April 26, 1927. 1,625,889

H. HEARTFIELD

MEANS FOR RENOVATING AND REBLOCKING HAT BRIMS

Filed Sept. 13, 1923 3 Sheets-Sheet 1

Fig. 1

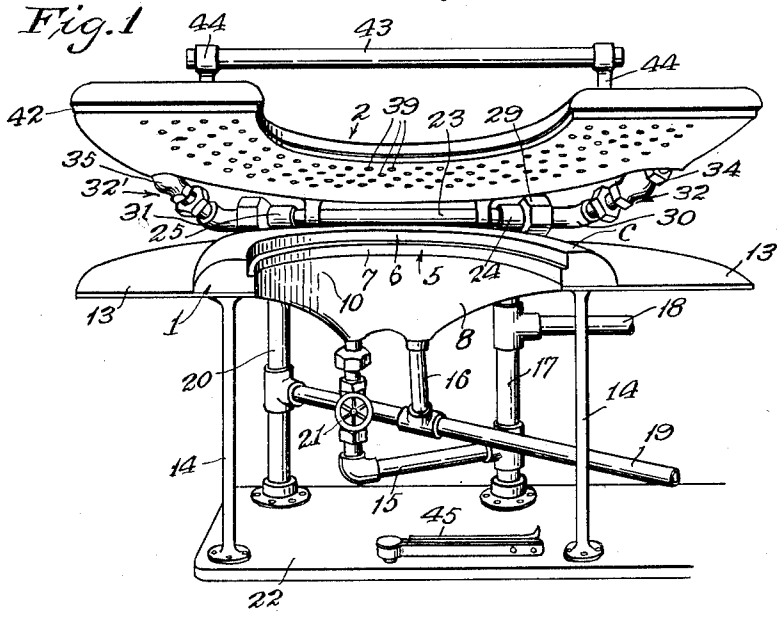
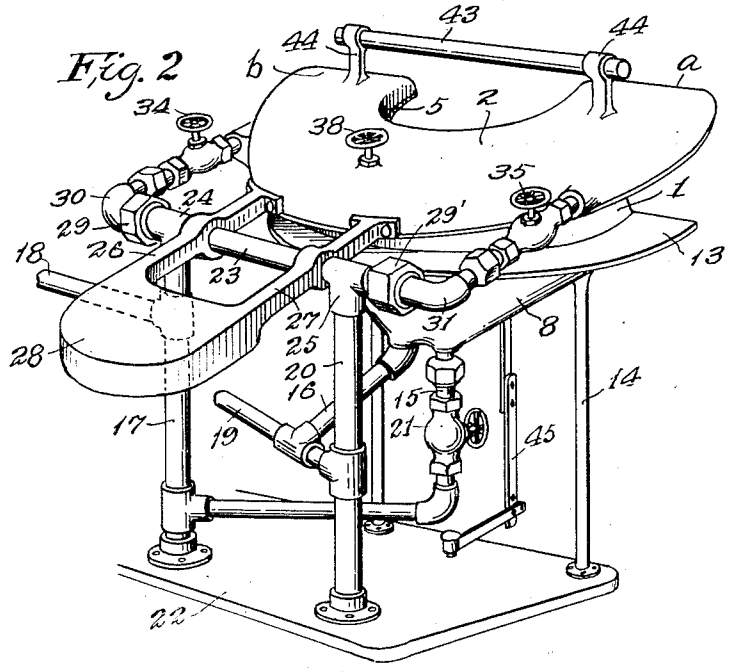


Fig. 2



Witness
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Filed Sept. 13, 1923 3 Sheets-Sheet 2

Fig. 3

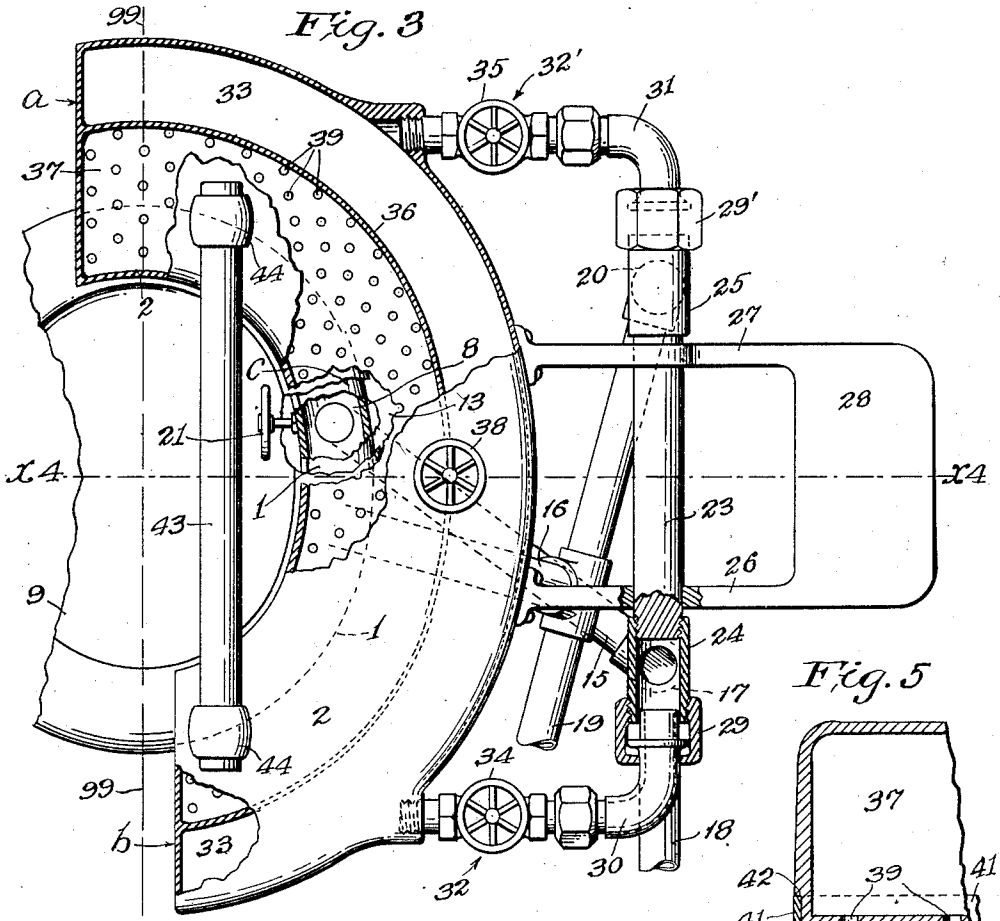
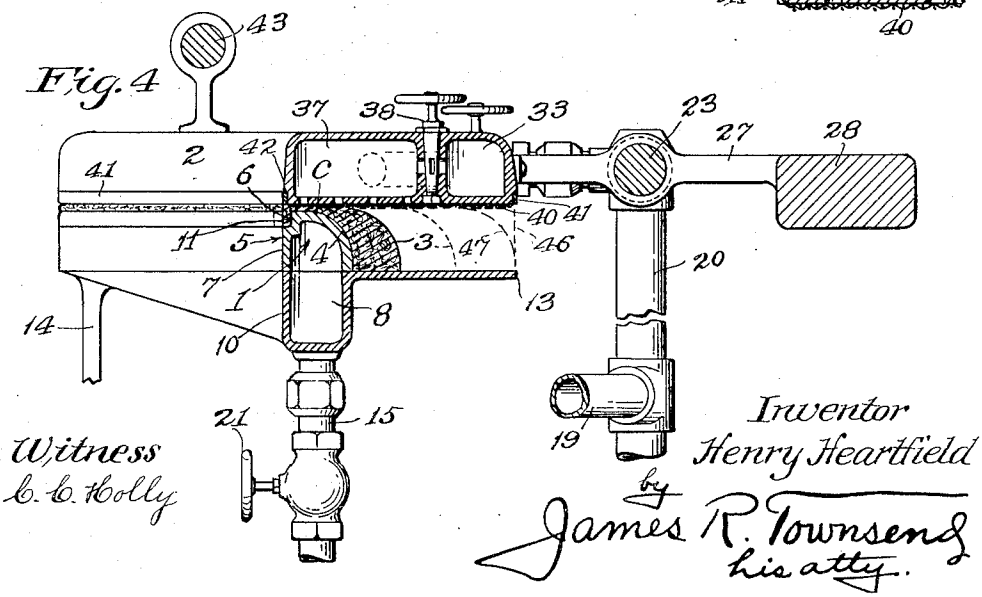


Fig. 5

Fig. 4



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Fig. 6

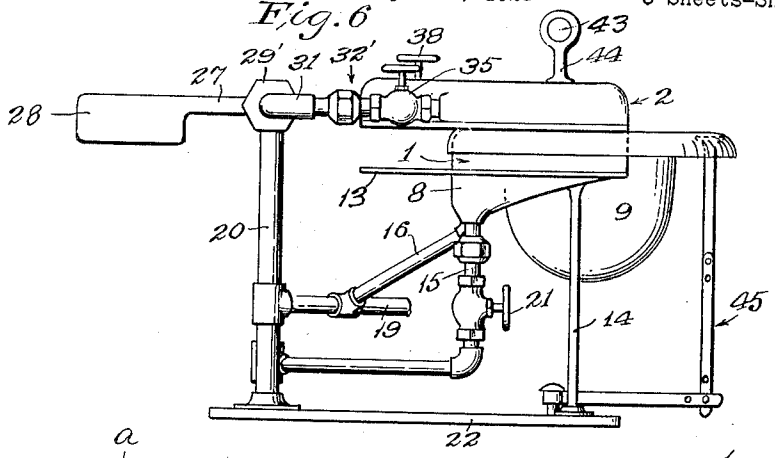


Fig. 7

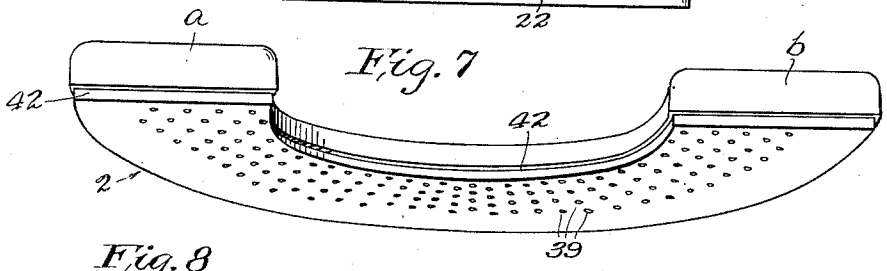


Fig. 8

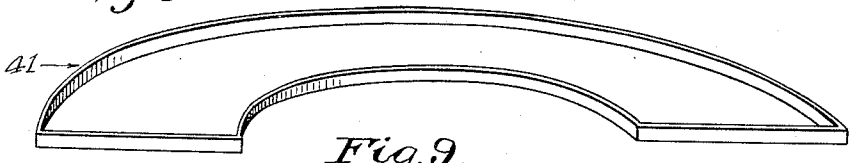


Fig. 9

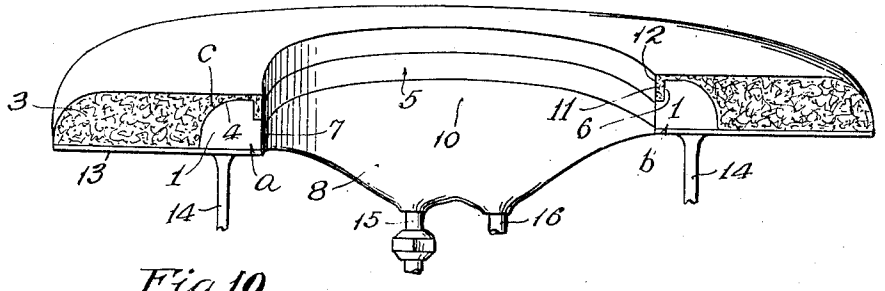
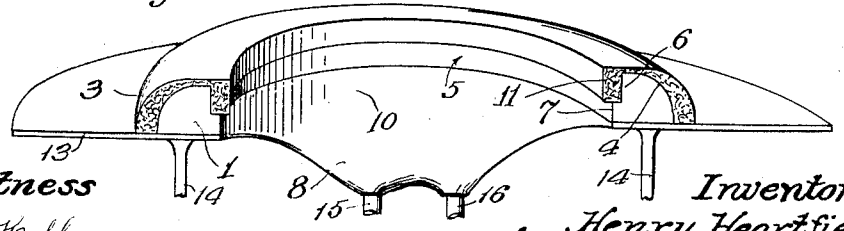


Fig. 10



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UNITED STATES PATENT OFFICE.

HENRY HEARTFIELD, OF BREA, CALIFORNIA.

MEANS FOR RENOVATING AND REBLOCKING HAT BRIMS.

Application filed September 13, 1923. Serial No. 662,389.

An object of this invention is to minimize the complication and multiplicity of parts heretofore necessary in blocking the brims of men's and women's hats of any size, shape, style and material.

Under methods heretofore employed, the hat brim is placed over a wooden flange and it is then covered with a cloth which is moistened by hand. The cloth covered brim is then ironed by hand with a hot iron to produce steam for stiffening and blocking the brim. In such process, a great many wooden flanges are required in order to accommodate the various sizes of hats, and styles and shapes of brim; and there are many hat brims that cannot be blocked at all by such method; the wooden flanges required in the old method frequently become cracked or dented and each crack or dent leaves an impression on the hat brim blocked over it. The work of blocking one hat brim with the old method and means requires from 10 to 15 minutes for each brim and in addition to this, the work is arduous and performed by hand. Furthermore, such work requires an experienced hatter.

Former devices for blocking hat brims of different sizes, shapes or styles, requires numerous wooden flanges to fit the requirements of the various shapes and sizes of hat brims, to the block; and much storage space for such flanges is required.

An object of this invention is to avoid the use of the wooden flanges, and to dispense with the numerous flanges and to minimize the amount of space required for the apparatus; that is to say, heretofore the numerous wooden flanges required necessitated the provision of considerable storage space and an object of this invention is to eliminate the necessity of providing such storage space for the numerous flanges, and to enable the hatter to easily and quickly block the brim of any kind of hat.

In carrying out this discovery and invention I have produced a machine provided with a steam heated, steam tight flange which is shaped in the form of a half oval to support one-half of the brim, and I provide a folding support beneath the other half which may be snapped into place holding the brim in a horizontal position, so that it cannot slip while the other half is being blocked; and I provide a steam heated lid adapted and arranged to be lowered over the portion of the brim being blocked, and provided with perforations in the bottom to which a piece of muslin is attached, and the muslin is thus applied to the hat brim by the lid. The application of steam need only be momentary and the lid is then raised and the brim is shaped or veloured with an arched velour pad which forms a part of the hat blocking outfit to which my present invention may be attached. (See Serial No. 645,821, Filed June 16, 1923.)

My newly invented apparatus is all metal in construction with the exception of felt forms and heat insulating handle, preferably of wood attached to the lid for lowering and raising the lid to and from the portion of the rim upon the flange. Said flange is mounted on a metal base and the machine is preferably approximately 18 inches from side to side, 18 inches from front to rear and 18 inches from the base to the top of the lid when the lid is raised.

A further object of the invention is to minimize the time for blocking hat brims; and in this respect I have made provision whereby the work which heretofore required about 10 or 15 minutes of an expert workman in which to block a hat brim, may be accomplished by an inexperienced workman in from one-half minute to a minute, thereby economizing time in this operation.

I have discovered that by treating at one time, only half of the hat brim with the pressure and heat and with the application of steam on one side during the application of heat and pressure, while the other half of the hat brim is free to be grasped by the hand in handling the hat, the work of blocking the brim can be better and much more rapidly performed than heretofore, and I have also discovered that by applying the pressure, heat and steam to only a portion of the brim, the total blocking is effected in less time than heretofore, and the danger of making the material look shiny and dingy is minimized. In this respect and also with respect to the half brim blocking apparatus whereby one-half of the brim is left free for handling while the other half is being blocked, is broadly new, basic and pioneer.

An object of the invention is to effect the blocking more perfectly and expeditiously than has heretofore been possible.

An object of the invention is to provide simple and novel means whereby the brims of hats of all sizes and styles may be easily

and quickly renovated on the same machine.

Other objects are to provide a device of the character set forth in which the steam conducting pipes will be inconspicuous, and which will be simple in construction and very compact.

The invention comprises the various parts and combinations of parts more particularly hereinafter set forth.

Other objects, advantages and features of invention may appear from the accompanying drawings, the subjoined detail description and the appended claims.

The discovery and invention may be understood by reference to the accompanying drawings in which—

Figure 1 is a perspective front view of a hat brim blocking machine constructed in accordance with my discovery and invention and open with the lid raised to receive a hat brim to be renovated or blocked.

Fig. 2 is a perspective three-fourths rear view of the machine shown in Fig. 1.

Fig. 3 is a fragmental plan of the machine shown in Figs. 1 and 2; the lid being shown closed to block a hat brim, a fragment of which is shown.

Fig. 4 is a sectional elevation on the plane indicated at line x^4, Fig. 3, showing in place one form in solid lines and larger and smaller forms in dotted lines.

Fig. 5 is a fragmental section of the perforated steam lid.

Fig. 6 is a side elevation of the machine shown in Figs. 1, 2 and 3, as the same appears at the moment of blocking the brim of a hat.

Fig. 7 is a perspective view of the lid.

Fig. 8 is a perspective view of a metal frame to slip onto the lid.

Fig. 9 is a perspective view of one form of form in place on the flange.

Fig. 10 is a perspective view of another form of form in place on a flange.

The machine comprises a steam-heated, steam-tight supporting member or flange 1, and a perforated steam lid 2, both being approximately semi-elliptical the shape of a half oval, so that they may fit beneath and above the brim at one side of the hat. In this position, one end or wing *a* of the flange and also of the lid extends a short distance past the center line 99 from front to rear of the hat, while the other end or wing *b* of the flange and also of the lid, extends not quite to the center line at the other end of the hat. The object of this shape is to insure the entire surface of the hat brim being blocked at two operations so that the blocked surfaces overlap when the hat is reversed on this flange, thereby eliminating creasing the hat which would be apparent if the ends only extended exactly half way around the oval. By terminating the wing *b* short of the center axis I provide sufficient space on the open side for receiving the hat, and this construction also provides the proper contour to fit the hat crown when either side of the hat is fitted against the flange.

The upper surface *c* of the flange is narrow and sharply curved, being shaped to fit the most narrow and sharply curved hat brims. Removable forms 3 which may be of felt and of the shape desired are constructed to be placed over the flange, the under surfaces of all forms having a recess 4 of the same size and contour and are shaped to fit the flange 1, while their outer or upper surfaces are of various outside sizes and vary to fit different widths and shapes of hat brims.

The inner wall of the flange forms a shoulder and at the top thereof is rabbeted and the up and down traces 5 of the concave upper and lower faces 6 and 7 are straight. 8 is a steam chamber extending below the flange 1 and concave to go part way around the hat 9, the up and down traces 10 may be straight and conforming to traces of the lower face 7 so that the crown of the hat will not be interfered with by such inner walls.

The rabbet at 6 is shallow being about ⅛ of an inch deep and about ½ of an inch high and forms a ledge so as to accommodate depending lips 11 of the various forms 3 when applied to the top of the flange so as to cause the forms to be held more firmly. The depending lip 11 is adapted to engage the periphery of the shoulder formed on the supporting member which comprises a flat, removable form supporting surface.

The interior surface or recess 4 of the forms 3 fit this rabbet or ledge at 6. The inner edge 12 of one style form being flush with the extended lower portion of the traces 5 of the lower face 7 of the flange.

Another set or style of forms used for the brims of smaller sized hats extend slightly inward beyond the flange and ledge at 6 as shown in Fig. 10 in order to reduce the size of the ellipse to fit the small sized hats.

Around the outer edge of the flange 1 and below the top thereof, a thin flat plate 13 projects horizontally as a support for the removable forms used in blocking the wider hat brims.

The flange is supported on two legs 14, one placed beneath each end or wing *a*, *b* of the flange. Further support is given to the flange 1 by the steam feed pipe 15 and the exhaust pipe 16, both of which are connected to the underneath side of the steam chamber 8 near the rear thereof and connect with other movable pipes.

The steam feed pipe 15 connects to a hollow leg 17 which serves as one support for

the steam lid 2. The hollow leg 17 is connected to the main steam line by pipe 18 and the hollow leg 17 supplies steam to the lid as well as to the steam chamber 8. The exhaust pipe 16 connects with the main exhaust line 19 which in turn is connected to another hollow leg 20 which cooperates with the hollow leg 17 to form a support for the lid 2. The hollow leg 20 serves as a drain for the condensed steam coming through the exhaust from the lid 2.

A valve 21 is placed in the steam feed pipe 15 just below the flange 1 so that the front is within easy reach of the operator.

The two hollow legs 17 and 20 forming the support for the lid 2 are both constructed of substantial dimensions and are located just to the rear of the flange 1; said legs 17 and 20 are securely fastened at their base by bolts or rivets to any suitable support such as a metal base or table or bench 22 upon which the machine is mounted. The hollow legs 17 and 20 are connected at their upper ends by a horizontal solid shaft 23 that is threaded into one end of the T's 24 and 25 which are secured to said legs 17 and 20. Cross arms 26, 27 are pivotally mounted on the horizontal solid shaft 23 and are attached at their forward ends to the steam lid 2 to support the same and are attached at their rear ends to a balancing weight 28. The lid 2 and the weight 28 are so balanced that the lid will remain in whatever position it is placed.

The solid shaft 23 connects with one end of the T's 24, 25 at the top of the hollow legs 17 and 20 and thereby closes the steam connections at that side of the T. The opposite sides of the T's 24, 25 turn outward and lead into boxings 29, 29′ which connect with pipes 30, 31 that make a turn to the front. The pipe 30 is connected by suitable connections 32 to one side of the inlet end of a heating chamber 33 formed around the outer periphery of the steam lid 2. The pipe 31 is connected by suitable connections 32′ to the other side or the outlet end of said heating chamber 33. Said connections are preferably the same as those connecting the pipe 30 with the inlet end of said chamber. The connections from the pipes 30 and 31 are connected to the steam lid 2 at points well out to the side of each wing. This method of connecting the steam pipes to the lid aids in steadying the lid and prevents side play. On the upper sides of the connections 32 and 32′ at points near their junction with the lid 2, I place valves 34, 35 that regulate the flow of steam into the heating chamber 33 from the pipe 30 and that regulates the passage of condensed steam from the heating chamber 33 into the exhaust line through the pipe 31. The pipes 30, 31 turn within the boxings 29, 29′ as the lid is raised or lowered. The solid shaft 23 fitted between the T's 24 and 25 at the tops of the hollow legs force the incoming live steam through its intended channel and likewise turns the outgoing condensed steam outward toward the hollow leg 20 from which it enters the hollow exhaust line 19.

The steam lid 2 is partitioned into two hollow compartments or chambers, flat on top and bottom. The partition 36 extends from one end *a* to the other end *b* of the lid following the same semi-elliptical contour and extending along a line about one-third of the distance from the back to the front of the lid and thereby forms rear and front compartments hereinafter called the heating chamber 33 and steam chamber 37 respectively.

The rear compartment or heating chamber 33 into which the steam inlet and outlet connections 32, 32′ directly enter is steam tight. Steam entering this chamber heats the entire lid 2. Condensed steam drains away through the exhaust pipe connections. When the steam lid 2 is thoroughly heated past danger of further condensation, a valve 38 in the center of the partition is opened permitting the passage of dry steam into the front or steam chamber 37, the bottom of which is perforated so that steam passes from the steam chamber 37 through the perforations 39 to the hat brim to be blocked and upon which the bottom of the lid 2 rests while in operation.

Thicknesses of cloth 40, preferably muslin or some such material, is stretched across the perforated bottom of the lid 2 and is held in place by a metal frame or hoop 41 which snugly fits into the groove 42 around the lower edge of the lid. The cloth 40 prevents the perforations 39 from leaving imprints upon the hat brim.

The lid is approximately five inches wide, equal to the width of the widest hat brims.

A wooden handle 43 extends from one wing *a* to the other wing *b* of the lid 2 and is mounted on metal supports 44 which raise the handle several inches above the lid so that the handle does not become heated and the hand of the operator is not within close proximity to the heated lid.

A folding attachment 45 may be used to support the hat brim while being blocked on the side opposite the flange 1 and is attached to the table or stand 22 midway between the flange legs 14 and where it rests folded when not in use. The folding attachment 45 comprises three sections connected at folding joints which extend outward and upward to a point level with the top of the flange 1. By using the folding attachment to support the one-half of the hat brim that extends beyond the supporting member, the hands of the operator are free to steam and velour the hat brim.

With this apparatus I find that only a

very few forms are required to block any and all hat brims regardless of size, shape or style. One set of forms, preferably 5, of various outside dimensions (see Fig. 4) having their depending lips 11 to snugly fit the shoulder of the supporting member or the rabbet at 6 as shown in Figs. 4 and 9 are adapted to be used when blocking brims of hats of size 7⅛ and larger. Another set of forms preferably 5, have their depending lips 11 of a greater thickness so as to extend inward from the face 6 of the inner wall of the flange as shown in Fig. 10 are used for blocking brims of hats smaller than size 7⅛. The only difference in the two sets is that the set used for smaller sizes extends further within the inner edge of the flange, thus reducing the size of the elipse to accommodate smaller hats.

For blocking flat brims of any width on hats of size 7⅛ and larger, I use one style of form 46 which is shown in dotted lines, Fig. 4, that is flat along its entire upper surface and extends the full width of the lid and of the supporting plate 13, outward, from the flange. It is understood of course if flat brims of any width on hats smaller than size 7⅛ are to be renovated or blocked the style of form having a depending lip 11 such as shown in Fig. 10 will be used.

For hats with wide brims that curl at the edge, I use another style of form 47 which also extends the full width of the lid and is rounded at its upper outer edge. Many women's hats may be blocked with this style of form. Other styles of forms may be made which are narrow and curve more sharply to accommodate different styles of hat brims as may be found necessary.

An advantage in using resilient or felt dummies in blocking hat brims is that women's hats constructed of delicate material and wire frame work, which hats have heretofore been practically impossible to block under processes heretofore known, as hard pressing with an iron, which would crush the material may be easily, quickly and satisfactorily blocked with this apparatus because the introduction of steam in the foregoing manner relieves the need of hard pressing and the forms being soft and pliable permit the wire framework to be embedded or pressed therein without hurting the material around the wire thus leaving the material in an uninjured condition.

The object of this means for blocking hat brims is believed to be clear from the foregoing and further explanation thereof is believed to be unnecessary.

However, by this means of renovating hat brims I gain many advantages, the paramount one of which is that with one machine or device and two sets of resilient forms, one set of five forms with a thin lip 11 as shown in Fig. 4, and another set of five forms with a thicker lip 11 as shown in Fig. 10, I am able to block practically any hat brim, regardless of size, shape, or style.

With the devices heretofore used it has been necessary to have a different or separate machine for each style hat, thereby making it practically prohibitive for the ordinary hat renovating or reblocking shop to be equipped with a complete set of machines due to cost and the space required to mount a machine for each and every size and style hat.

Whereas, with my device and ten forms, I have accomplished what has heretofore required many separate machines.

A further advantage gained is that I provide the flange 1 with a horizontally projecting flange 13 whereby the dummies are supported in operative position.

Another advantage is that by utilizing the legs or supports of the device as conduits for the steam supply and exhaust the cost of fittings are reduced and the device is made very compact.

A further advantage is that by providing the steam heated lid with a steam chamber the bottom of which is perforated, and with a heating chamber around said steam chamber, and the bottom of which is solid the apparatus may be heated by permitting the steam to flow through the heating chamber only until the device is sufficiently warm to prevent condensation of steam when the valve 38 may be opened to permit the dry steam to enter the steam chamber without likelihood of such steam condensing and permitting the condensed steam or water from flowing through perforations onto a hat brim being renovated.

I claim:

1. A hat brim blocking outfit comprising a member including a flat removable form supporting surface having a vertical shoulder; a removable form having a depending lip adapted to engage the periphery of said shoulder and having a surface adapted to receive a hat brim; and means cooperating with said form to operate upon a hat brim received upon said surface.

2. In a hat brim blocking outfit the combination of a member adapted to be heated and being provided with a rabbet; a plate around the outer edge of said member and projecting horizontally therefrom below said rabbet; a removable form supported on said plate and having a recess adapted to accommodate said member and having a lip adapted to be received in said rabbet, said form having a surface adapted

to receive a hat brim to be blocked; and means cooperating with said form to block a brim received upon said surface.

3. In a hat brim blocking apparatus, a member in the shape of a semi-ellipse; a plate around the outer edge of said member and projecting horizontally therefrom; a removable form supported on said member and plate, said form having a surface adapted to support a hat brim to be blocked; and a steam heated lid for steaming a hat brim supported on said surface.

4. A hat brim blocking outfit comprising a flange adapted to support a hat brim to be blocked, said flange being semi-elliptical and having one end extending past the longitudinal axis of said ellipse and its other end terminating short of said axis a distance less than the distance said end extends beyond the axis of said oval; and means for applying steam to a hat brim supported upon said flange.

5. A hat brim blocking outfit comprising a semi-elliptical flange adapted to support substantially one-half of a hat brim to be blocked; legs supporting said flange; a lid adapted to steam a hat brim supported upon said flange; and a folding support adapted to support the hat brim on the side opposite the flange.

In testimony whereof, I have hereunto set my hand at Brea, California, this 6 day of September, 1923.

HENRY HEARTFIELD.