Aug. 25, 1953 E. J. GURRY 2,650,005

APPARATUS FOR MAKING HATS

Filed July 19, 1949

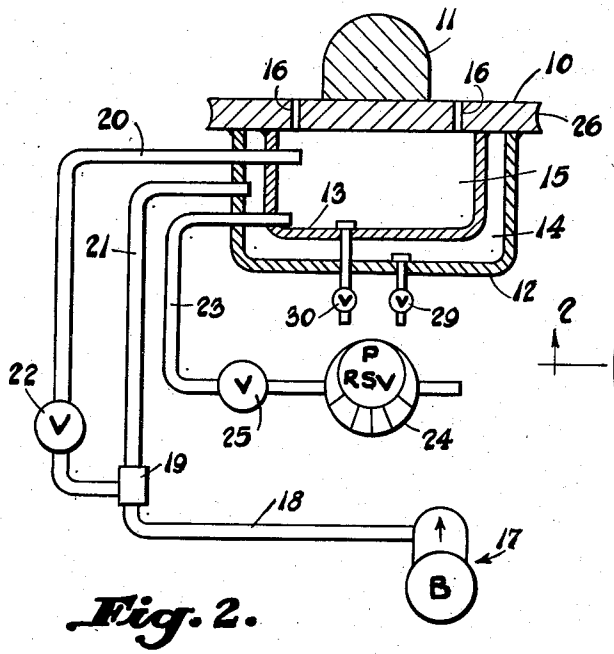


Fig. 2.

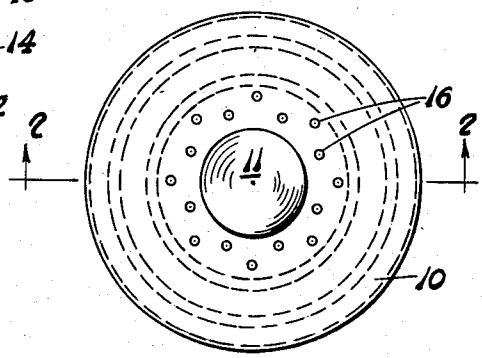


Fig. 1.

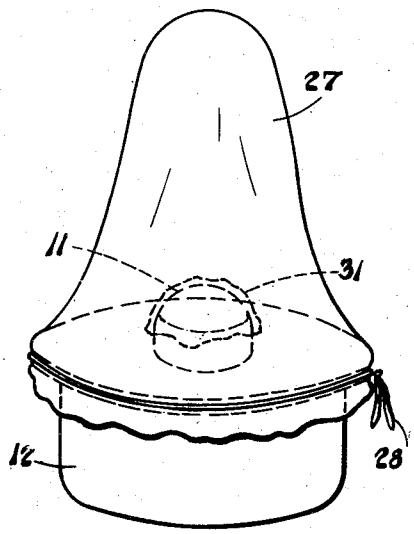


Fig. 3.

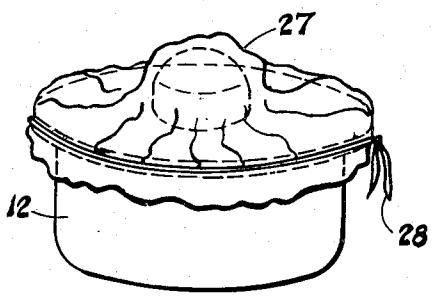


Fig. 4.

INVENTOR.
Edward J. Gurry
BY
Chester A. Williams

Patented Aug. 25, 1953 2,650,005

UNITED STATES PATENT OFFICE

2,650,005

APPARATUS FOR MAKING HATS

Edward J. Gurry, Upton, Mass.

Application July 19, 1949, Serial No. 105,505

1 Claim. (Cl. 223—12)

1

The present invention relates to an apparatus for the blocking and finishing of hats constructed of braid or similar material.

In the past, the conventional method of shaping hats comprised the first step of dipping the hat blank, or form, in a sizing material, and thereafter placing the rough hat form over a wooden block which was shaped in a manner so as to produce the desired hat form when the blank was pressed into intimate contact with the block. It has been, in the past, the universal practice to pin the hat form in intimate contact with the block, and then to permit the form to dry for an appreciable period on the block. As soon as the hat form was dried, the operator pressed the hat form against the block by means of a steam iron, so as to force the hat to take the form of the block. Upon the completion of the pressing operation, the hat was then removed from the block and thereafter any desired ornamentation could be attached to the hat, thereby to complete the same.

This manner of forming a hat is time-consuming, for it requires an appreciable time for an operator to pin the hat to the block and, of course, the manual pressing operation is not only time-consuming, but it is also a tedious and fatiguing operation from the operator's standpoint. Also, since it is necessary in this prior method to allow the hat form to dry upon the block preparatory to pressing the form, many blocks are tied up unnecessarily in the drying operation.

It is, therefore, a primary object of the present invention to provide an apparatus whereby a hat form may be completely blocked and finished to its final shape in a few minutes, without tying up a large number of blocks, and at the same time, relieving the operator of any tedious and fatiguing hand pressing operations.

It is a further object of the present invention to provide an apparatus which is not only efficient in operation but which, at the same time, is most economical of manufacture.

A still further object of the present invention is to provide apparatus for performing a hat shaping operation, which apparatus is designed so as to require a minimum of attention from a maintenance standpoint.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations and arrangements of parts hereinafter set forth and illustrated in the accompanying drawings of a preferred embodiment of the invention, from which the several

2

features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the drawings,

Fig. 1 represents a top plan view of the apparatus which incorporates therein the present invention.

Fig. 2 represents a sectional view taken substantially along the line 2—2 of Fig. 1, and discloses in conjunction therewith a piping system whereby steam is directed to the apparatus and a vacuum is created in a portion thereof.

Fig. 3 represents a perspective view of the apparatus with the bag portion thereof fully expanded under steam pressure.

Fig. 4 represents a perspective view of the present apparatus with the bag portion thereof collapsed under the influence of a vacuum which is created within the bag.

The equipment employed in practicing the present invention is illustrated in the accompanying drawings. This equipment comprises a substantially circular metallic platen 10 which is generally horizontally disposed, and which is adapted to carry a hat block 11 of any desired configuration. Secured to the under side of the platen 10 are a pair of nested cylindrical tanks 12 and 13 which form therebetween a chamber 14. The tank 13 forms, in conjunction with the platen 10, an inner chamber 15. These tanks may be suitably secured to the platen by welding or any other appropriate method. The platen 10 is provided with a plurality of apertures 16, 16, which communicate directly with the chamber 15.

As may be particularly understood from Fig. 2, chambers 14 and 15 may be connected to a boiler or some other steam source, generally designated by the numeral 17, by means of a steam conduit 18. This steam conduit is provided with a fitting 19 to which is connected a pair of steam conduits 20 and 21 which are connected respectively to the chambers 15 and 14. A valve 22 may be connected in the steam line 20 so that the operator may control the steam entering the chamber 15.

Also connected with the chamber 15 is a second pipe or conduit 23 which is connected with a vacuum pump, generally designated by the numeral 24. A valve 25 may be connected in the vacuum line 23 for the purpose of blocking off this line whenever desired.

As may be observed in Fig. 2, the peripheral portion of the platen 10 is provided with a circumferential groove 26. Referring to Fig. 3, the

present apparatus also includes a substantially bell-shaped fluid-impervious bag, or diaphragm 27, the mouth portion of which is of sufficient size to enable the bag to be placed over the platen 10. In order to lock the bag securely in the position shown in Fig. 3, a cord 28 may be tied about the bag in the vicinity of the platen groove 26. From this, it will be understood that the cord will not only function to secure the bag upon the platen but it will also effectively seal the interior of the bag from the atmosphere.

If desired, a pair of drain valves 29 and 30 may be connected with the tanks 12 and 13 for the purpose of draining them of any and all moisture.

In carrying out the present invention, a hat form may be first dipped in a sizing solution, and then it is permitted to dry on any appropriate type of rack which may be located a convenient distance from the blocking equipment. As soon as the hat form is sufficiently dried, it is placed over the block 11 in a manner as best illustrated in Fig. 3, wherein the hat form is generally indicated by the dotted lines 31.

After the hat form has been placed over the block, the bag 27 is then tied over the platen in a manner as disclosed in Fig. 3. Thereafter, steam is introduced into the chamber 15 by way of the steam line 20. This steam will fill the chamber 15 and expand the bag 27 by reason of the fact that it will pass freely through the platen by way of the apertures 16. Of course, during this bag expanding operation, the valve 25 of the vacuum line is in its closed position. The steam line 21 furnishes steam to the chamber 14 for the purpose of maintaining the platen 10 at a predetermined temperature at all times, so as to reduce the tendency of the steam from the line 20 to condense on the upper surface of the platen.

The steam, upon filling the bag 27, will, of course, permeate the hat form 31 so as to soften the same, so that it may be in a pliable condition preparatory to pressing the form into intimate contact with the block 11. After a short interval, the steam line 20 is closed by means of the valve 22, and the valve 25 may be opened and the pump 24 actuated so as to evacuate the bag 27 and the chamber 15, to the end that atmospheric pressure will force the bag 27 to collapse about the block 11. With the bag forcibly engaging the hat form 31, under atmospheric pressure, it will be understood that the hat form, in its pliable condition, will be forced into intimate contact with the block 11.

After a predetermined time interval, the vacuum pump 24 may be disconnected from the line 23, whereupon the bag 27 may be removed from the platen so as to permit the hat to be

removed from the block. The hat may then have any desired ornamentation attached thereto, in order to complete the same. Experience has shown that this entire hat blocking operation may be completed within three or four minutes, which is approximately one-tenth of the time required by the old method which was hereinabove described. Those skilled in the art will readily appreciate that in employing the present apparatus, the operator need perform no tedious or fatiguing manual operations. In other words, the bag 27, in collapsing about the hat, presses the latter about the form 11 so as to block the hat to its final finish, which operation replaces entirely the old hand ironing action. When the hat is finally removed from the block 11, no subsequent pressing or blocking operations are required.

To those skilled in the art, it is manifest that the present equipment, although most efficient in use, is at the same time, designed so as to be economical of manufacture. Furthermore, this equipment is inherently simple and rugged, to the end that it will require very little attention from the maintenance standpoint in order to keep it in efficient operating condition.

I claim:

Hat blocking apparatus comprising in combination, a circular platen having a plurality of apertures extending therethrough, a solid hat-shaping block mounted upon the upper face of said platen, so as to be surrounded by said apertures, a flexible diaphragm removably secured at its edge around the upper face of said platen and over said block, an inner casing and an outer casing concentrically arranged and secured to the lower face of said platen, with their attached ends spaced apart, the inner casing forming with the platen an enclosed inner chamber communicating with said platen apertures, and the outer casing forming with the platen an enclosed outer chamber in communication with a solid portion of said platen, in the space between the ends of said casings, a source of steam under pressure, a source of vacuum, valve means for selectively connecting said inner chamber to either said steam or vacuum source, and valve means for connecting said outer chamber to said steam source independently of the inner chamber.

EDWARD J. GURRY.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,080,731	Stoffel	Dec. 9, 1913
1,321,141	Olsen	Nov. 11, 1919