(No Model.)

S. BEATTY.

MACHINE FOR PRESSING STRAW HATS.

No. 366,066. Patented July 5, 1887.

FIG. 1.

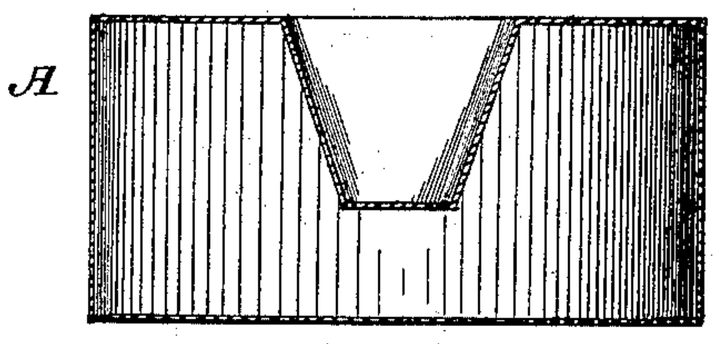


FIG. 2.

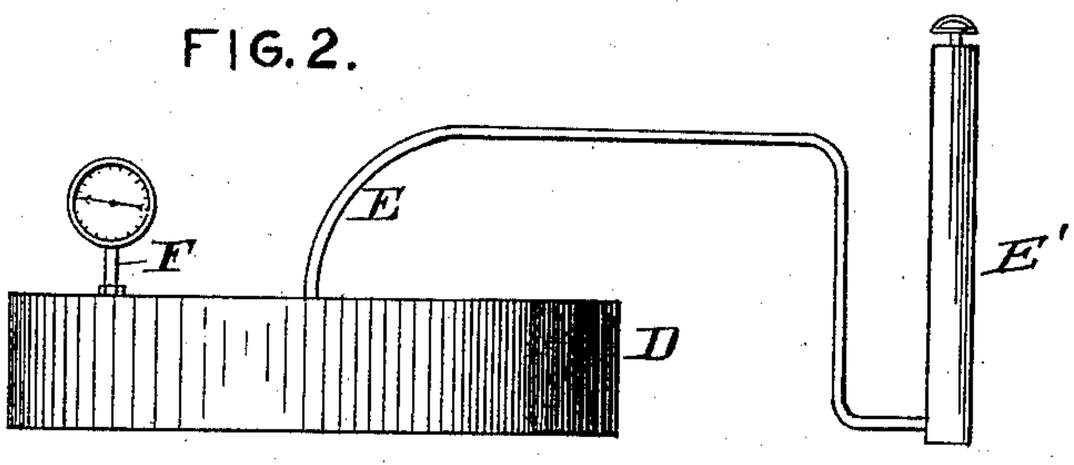


FIG. 3.

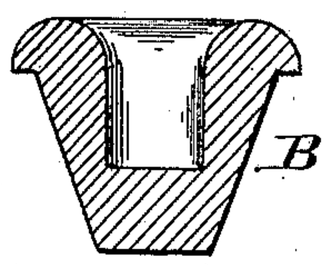
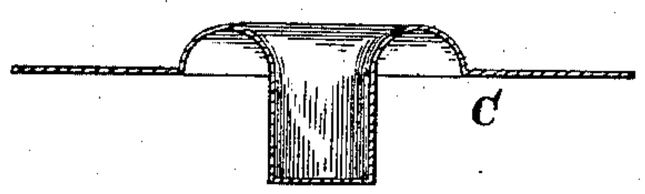


FIG. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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MACHINE FOR PRESSING STRAW HATS.

SPECIFICATION forming part of Letters Patent No. 366,066, dated July 5, 1887.

Application filed October 20, 1886. Serial No. 216,740. (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 Machines for 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 straw-hat-pressing machines.

Heretofore hats have been pressed by means of 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.

The operation is as follows: The metal die or mold is placed in the steam-chamber, which is heated by hot air, steam, or by burners, and the hat to be pressed is inserted in this die or mold. 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. Water under pressure is then forced against the film or rubber bag, which expands and assumes the form and shape of the hat, so as to press and fashion it in the shape required. After the hat has been pressed, and before the dome or upper part of the press can be raised, the water must be allowed to run out of the film or bag. This operation is objectionable, for the reason 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. It is also impossible to press the brim of the hat perfectly at the time the crown is pressed, requiring the brim to be pressed by means of a hand-iron after coming from the hydraulic press; nor can a hat be pressed hard on the brim and soft on the crown, or vice versa, with this device. If it is 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 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 do away with the film or rubber bag, fluid-pressure, solid-block press, and hand-iron, and construct a cheap hat-pressing machine to be operated by means of compressed air that will press evenly every part of a straw hat, or, if desired, press the crown hard and the brim soft, or vice versa, at one operation.

The nature of my invention consists of constructions and combinations, all as will be hereinafter described in the specification, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents the steam-chamber; Fig. 2, the air-chamber and pumping device; Fig. 3, the metal die, and Fig. 4 the hollow flexible block.

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 A.

C is a hollow flexible block separate from the air-chamber and 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 of my device 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 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 is forced through 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 C and air-chamber D and pass between the steam and air chambers A D 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 method herein described, as it forms the subject-matter of another application filed by me March 3, 1887, Serial No. 229,551.

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

1. In a straw-hat-pressing machine, the combination of a steam-chamber, A, metal die B, having crown and brim configurations, flexible hollow block C, having crown and brim shaped to conform to the crown and brim configurations of die B, and expanding or pressure devices for block C, whereby the crown and brim of a hat are pressed or shaped at one operation, substantially as set forth.

2. A straw-hat-pressing machine consisting of a steam-chamber, a metal die, air-chamber, and a flexible hollow block having a brim attached, substantially as set forth.

3. In a straw-hat pressing machine, the combination of a steam-chamber, a metal die having crown and brim configurations, flexible hollow block having crown and brim shaped to conform to the crown and brim configurations of the die, and an air-chamber above said flexible block, substantially as set forth.

4. In a straw-hat-pressing machine, the combination of a steam-chamber, a metal die having crown and brim configurations, flexible hollow block having crown and brim shaped to conform to the crown and brim configurations of the die, an air-chamber above said flexible block, and air-compressing devices communicating with said chamber, substantially as set forth.

5. In a hat-pressing machine, the combination of a steam-chamber, a die in its upper face, a flexible block, an air-chamber separate from the block, and expanding devices for the block, substantially as described.

6. In a hat-pressing machine, the combination of a steam-chamber, a die, a flexible block having a crown and brim conforming to the outline of the crown and brim of the hat to be pressed, an air-chamber separate from the block, and an expanding device for the block, substantially as described.

7. A flexible hollow block for straw-hat-pressing machines, having a crown and brim shaped to conform to the outline of the hat to be pressed, and the crown and brim parts of the block, composed of different flexible materials, substantially as and for the purpose set forth.

8. A flexible hollow block for straw-hat-pressing machines, having a rubber crown and a felt brim shaped to conform to the outline of a hat to be pressed, substantially as set forth.

9. In a straw-hat-pressing machine, a heating-chamber, a die having a crown and brim configuration, and a flexible hollow block having a rubber crown and a felt brim shaped to conform to the configurations of the die, substantially as and for the purpose set forth.

10. A flexible hollow block for hat-pressing machines, separate from the expanding device, having a crown and brim shaped to conform to the desired outline of the crown and brim of the hat to be pressed, substantially as set forth.

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

SAMUEL BEATTY.

Witnesses:
G. WARD SMECK,
ALFRED H. CAMP.