(No Model.)

# S. BEATTY.

## METHOD OF PRESSING STRAW HATS.

No. 366,067. Patented July 5, 1887.

*Fig. 1.*

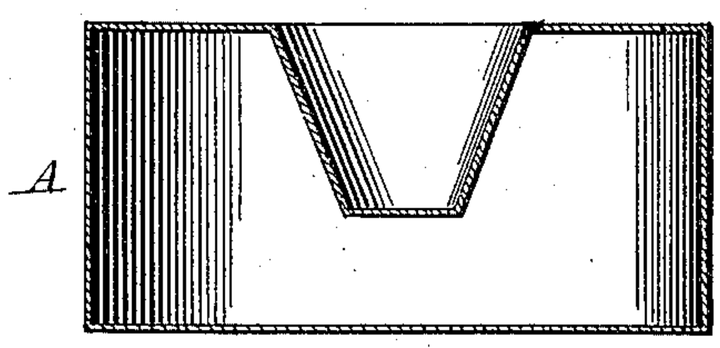



*Fig. 2.*

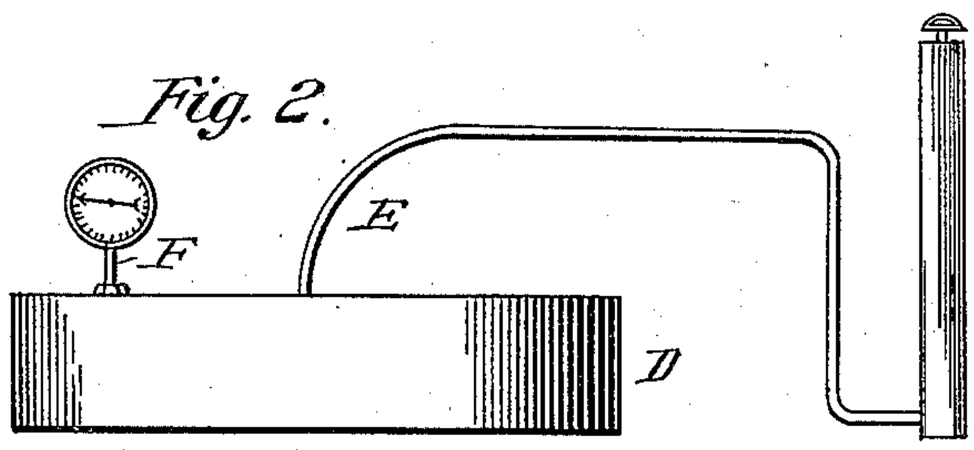



*Fig. 3.*

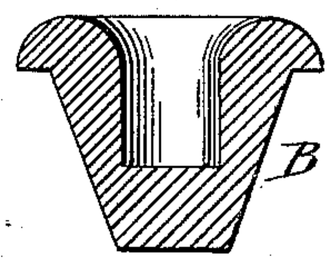



*Fig. 4.*

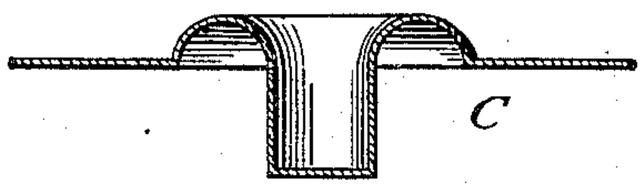
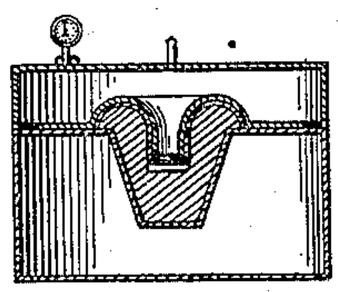



*Fig. 5.*



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

SAMUEL BEATTY, OF NORWALK, CONNECTICUT, ASSIGNOR TO THOMAS STANLEY VANDERHOEF, OF SAME PLACE.

## METHOD OF PRESSING STRAW HATS.

SPECIFICATION forming part of Letters Patent No. 366,067, dated July 5, 1887.

Application filed March 3, 1887. Serial No. 229,551. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL BEATTY, a citizen of the United States, residing at Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Methods of Pressing Straw Hats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the method of pressing hats into any desired shape, and particularly those known as straw hats.

Hats have heretofore been pressed by two or more operations, the simplest mode being that in which is used a metal die or mold placed in a steam-chamber and a hollow shell or dome having at its base or lower part a flexible film or rubber bag bolted therein and expanded by water or other fluids under pressure. The die or mold is placed in a steam-chamber which is heated by hot air, steam, or by burners, and the hat to be pressed is inserted in the die or mold, the brim overlapping the die. The upper part of the press, in which is bolted the film or rubber bag, is then brought down and locked in place in any ordinary manner, and water under pressure is then forced into the film or rubber bag, which expands and assumes the form and shape of the die and presses and fashions the body of the hat into the shape desired. This operation is objectionable for the reasons that the film or rubber bag expands unevenly and presses the hat hard in some places and soft in others, and often bursts, necessitating a new bag, which adds to the cost of manufacture; that the bag, after the hat has been pressed and before the dome or upper part of the press can be raised, the water must be withdrawn from the film or bag, which operation requires considerable time; that it does not press the brim in shape, but crushes the straw and requires separate hand-pressing to bring the hat to the required shape, and that a hat cannot be pressed hard on the brim and soft on the crown, or vice versa. Furthermore, if it be desired to press the hat hard on the crown and soft on the brim, a solid-block press is required, making two presses through which the hat must pass. This solid-block press is also objectionable on account of the inability to keep the block in perfect shape, so that it will press evenly and not press too hard in one spot and too soft in another; also, the impossibility of pressing the crown and brim at one operation.

The object of my invention is to obviate these objections; and to that end the nature of my invention consists of an improvement in the art of pressing hats, which consists of pressing the hat and brim in one operation, all as will be hereinafter described and claimed, whereby I am enabled to press a hat having a hard body and brim, a soft body and hard brim, or a hard body and soft brim.

One form of apparatus for carrying out my invention is shown in the accompanying drawings, in which—

Figure 1 represents the steam-chamber; Fig. 2, the air-chamber and pumping device; Fig. 3, the metal die; Fig. 4, the hollow flexible block; and Fig. 5, a vertical section of the apparatus, with hat in place and ready for manipulation.

A is the steam-chamber, which is heated by hot air, steam, or burners; B, the metal die having crown and brim configurations of the shape of the hat to be pressed, and is inserted in the steam-chamber.

C is a hollow flexible block, separate from the air-chamber, having crown and brim shaped to conform to the crown and brim configurations of the die B, and is made of rubber or other air-tight material, and is placed inside of the hat to be pressed and held in place by the pressure of the air.

If it is desired to press the hat-crown hard and brim soft, the crown of the flexible block is made of rubber and the brim of felt or other suitable material; or, if it is desired to press the crown soft and brim hard, the construction is reversed.

D is the air-chamber, which has an air-tight joint at the point of connection with the steam-chamber A, and is provided in its top with two apertures, E F, the aperture E for the admission of compressed air from a pumping device, E′, and aperture F for a gage to register the amount of pressure.

The operation is as follows: The air-chamber D is raised in the usual manner. The metal die B is placed in the heated steam-chamber A, and the hat to be pressed is placed in the die. The hollow flexible block C is then placed inside of the hat, its brim covering the brim of the hat. The air-chamber is then brought down and locked upon the steam-chamber and compressed air or gas forced through the aperture E by means of a pumping device until the gage registers a pressure sufficient to press the hat. The air-chamber is then raised to allow the air to escape from between the block and air-chamber and pass between the steam and air chambers to the outer air direct, which leaves the press instantly ready to press another hat without waiting for the block to be relieved of its contents, as heretofore.

I do not wish to confine myself to pressing straw hats exclusively, as it is obvious that wool and felt hats can be pressed as well as straw by this machine.

I do not claim the apparatus herein described, as it forms the subject-matter of another application filed by me October 20, 1886, Serial No. 216,740.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an improvement in the art of pressing hats, the method herein described, which consists in expanding the block to the desired shape by means of compressed air or other gas and then instantly relieving said block of said air, substantially as described.

2. As an improvement in the art of pressing hats, the method herein described of expanding and releasing the block from pressure, which consists in forcing air or other gas between the block and walls of the air-chamber and instantly relieving the same by withdrawing the air through the space between the air and steam chambers by raising the air-chamber from its seat, substantially as described.

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

SAMUEL BEATTY.

Witnesses:
ALFRED H. CAMP,
A. HOMER BYINGTON.