Aug. 31, 1937. G. CIPRIANO 2,091,429

PROCESS AND APPARATUS FOR TREATING HATS

Filed May 13, 1936 3 Sheets-Sheet 1

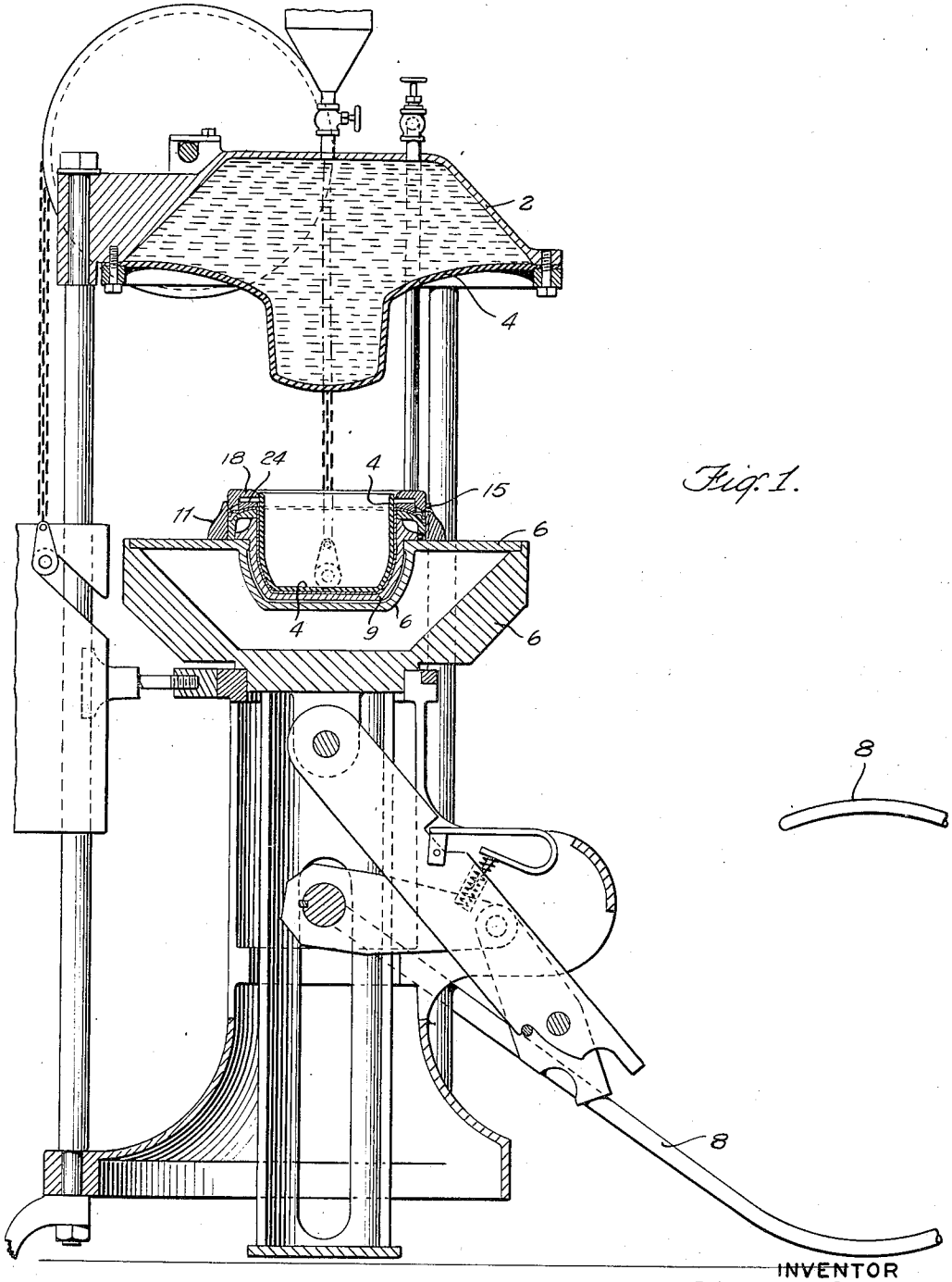

Fig. 1.

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Fig. 2.

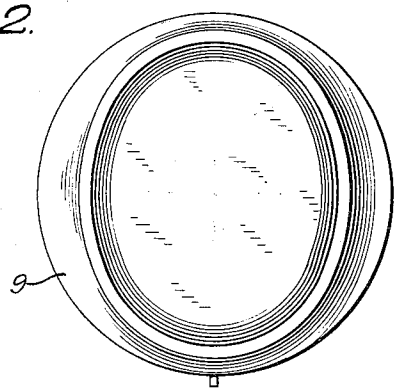


Fig. 3.

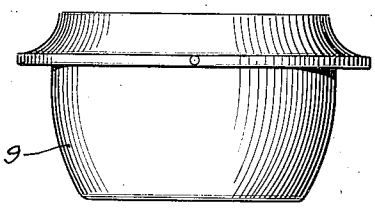
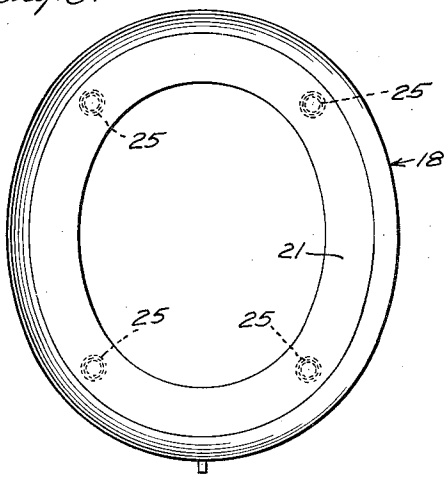


Fig. 6.



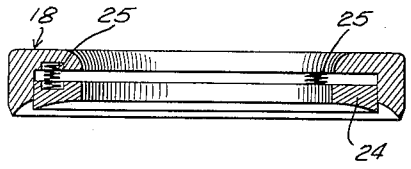


Fig. 7.

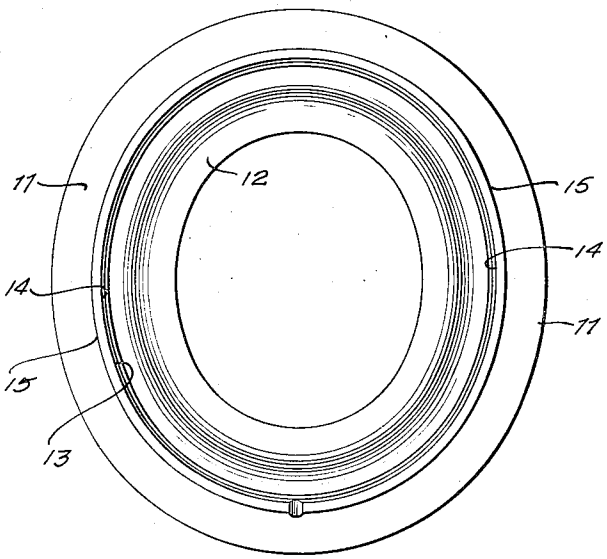


Fig. 4.

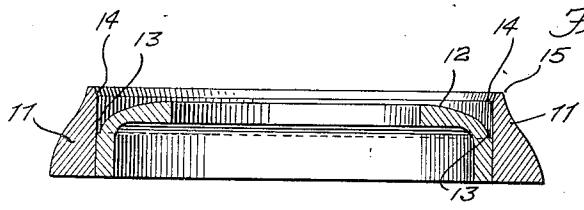


Fig. 5.

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Fig. 8.

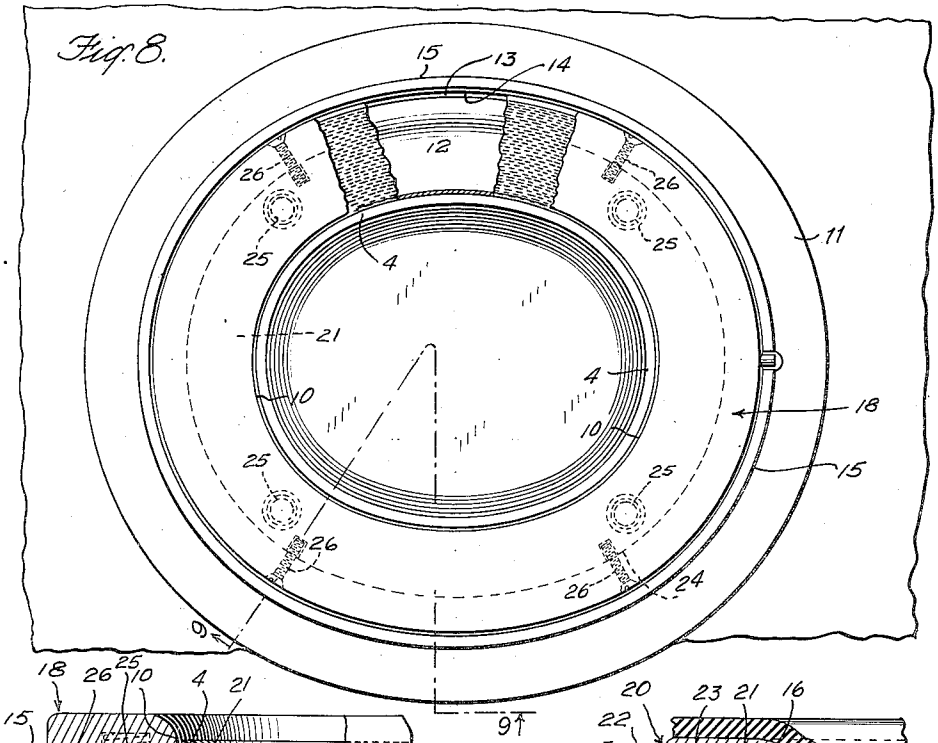


Fig. 9.

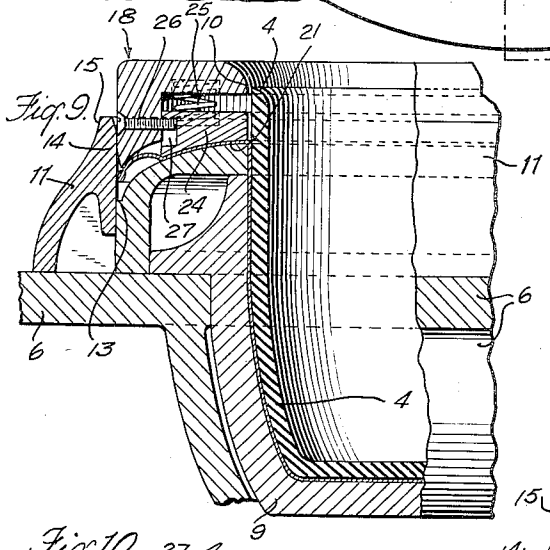


Fig. 11.

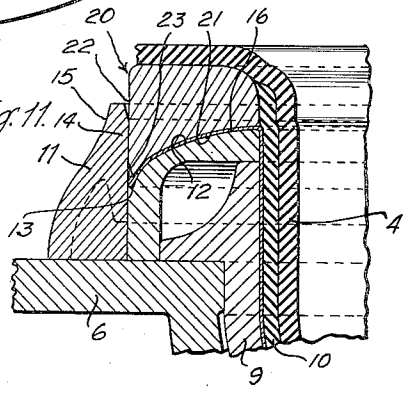
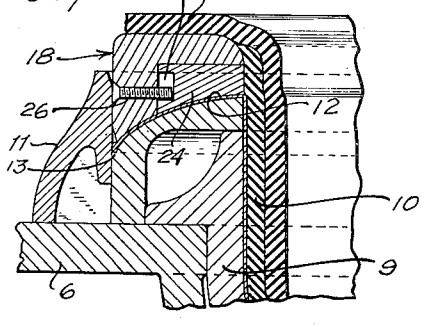


Fig. 10.



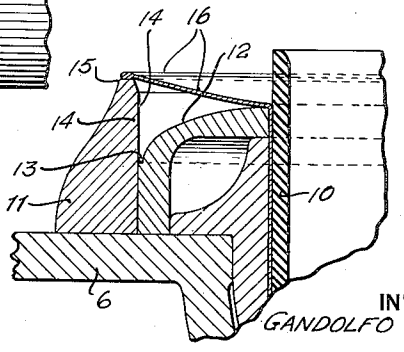


Fig. 12.

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Patented Aug. 31, 1937 2,091,429

UNITED STATES PATENT OFFICE

2,091,429

PROCESS AND APPARATUS FOR TREATING HATS

Gandolfo Cipriano, Dongan Hills, N. Y., assignor to Cyprian Machinery Corporation, (New Brighton), New York, N. Y., a corporation of New York

Application May 13, 1936, Serial No. 79,446

4 Claims. (Cl. 223—13)

This invention relates to a process and apparatus for treating hat brims of woven hats and particularly hats made of grass-like material or the like and known commercially as Panama hats.

One of the objects of the invention is to enable a hat brim to be given the proper width and its edge made smooth and even with greater ease and certainty than by processes and devices at present employed in the commercial art.

A further object of the invention is to provide an apparatus whereby a hat brim may be given its proper width and the edge of the brim finished by manipulations which are largely mechanical.

A feature of the invention relates to a process of treating a hat brim whereby the edge is evened by pressure applied to the entire brim edge simultaneously.

A further feature of the invention relates to a process whereby a hat brim is pressed and the brim edge finished in one operation.

A still further feature of the invention relates to an improved apparatus whereby the process of determining the proper width of the brim, the pressing of the brim, and the evening of the edge of the brim may be accomplished with greater facility than with apparatus for this purpose now in commercial use.

Further features and advantages will become apparent from the following description and claims taken in connection with the accompanying drawings in which:

Figure 1 is a sectional view of a hat pressing machine with which my improved hat brim molding apparatus may be used and my improved process performed.

Figure 2 is a top plan view of the usual crown shell.

Figure 3 is an elevation thereof.

Figure 4 is a top plan view of the hat brim mold of the present invention.

Figure 5 is a central transverse sectional view of the mold shown in Figure 4.

Figure 6 is a top plan view of the saddle which is adapted to fit over the mold shown in Figures 4 and 5.

Figure 7 is a transverse central sectional view of Figure 6.

Figure 8 is a top plan view showing the mold and saddle assembled with a hat within the mold, parts of the saddle and a part of the hat brim being broken away.

Figure 9 is a broken sectional view on the line 9—9 of Figure 8.

Figure 10 is a similar view showing the position of the parts when the press is closed.

Figure 11 is a view similar to Figure 10, but showing a different type of saddle; and

Figure 12 is a view similar to Figure 9 but with the saddle removed and illustrating the manner in which the width and shape of the hat brim is determined.

The process and apparatus forming the subject matter of this application may be used in connection with an ordinary hat press and for illustrative purposes, I have shown in Figure 1 a cross sectional view of a press substantially like that shown in Figure 2 of my Patent #1,819,592 granted August 18, 1931, the said Figure 1 however, differing from Figure 2 of my patent in that my present improved brim molding apparatus is shown in connection with the press. Since the press is fully shown and described in my patent aforesaid, it will not be necessary to describe its construction and mode of operation in any great detail.

It is sufficient to state that there is provided the usual dome **2** which supports a rubber bag **4** approximately the shape of the hat, which bag is normally filled with water to which pressure may be applied by suitable means well known in the art. The movable member **6** of the press is supported on a vertically movable plunger whose movements are controlled by a lever **8** in a manner fully described in said patent. When the lever **8** is moved from the position shown in Figure 1 to the position shown in Figure 3 of said patent, the press is closed, Figure 1 of the present applicaiton showing the press in open position.

Carried by the member **6** is the usual crown shell or die **9** shaped according to the contour of the hat crown. It is understood of course that various dies may be used, depending upon the shape and size of the crown of the particular hat to be pressed or molded.

My improved process and apparatus will be better understood by first giving a brief outline of the methods now in commercial use.

According to the present practice, a wooden block is placed within a hat blank, a cord is then tied around the hat at the base of the crown. The width of the brim is determined by measuring it at various places and it is pulled this way or that until its correct width is attained. After this has been done the hat is sized and dried for several hours, the wooden block is then taken out and a hollow rubber plug put in its place, the

plug having the shape and size to be given to the hat crown and fitting the crown mold. At this stage the hat is put into the press and subjected to pressure to shape it. After this treatment, the edge of the brim is uneven and further treatment is necessary to smooth and even it. This operation consists in placing the hat over a wooden flange apertured to receive the hat crown and provided with a groove in its outer edge. A cloth is placed over the brim portions of the hat; a cord is placed in and around the groove and the brim is ironed by hand. A small tool is then pressed against successive portions of the brim edge to even it and make it smooth.

The process and apparatus of the present invention permit several of the steps above described to be eliminated, permitting a hat brim to be treated in a much shorter time than heretofore with fewer manipulations.

According to the present invention, I provide an apertured brim element 11 of general oval shape as shown in Figure 4, which element is provided with a surface 12 against which the brim of the hat is brought in contact during the pressing operation. The surface 12 (Figures 4 and 5) terminates in a circumferential shoulder 13. The aperture coincides precisely with an aperture in the crown mold and different elements are provided for hats of different sizes and widths of brim. The surface 12 as measured from the aperture to the shoulder 13, is of a width equal to that of the brim of the hat to be treated. The element 11 is also provided with a wall 14 of such thickness that its outer circumferential edge 15 is of a size to enable the proper width of the brim to be determined when the hat is within the crown mold.

In carrying out my improved process the brim element is placed over the crown mold, the rubber plug 10 is placed within the hat crown and both are passed through the aperture in the brim element and seated in the crown mold as shown in Figures 1 and 9. At this stage of the procedure the hat brim 16 is adjusted so that its edge coincides with the outer edge 15 of the wall 14 as indicated in Figure 12, to thereby determine the proper width of the brim. After this has been determined the brim is pushed down against the surface 12 of the brim element and a saddle 18 of the type shown in Figure 9 or a saddle 20 of the type shown in Figure 11 is placed over the brim, the assembled parts being then inserted in the press as shown in Figure 1; and the press closed.

The saddle 20 is of general oval shape and its under-surface 21 conforms to that of the surface 12 of the brim element. It is also provided with an outer surface 22 which accurately fits within the wall 14 of the brim element, said surface 22 terminating in an edge 23 which is slightly bevelled as shown in Figure 11. When the assembled parts are put into the press and the press closed, the edge 23 engages the brim of the hat near the edge thereof and forces the brim edge into contact with the shoulder 13 which smooths and evens the edge by direct pressure against the entire edge simultaneously. The brim is at the same time pressed between the surfaces 12 and 21.

For convenience in shaping and assembling, the brim element 11 may be formed in separate pieces. As shown in Figures 9 to 12 it functions as one piece and the wall 14 together with the surface 12 with its shoulder 13 may be said to constitute a recess into which the edge of the hat brim is forced by the saddle 20. This operation gives an even smooth edge to the hat brim.

It is found in actual experience in the treating of hat brims that sometimes the brim has a tendency to wrinkle when the saddle is applied and the press moved to closed position as illustrated in Figure 11. To obviate this difficulty I prefer to use the construction of saddle illustrated in Figures 7, 9, and 10 wherein the same is formed of separately movable parts, the part 18 acting to press upon the outer circumferential area of the brim and the part 24 acting upon those portions of the brim adjacent the crown of the hat. The two parts are connected by springs 25 as shown in Figures 6 and 7. When the saddle is first placed upon the crown mold, the parts assume the position shown in Figure 9 with the part 24 of the saddle in contact with the inner portions of the hat brim adjacent the hat crown. When pressure is applied during the closing of the press, the springs 25 cause the portion 24 to press the hat brim and when the press is fully closed and the springs 25 fully compressed, the parts 18 of the saddle assume the position shown in Figure 10, the under-surfaces of the parts 18 and 24 aligning accurately. Screws 26, Figures 8, 9, and 10 threaded into the member 18 engage slots 27 in the portion 24 of the saddle and serve to guide the movement of the parts 18 and 24 and limit the movement of 18.

From the above it will be seen that my improved process greatly facilitates the molding of hat brims, the process consisting in adjusting the brim to coincide with the edge 15 of the brim element and then applying suitable pressure to the brim. The result is that pressure is simultaneously applied to the entire brim edge as the same is forced against the shoulder 13.

By my improved process also, pressure is applied to the brim surfaces and to the brim edge during the pressing operation.

Variations may be resorted to within the scope of the invention as defined in the claims without departing from the principle thereof and some parts of the apparatus may be used without others.

What I claim is:

1. Those steps in the process of treating a woven hat which consist in applying pressure to the brim surfaces, said pressure being graduated and applied first to the brim surfaces adjacent the hat crown and subsequently to the remaining portions of the brim surfaces, and applying pressure against the entire brim edge simultaneously.

2. An apertured brim element of general oval shape having a surface against which a hat brim may be pressed, said surface being of the width of a hat brim to be treated and terminating in a circumferential shoulder, said shoulder being normal to the adjacent surface, and means for pressing the hat brim against said surface, said means provided with an edge having a component of motion toward said shoulder to engage the hat brim near its edge and force the edge of the brim against said shoulder.

3. An apertured brim element of general oval shape having a surface against which a hat brim may be pressed, said surface being of the width of the hat brim to be treated and terminating in a circumferential shoulder, and a saddle having separately movable parts for engaging the hat brim to press it against the brim surface of said element, one of said parts having means having a component of motion towards the brim

edge to engage the brim near its edge and force the brim edge against the shoulder of said element.

4. An apertured brim element of general oval shape having a surface against which a hat brim may be pressed and terminating in a circumferential shoulder, a circumferential wall surrounding said surface and with said shoulder forming a circumferential recess, the width of said surface to the bottom of said recess corresponding to the width of the hat brim to be treated, said wall having an edge of a size and shape corresponding to the periphery of the hat brim whereby when a hat is within the aperture of the element said wall edge serves to determine the centering of the hat in the element and the width of the brim thereof, and means for pressing the hat brim into the recess and causing its edge to bear against said shoulder.

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