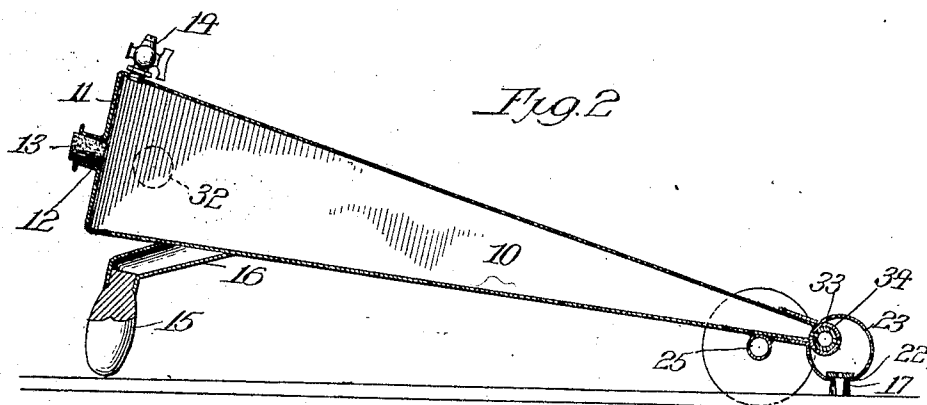
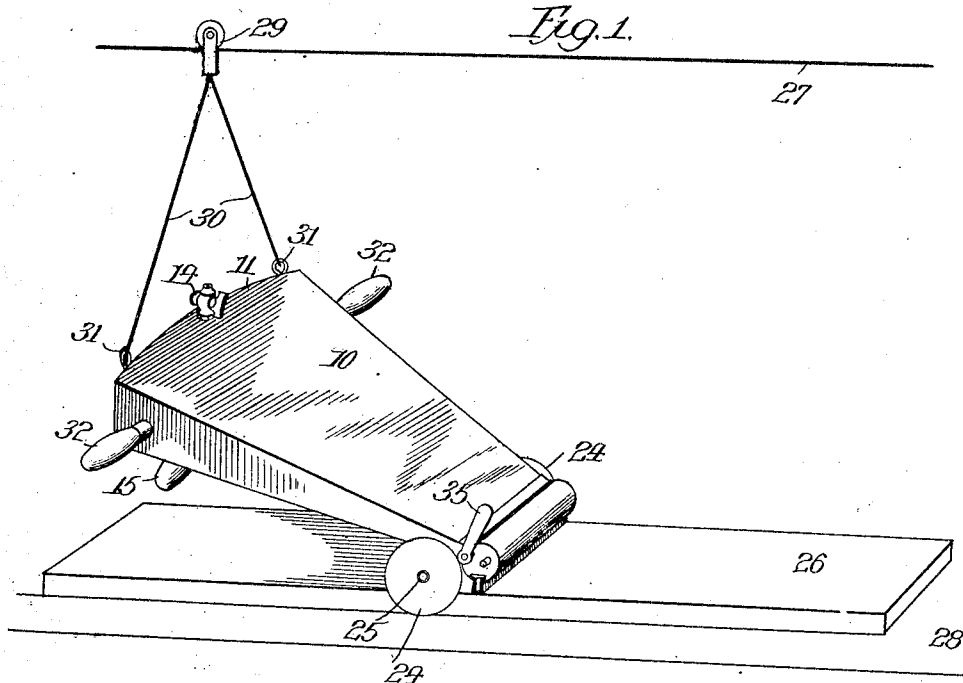


No. 856,641.

PATENTED JUNE 11, 1907.

A. D. HYMAN.
 FOUNTAIN GLUE BRUSH.
 APPLICATION FILED JULY 19, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

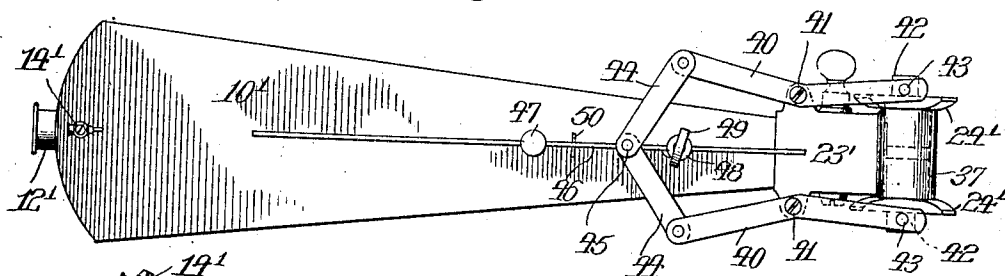


Fig. 6.

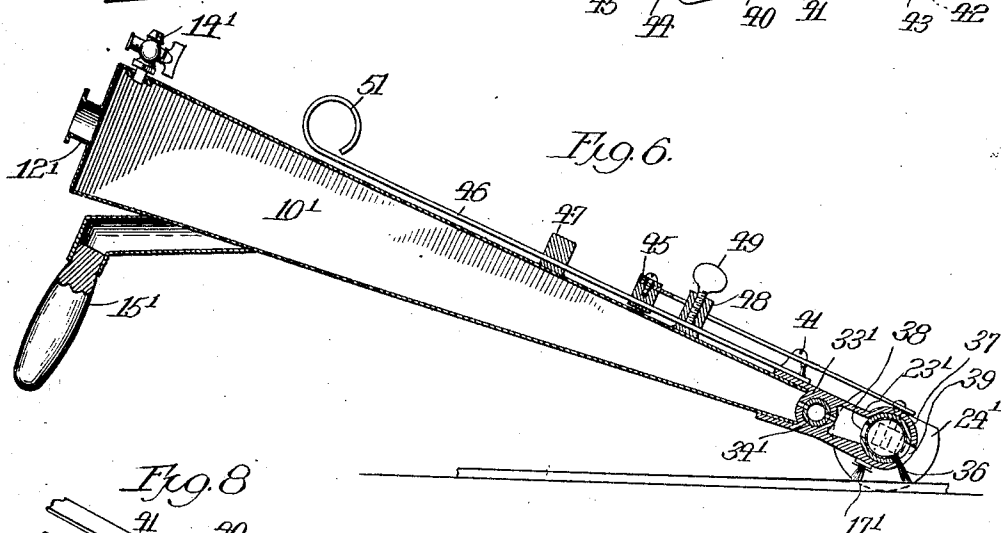


Fig. 8.

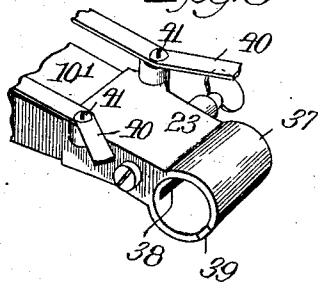
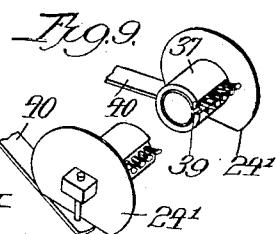
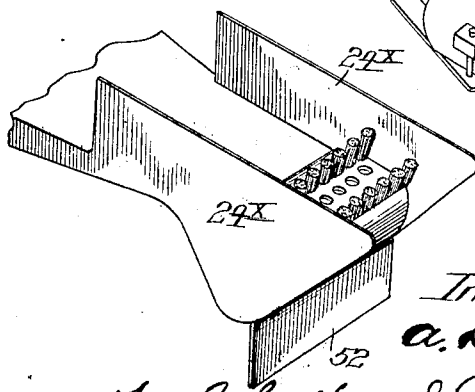


Fig. 7.



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UNITED STATES PATENT OFFICE.

ABRAHAM DAVID HYMAN, OF GRAND RAPIDS, MICHIGAN.

FOUNTAIN GLUE-BRUSH.

No. 856,641.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed July 19, 1905. Serial No. 270,336.

To all whom it may concern:

Be it known that I, ABRAHAM DAVID HYMAN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Fountain Glue-Brushes, of which the following is a specification.

My invention is concerned with a novel brush for applying glue to wood, in the process of making furniture, etc., and is designed to produce a device in which the glue is contained in a fountain or reservoir, from which it is discharged as the brush is used, the object being to dispense with the necessity of frequently dipping the brush in glue, as is necessary in the use of ordinary brushes.

To illustrate my invention, I annex hereto two sheets of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—

Figure 1 is a perspective view of one form of my invention, adapted for use in applying glue to panels; Fig. 2 is a central longitudinal section through the same, on an enlarged scale; Fig. 3 is a perspective view, on a still larger scale, of a portion of the brush which I employ; Fig. 4 is a detail, in section, on the line A—A of Fig. 3; Fig. 5 is a top plan view of a modified form of my brush, in which the width of the brush is made adjustable; Fig. 6 is a central longitudinal section through the brush shown in Fig. 5; Fig. 7 is a perspective view of still another modification; and Figs. 8 and 9 are details in perspective, showing portions of the form shown in Figs. 5 and 6.

Referring first to the apparatus shown in Figs. 1 to 4, the fountain or reservoir consists of a hollow tank 10, which is preferably made of some suitable sheet-metal, such as copper, and is preferably constructed of the general shape shown, which is seen to be segmental in both directions, the cross section of the device being greatest at the end 11, which is provided with the filling aperture 12, which in use is closed by the stopper 13. To permit of the free flow of the glue from the apparatus when in use, and to prevent the escape of the glue therefrom when not in use, if it should be inverted, as indicated in Fig. 7, I provide the cock 14, of any desired form, which can be opened to admit the air or closed to prevent the escape of the glue. This cock 14 is, of course, located at the point which is in the highest position when the brush is in use. As a means of manipulating

the brush, I provide the handle 15, which is preferably of wood or some non-conducting material, and which is secured to the socket 16 fastened on the under side of the reservoir. At the reduced end of the brush, I place the brush proper 17, the details of which are best shown in Figs. 3 and 4, and which will be seen to consist of the preferably metallic back piece 18, which has the central line of perforations 19 through which the glue is adapted to flow, and which is also provided at either side thereof with the bristles 20, which are of the customary tuft form, and are inserted in the apertures 21 formed in the back piece 18. I have found by experiment that it is impractical to make these apertures 21 of uniform diameter throughout, as in that case the bristles are cut off at the point where they emerge from the back plate, by reason of their being bent thereon; and to obviate this difficulty I make the diameter of these apertures 21 greater at the bottom than at the top, the smaller diameter at the top serving to hold the bristles together in the necessary tuft form, while the larger diameter at the bottom permits of their bending as is necessary in operation without their being cut or broken off against the lower edges of the apertures. The bristles are wired into the apertures in the customary manner. The brush 17 is preferably removably located in an aperture 22 formed in the under surface of the preferably cylindrical enlargement or supplemental reservoir 23 which terminates the lower end of the reservoir proper.

In use, the board to be glued has the brush drawn over it in the position shown in Figs. 1 and 6, and the glue flows out through the apertures 19 and is spread on the surface to which it is to be applied. The brush is preferably provided with flanges to co-operate with the sides adjacent the surface to be glued, and in the large sizes shown in Figs. 1 and 2, these flanges preferably take the form of rollers 24, which may be journaled on pintles or a common bearing shaft 25 extending across the under side of the reservoir and secured thereto, or mounted to rotate in suitable bearings therein. Where the reservoir is of a very large size, as is necessary for gluing the surfaces of panels, such as 26, I preferably provide a wire or rod 27 suitably located above the table 28, so that the brush can be suspended therefrom, preferably by means of a pulley 29 adapted to run on said rod or wire,

and provided with the cords or chains 30, which are hooked into or secured to the eyes 31 secured to the uppermost rear edge of the tank. In this form, it is also preferably provided with the additional handles 32 projecting from the sides thereof, and by which it can be readily manipulated in drawing the brush back and forth over the panel in order to evenly and uniformly distribute the glue thereon.

While I may reduce the size of the lower end of the reservoir, as indicated in Fig. 7, so as to make a very narrow passage leading from the reservoir proper to the supplemental reservoir 23, so that no more than the desired amount of glue can be discharged, I preferably place a valve in the passage, as indicated in Fig. 2, where the outer tube 33, perforated at intervals, is secured in the enlargement 23, and an inner tube 34, similarly perforated, is placed inside of it, so that it can be turned by the handle 35 projecting upon the outside, in order that the valve thus formed may be opened or closed as desired.

In Fig. 5, I have shown a modification, in which the effective width of the brush is adjustable. In this form the reservoir 10' is of the same general shape, and is provided with the cock 14', the filling aperture 12' and the handle 15'. It is preferably provided with the valve tube 33', which is here shown as formed integrally with the cast end 23' of the brush, and provided with the inner valve tube 34'. The enlarged end 23' is provided with the stationary brush 17', as well as with two movable brushes 36, which are secured on the tubular portions 37 of the movable flange pieces 24', as best seen in Fig. 8. The tubular portions 37 are provided with the apertures 38, by which the glue enters, and with the elongated apertures 39, by which it escapes. The flanges 24' are drawn toward and from each other in order to vary the effective width of the brush, by means of the levers 40, which are pivoted to the lugs 41 projecting from the casting 23', and which have their other ends pivoted to the lugs 42 projecting from the ends of the flanges 24' by means of the pins 43 extending downwardly from the levers. The levers 40 have pivoted to their other ends the links 44, which are pivoted at 45 to a rod 46, which is adapted to slide back and forth in bearings formed in the posts 47 and 48, and to be secured in any desired position of adjustment by the set screw 49 screwed into the post 48 and taking against the upper side of the rod. Stops 50 are secured upon the rod 46 in position to abut against the post 47 and prevent the rod being moved far enough to throw the tubes 37 out of the bearings formed in the casting 23', in which they move. The outer end of the rod 46 is conveniently provided with the hook 51, by which it is manipulated. With

this form of brush, which is intended to glue the edges of boards, it will be seen that I can adjust it to any desired width, it being especially desirable that the brushes shall have in operation the exact width of the edge of the board, as if it is any wider, the glue will run down over the sides of the board, and be not only wasted, but in the way. With this form, it will be seen that the glue will flow out from the apertures 39, and from the tubes 37, if they are separated to any extent, and be spread by the brushes 17' and 36.

In Fig. 7, I have shown still another form, in which the flanges 24^x are stationary, instead of being in the form of rollers, as in Fig. 1, or adjustable as in Fig. 5. In this form, I have also shown a projection 52 upon which that end of the brush is adapted to rest when it is turned upside down as it would be when not in use.

While I have herein shown and described a form of the brush which is adjustable in width, I do not herein claim the same, but reserve the subject matter thereof for a divisional application.

While I have shown and described my invention as embodied in some of the forms which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is,—

1. In a fountain glue brush, the combination with the reservoir having the discharge aperture in one end thereof, of the downwardly-projecting brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be spread thereon by the brush, and the handle by which it is manipulated secured to the under side thereof.

2. In a fountain glue brush, the combination with the reservoir having the discharge aperture in one end thereof, of the downwardly-projecting brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be spread thereon by the brush, the guiding members at the sides of the brush immediately adjacent thereto, and the handle secured to the under side of the brush, substantially as shown and described.

3. In a fountain glue brush, the combination with a segmental wedge-shaped reservoir having the discharge aperture at the tip thereof, of the downwardly-projecting brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be

spread thereon by the brush, and a handle located toward the larger end of the reservoir on the under side thereof to balance it when it is filled, substantially as shown and described.

4. In a fountain glue brush, the combination with a reservoir having the discharge aperture in one end thereof, of the brush associated therewith, and means for suspending the reservoir, consisting of a track, a trolley wheel running on said track, and connections between the trolley wheel and the reservoir.

5. In a fountain glue brush, the combination with the reservoir having the discharge aperture in one end thereof, of the brush associated therewith, the pair of handles extending from the sides thereof, and means for suspending the reservoir, consisting of a track, a trolley wheel running on said track, and connections between the trolley wheel and the reservoir.

6. In a fountain glue brush, the combination with the reservoir having the discharge aperture in one end thereof, of the brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be spread thereon by the brush, and the supporting rollers

adjacent the brush and acting as guiding flanges.

7. In a fountain glue brush, the combination with a reservoir having a discharge aperture in one end thereof, of the brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be spread thereon by the brush, and the valve located between the reservoir and brush.

8. In a fountain glue brush, the combination with the main reservoir, of the brush reservoir at one end thereof having the discharge aperture therein, the brush associated with said aperture but not obstructing the passage of the glue therethrough, so that the glue discharged through the aperture directly on the work will be spread thereon by the brush, and the valve interposed between the main reservoir and the brush reservoir adapted to permit the free passage of the glue.

In witness whereof, I have hereunto set my hand this 15th day of July, 1905.

ABRAHAM DAVID HYMAN.

Witnesses:

CLAUDE R. BUCHANAN,
FREDERICK N. BLAKE.