R. E. HEIM.

APPARATUS FOR SOFTENING HAT BRIMS FOR SETTING.

APPLICATION FILED JAN. 14, 1909.

929,945. Patented Aug. 3, 1909.

Fig. 1.

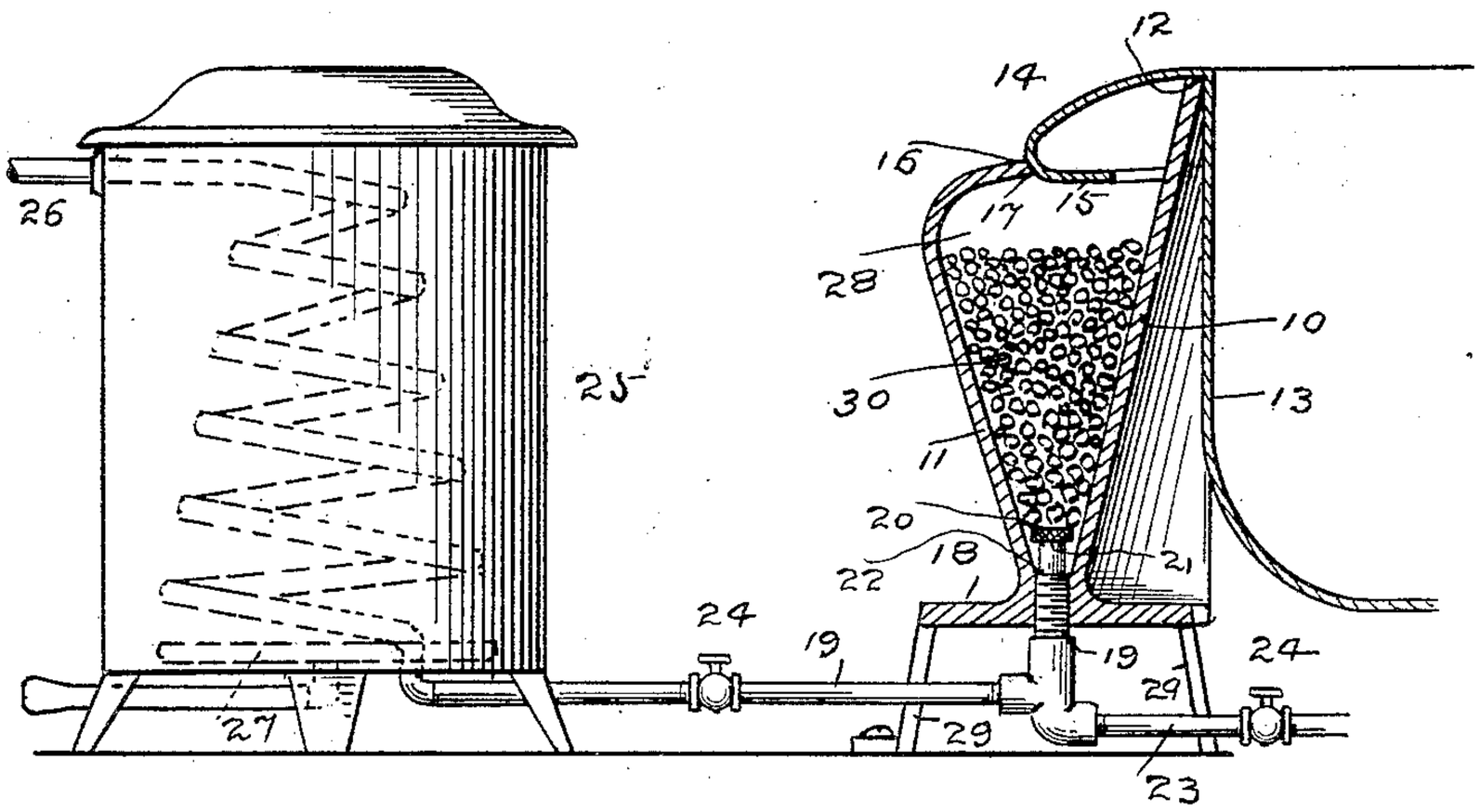


Fig. 2.

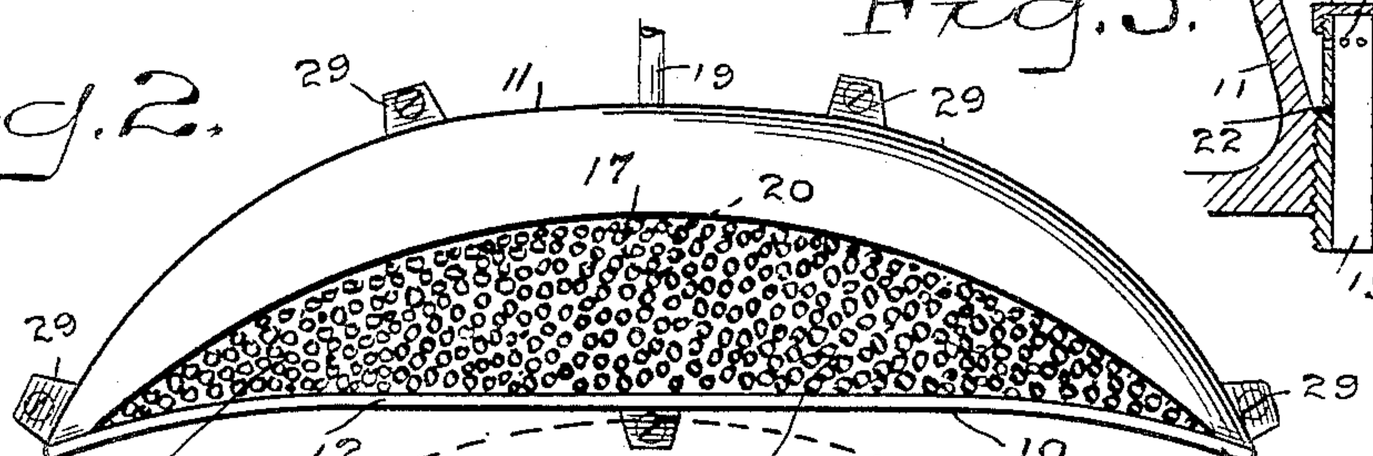
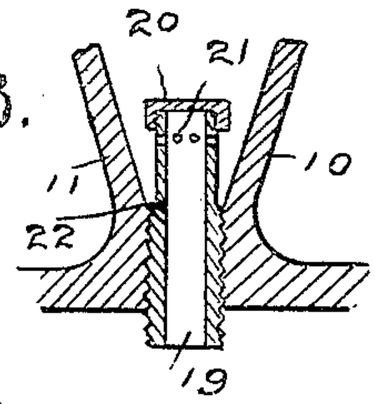
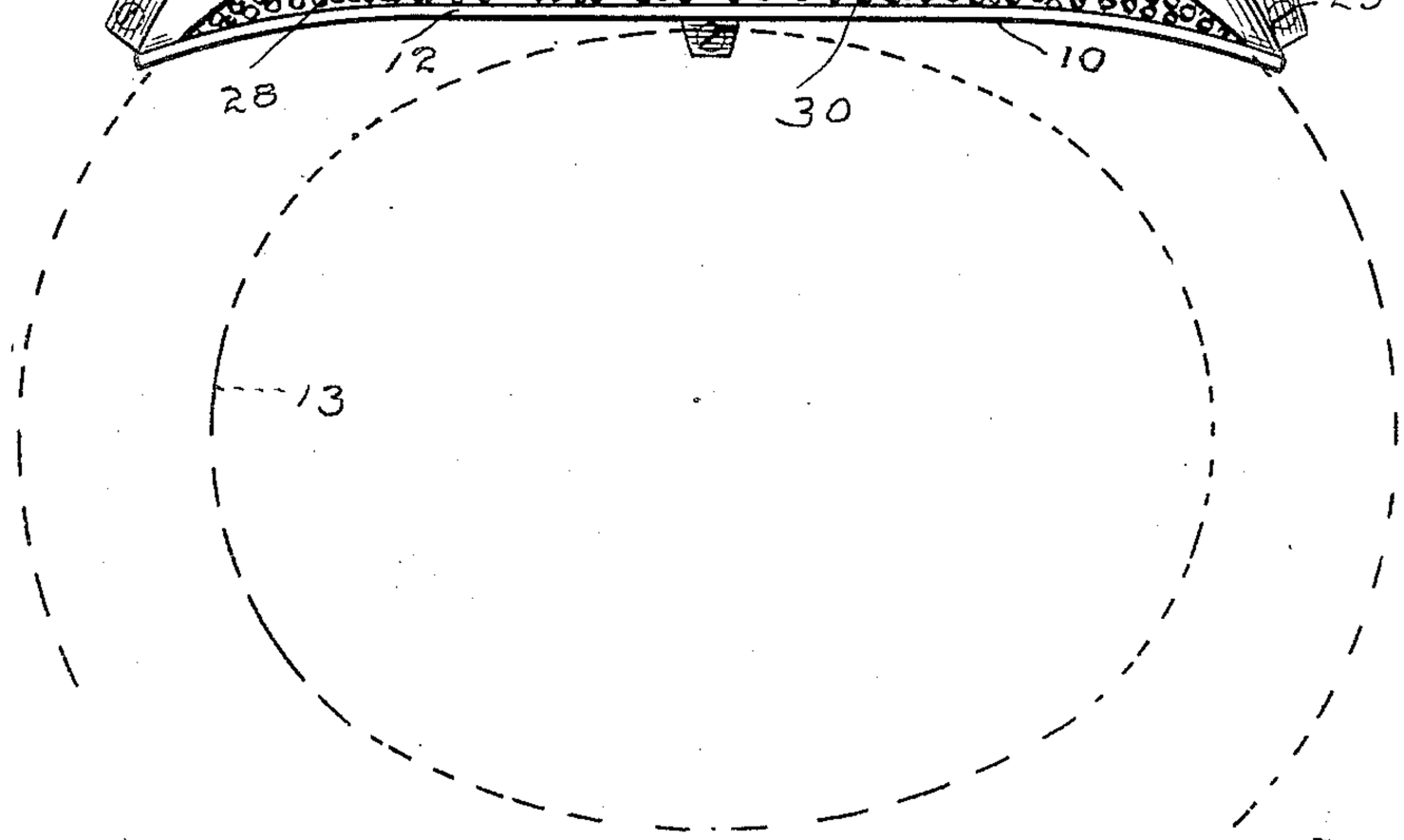


Fig. 3.





Witnesses:
H. A. Lamb.
S. W. Atherton

Inventor
Robert E. Heim
By Attorney
N. W. Wooster

UNITED STATES PATENT OFFICE.

ROBERT E. HEIM, OF DANBURY, CONNECTICUT.

APPARATUS FOR SOFTENING HAT-BRIMS FOR SETTING.

No. 929,945. Specification of Letters Patent. Patented Aug. 3, 1909.

Application filed January 14, 1909. Serial No. 472,256.

To all whom it may concern:

Be it known that I, ROBERT E. HEIM, a citizen of the United States, residing at Danbury, county of Fairfield, State of Connecticut, have invented a new and useful Apparatus for Softening Hat-Brims for Setting, of which the following is a specification.

This invention relates to the manufacture of hats and has for its object to provide apparatus for softening the brims, more especially the flanges of the brims, in preparation for setting or shaping by the use of either hot air or dry steam, so called, that is superheated steam.

The essential feature of the invention is that the brims are softened by heat without moisture, and furthermore, if there is moisture in a brim it is expelled by the use of my novel apparatus. It is of course well understood that in order to set or shape the brims of hats the brims require to be softened. This softening operation is usually effected by the application to the brim of ordinary steam, that is steam not superheated and containing much moisture. The result is that the brims do not set hard and rigid and are easily caused to lose their shape. In order to wholly overcome this difficulty and provide means for effectively softening hat brims so that they may be easily set or shaped and will become perfectly rigid in the form to which they are shaped, I have devised the novel apparatus which I will now describe, referring to the accompanying drawing forming a part of this specification and using reference characters to indicate the several parts.

Figure 1 is a view partly in elevation and partly in section, illustrating my novel apparatus and suitable means for furnishing dry heat; Fig. 2 a plan view on an enlarged scale of the heat reservoir and the means for supporting a hat while the brim is being softened; and Fig. 3 is a detail sectional view of the lower portion of the heat reservoir and the supply pipe.

The essential feature of the invention is the heat reservoir which is so shaped as to provide a rest or support for a hat brim of any shape that it is desired to soften. This reservoir, broadly considered, is crescent-shape in horizontal section and V-shape in vertical section and has an open top. The reservoir comprises essentially inner or concave and outer or convex walls indicated respectively by 10 and 11. The inner wall comprises a concave curve at its lower end which flattens out as the wall rises to approximately a straight line. The inner wall extends above the outer wall and the upper end, as at 12, serves as a rest for the top of a brim, when inverted, where it joins the body.

13 indicates a hat body, 14 the brim as a whole, 15 the flange of the brim, and 16 the edge of the curl. The outer wall comprises a convex-curve of shorter radius than the inner wall, said walls diverging from each other from the base upward and forming a heat reservoir 28 which is V-shape in vertical section and substantially crescent-shape in horizontal section. The upper end of the outer wall is curved inward toward the inner wall and the edge thereof forms a crescent-shaped rest, indicated by 17, against which the edge of the curl rests in use, as clearly shown in Fig. 1. The inclination of the inner wall permits the hat to be tilted as it is turned around so that the front and rear as well as side portions of the brim can be made to cover the open top of the reservoir. The walls are secured to or cast integral with a base 18 shown as resting upon legs 29 which are preferably rigidly secured to the floor or to a suitable support.

Heated air or superheated steam is supplied through a pipe 19 which extends upward into the reservoir. The end of the pipe is shown as closed by a cap 20 and as provided with orifices 21 to permit the hot air or superheated steam to pass out. In practice, the reservoir is preferably partially filled with marbles or gravel, indicated by 30, which acts to retain the heat and to diffuse it. In order to prevent the possibility of the accumulation of water in the reservoir, I provide one or more drainage openings 22 at the bottom of the reservoir leading into the supply pipe and a drainage pipe 23 communicating with the supply pipe. Both the supply pipe and the drainage pipe are shown as provided with valves 24.

So far as the present invention is concerned, it is unimportant how the hot air or superheated steam is furnished. I have shown means for providing superheated steam which I have found very effective in practice.

25 denotes a heater to which water is supplied by pipe 26, the water passing through coils in the heater and being converted into

steam and the steam being superheated by means of a suitable burner 27, indicated by dotted lines only.

The operation is as follows: The hot air or superheated steam is turned into the reservoir and the operator holding the hat in his hand places the crown downward contiguous to the inner or concave wall of the reservoir and lays the flange of the brim over the reservoir resting the edge of the curl against rest 17, so that the brim acts as a cover for the open top of the reservoir as clearly shown in Fig. 1, the hat being turned if necessary in order to soften all portions of the brim. In practice, however, the reservoir is made large enough and of suitable shape to completely soften one side of a hat brim at each heating.

Having thus described my invention, I claim:

1. An apparatus for softening hat brims comprising a reservoir crescent-shape in horizontal section, the inner wall of said reservoir being inclined and having its upper edge forming a rest for a portion only of a hat brim when inverted and the outer wall terminating in a rest for the edge of the curl, the inclination of the inner wall permitting the hat to be tilted as it is turned around.

2. An apparatus for softening hat brims comprising a reservoir V-shape in vertical section and crescent-shape in horizontal section, the inner wall of said reservoir being inclined and having its upper edge forming a rest for a portion only of a hat brim and the outer wall curved inward and forming a rest for the edge of a curl, the space between said rests being open, the inclination of the inner wall permitting the hat to be tilted as it is turned around, and a supply pipe for conveying hot air or superheated steam to the reservoir.

In testimony whereof I affix my signature, in presence of two witnesses.

ROBERT E. HEIM.

Witnesses:
LOUIS THEURER,
C. EDMUND MASON.