A. B. WARING.
Curling Hat-Brims.

No. 201,137. Patented March 12, 1878.

Fig. 1.

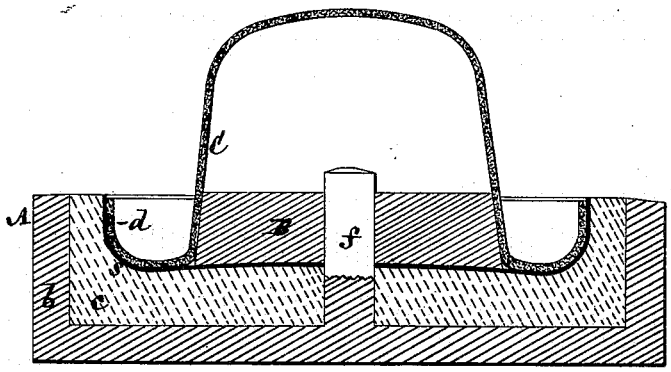
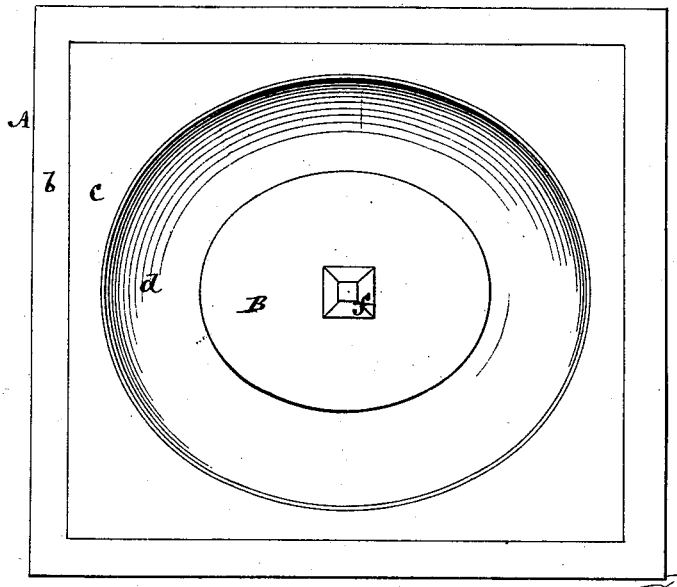


Fig. 2.



Witnesses:
Michael Ryan
Fred Haynes

Inventor
Arthur B. Waring
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

ARTHUR B. WARING, OF YONKERS, NEW YORK.

IMPROVEMENT IN CURLING HAT-BRIMS.

Specification forming part of Letters Patent No. **201,137**, dated March 12, 1878; application filed August 15, 1877.

To all whom it may concern:

Be it known that I, ARTHUR B. WARING, of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in the Manufacture of Hats, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to shaping and setting the brims of felt hats. Heretofore it has been customary to press and put the brims of said hats into the desired shape by subjecting the brim portion of the hat to pressure between metallic male and female dies, which are heated by steam and are of the exact form it is required to give the brim. These metal dies are not only expensive, but restrict the shape of the brim to a form which will admit of the male die readily entering and leaving the female die, and as the brim of the hat is hot when removed from the dies, its shape is liable to be disturbed, not only in the act of removal, but by its cooling and setting away from the dies. Furthermore, said dies have been constructed so that there has been no provision for varying the width of the brim of the hat relatively to the size of its crown.

My invention obviates these defects; and consists in a process of shaping and setting the brim by first pressing it between hot plates which are flat, or nearly so, or otherwise giving it a smoothness, regularity, and luster, and afterward, and while said brim is hot, inserting it within an open mold, the concave figure of which corresponds with the style of the brim required, and subjecting said brim in said mold to gentle pressure of the finger, or of a "talica," to make it conform to the concave figure of the mold, within which it is allowed to cool and set before removing it.

The invention also consists in a combination of a detachable block, constructed to fit the crown of the hat, with the mold, constructed with a cavity for reception of the brim, whereby different-sized blocks may readily be substituted in the same mold to vary the width of the brim relatively to the size of the crown of the hat.

Figure 1 represents a vertical section of a mold with a hat therein, having its brim shaped and set in accordance with my invention. Fig. 2 is a plan of said mold.

A is a block of wood, metal, cement, or other material, having a circular or oval cavity, *s*, in it of the same shape as the desired style of the brim of the hat. This block forms the outer portion of the mold, and is here represented as composed of an outer shell, *b*, and a plaster-of-paris or other cement filling, *c*, lined with lead, *d*, which is a cheap form of construction that, in the absence of any necessity to heat the mold, my invention readily admits of being adopted.

B is the crown-block within the mold, in which it is centered and held by fitting it onto or over a center stud, *f*, fast to the outer portion of the mold, so that it may be readily detached or replaced at pleasure, or a crown-block of a different size be substituted for it, to adapt the same mold to form hat-brims of different widths.

The hat C, after having been stiffened and finished, has its brim first pressed flat, or nearly so, between hot plates, and said hat then introduced into the mold and over the crown-block before the heated brim cools or sets. The finger, or a talica, is then brought to bear under gentle pressure upon the brim till it conforms to the concave figure of the mold, in which it is allowed to cool and set before removal, so that when removed its shape is not liable to be disturbed.

By this process, too, I am enabled not only to dispense with expensive metal male and female dies, but to dispense with the use of steam, as now commonly used, for softening the hats preparatory to what is called the "setting-off" process, as now performed by hand over a collar for shaping the brim after pressing it between flat surfaces, such use of steam being objectionable for the reason that it destroys the luster obtained by pressing.

I claim—

1. The process of shaping and setting the

brims of hats by first hot-pressing them into an approximately flat shape, and subsequently subjecting them to pressure, while hot, in an open mold of the required shape of the brim, and afterward allowing them to cool and set in said mold, substantially as specified.

2. The combination of the detachable crown-block with the mold, constructed with a cavity to receive the brim of the hat, and the center pin or stud for holding the crown-block in position, essentially as and for the purpose herein set forth.

ARTHUR B. WARING.

Witnesses:
HENRY T. BROWN,
FRED. HAYNES.