June 30, 1925. 1,544,539

E. H. ESHELMAN

LAUNDRY AND GARMENT PRESS

Filed May 23, 1924 2 Sheets-Sheet 1

Fig. 1

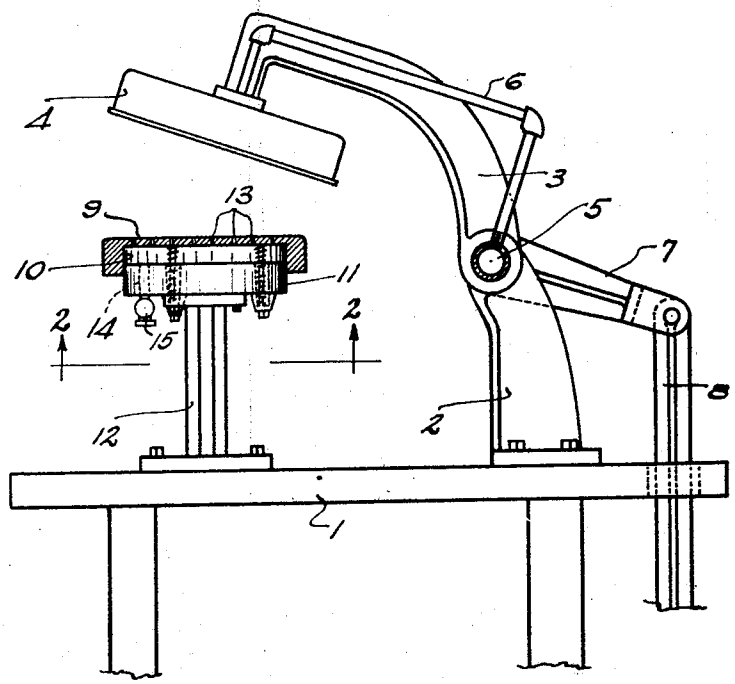
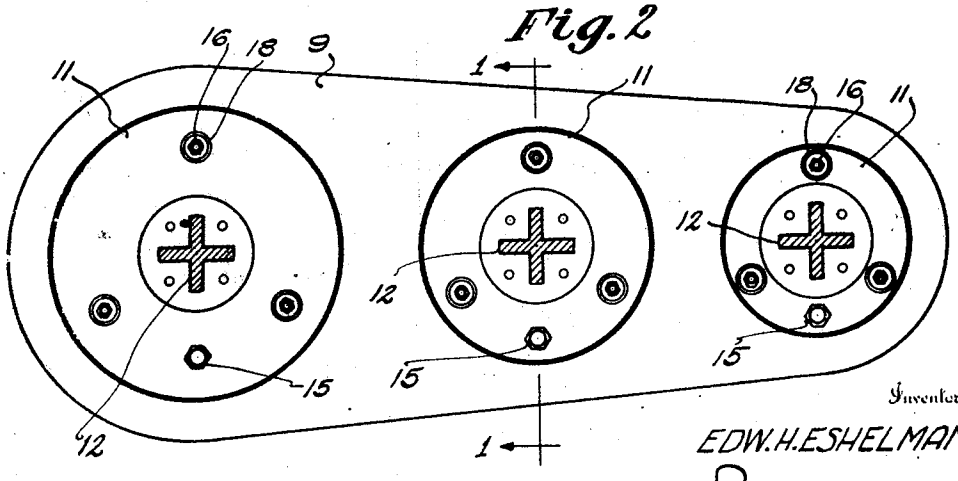


Fig. 2



Inventor

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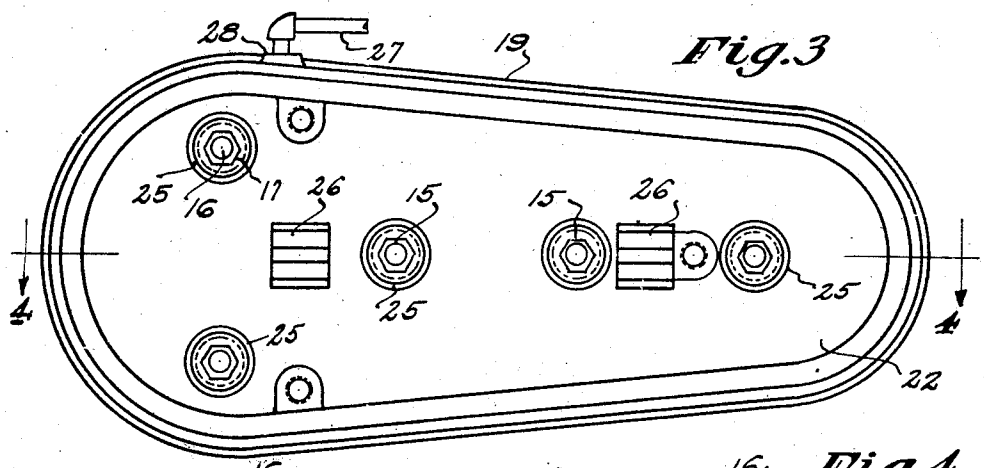


Fig. 3

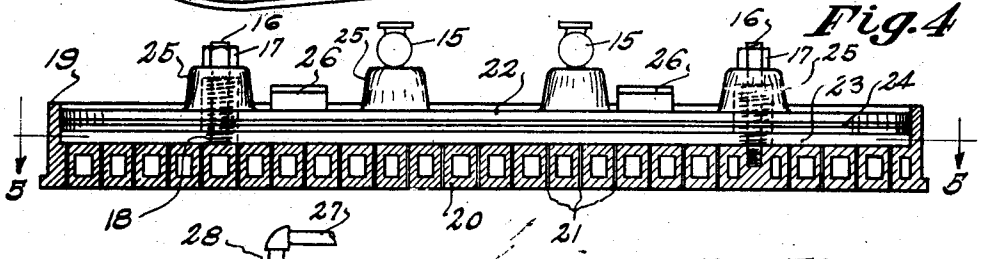


Fig. 4

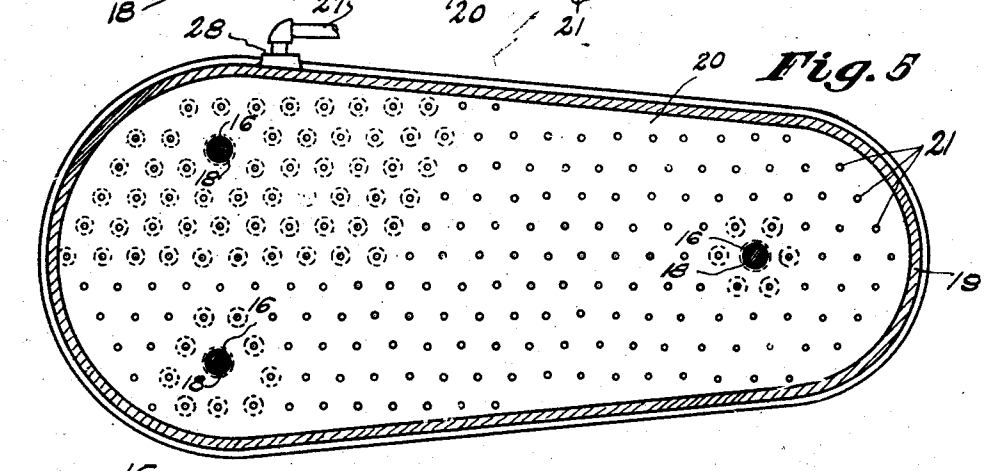


Fig. 5

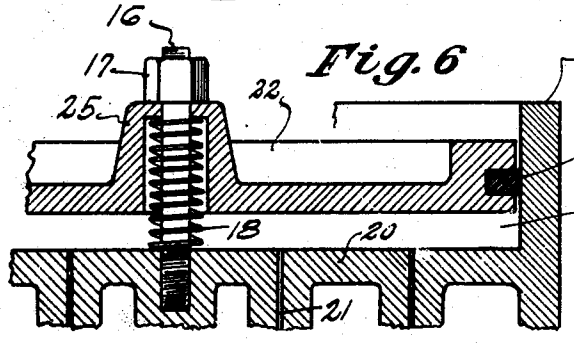


Fig. 6

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Patented June 30, 1925. 1,544,539

UNITED STATES PATENT OFFICE.

EDWARD H. ESHELMAN, OF BIRMINGHAM, ALABAMA.

LAUNDRY AND GARMENT PRESS.

Application filed May 23, 1924. Serial No. 715,450.

To all whom it may concern:

Be it known that I, EDWARD H. ESHELMAN, a citizen of the United States of America, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Laundry and Garment Presses, of which the following is a specification.

My invention relates to laundry and garment presses which comprise a head and a buck, either or both of which are heated by steam or other suitable means, and which are movable into engagement by any suitable means to press the work between them.

The chief object of my present invention is to improve the press by the provision of means for exhausting the steam or vapor from the garment or material being pressed which will give the following advantages:— The garment will dry more quickly; it will withdraw the steam and gasoline fumes in such a way as to make them less offensive to the operator; and, as applied to garment presses, by the quick removal of the steam applied to moisten the garment I will greatly increase the capacity output of the press.

My invention further contemplates the provision of a press with one of its press members equipped with means for the rapid exhaust of steam from the garment in such manner as to raise the nap of the garment and avoid the shiny objectionable finish, which is of special advantage in pressing clothes and will add to the life of the garments.

My invention further contemplates the equipping of the exhaust element, whether head or buck, with perforations through the heated surface leading to a chamber in which one or more plunger elements will work as the press elements are separated to create a vacuum and exhaust the vapor or moisture through the perforations.

My invention further comprises the novel details of construction and arrangements of parts, which in their preferred embodiments only are illustrated in the accompanying drawings which form a part of this specification, and in which:—

Fig. 1 illustrates a laundry press with the head shown in elevation and the buck shown in cross-section on the line 1—1 of Fig. 2.

Fig. 2 is a bottom view of the buck taken on the line 2—2 of Fig. 1.

Fig. 3 is a plan view of the exhausting head for a garment press.

Fig. 4 is a longitudinal cross-sectional view taken on the line 4—4 of Fig. 3; and

Fig. 5 is a horizontal cross-sectional view taken on the line 5—5 of Fig. 4.

Fig. 6 is an enlarged cross-sectional view through a part of the head.

Similar reference numerals refer to similar parts throughout the drawings.

Referring to the laundry press shown in Figs. 1 and 2, I show the machine as mounted on a table 1 having standard brackets 2 thereon on which the arms 3, which support the head 4, are pivotally mounted by means of a hollow shaft through which steam or other suitable medium is delivered through a pipe 6, to the hollow head to heat the same. The head is controlled by a crank arm 7 and an operating rod 8 leading to a foot pedal or other operating means, not shown.

The mechanism, as thus far described, is of conventional type and may be widely varied both in its structure, method of heating and operation. The buck with which the head 4 co-acts is formed by a plate 9 formed in its under face by a plurality of cylinders 10 which open below to receive plungers 11 mounted upon standards 12 secured to the table. I show three of these cylinders and illustrate them as occupying the major portion of the cross-sectional area of the plate 9, but my invention contemplates any desired number of or arrangement of cylinders which will substantially cover or underlie the working surface of said plate 9. The plate 9 above the several cylinders is provided with a plurality of small perforations 13 and these are covered over by the usual cloth cover which is not shown. The plungers are provided with an exhaust port 14 controlled by an outwardly opening check valve 15. I utilize any suitable spring means to lift the plate 9 from the plungers, the means shown being a plurality of guide pins 16 which are attached to the plate and work through suitable holes in countersunk spring seats in the plungers and receive at their lower ends stop nuts 17. Coil springs 18 are interposed between the plunger and the plate and act to lift the plate when the pressure thereon from the head is relieved.

In the operation of this embodiment of my invention the garment to be pressed or ironed

is placed over the buck while the buck plate stands in the raised position shown in Fig. 1. When the head is pressed down the springs 18 are compressed into their respective seats in the pistons and the plate seats against the top of the plungers and is there rigidly supported during the pressing or ironing operation. As soon as pressure is relieved by the raising of the head, the plate 9 will rise, responsive to the action of the springs 18, and the movement of the cylinders relative to the pistons will create a suction which will positively induce air currents to flow through the garment on the buck and through the perforations 13 so that the moisture will be quickly and effectively withdrawn from the garment and the latter dried very quickly.

Referring to Figs. 3 to 6, I show the essential feature of my invention as adapted for use in a clothes press. Here I show my invention embodied in the press head 19 which is formed by a marginal frame having mounted across its lower or bottom face a steam heated chest or plate 20, and through this plate I provide a plurality of small perforations 21 which miss the steam chambers and lead from the lower through the upper surface of the chest. The chest is fixedly held in place in the head frame and I mount a movable plunger 22 free to work vertically with a close fit in an exhausting chamber 23 formed in the head frame above the steam chest. I provide preferably a packing 24 about the plunger plate so as to give it a freely working pressure tight fit in the chamber 23. The head is guided by pins 16 which are screwed into the chest 20 and work through raised bosses 25 which form chambers for the compression springs 18 which act to lift the plunger from the steam chest 20. The plunger chamber 23 is provided with two or more automatically opening check valves 15 leading through the plunger and the plunger carries attachment plates 26 by means of which it is connected to operating arms 3. The head as thus described will co-operate with any standard type of buck and the head may be heated by steam as stated or by any other equivalent means. The steam as shown is supplied to the chest by a pipe 27 leading through a boss 28 in the head frame and entering the head below the plunger.

In operation, the head is pressed against the buck in the usual manner, this pressure acting to compress the springs until the plunger engages the chest 21. When pressure is relieved on the head the springs act immediately to raise the plunger and to suck through the perforations 21, which are closely interspersed about the working face of the head, air currents which will take up and carry off the moisture, vapor and fumes in the garment and which travel in a direction to lift the nap of the garment and thus improve its finished appearance.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A press having as co-acting elements a head and a buck, in combination with automatic means in at least one of said elements to induce a flow of air through the garment on the separation of the co-acting elements.

2. A press according to claim 1, in which said air flow inducing means comprises a suction plunger working in a cylinder in a press element, there being a plurality of perforations connecting said cylinder with the working face of the element.

3. A press according to claim 1, in which said air flow inducing means comprises a suction plunger working in a cylinder in a press element, there being a plurality of perforations connecting said cylinder with the working face of the element, spring means interposed between plunger and cylinder, and a check valve to permit the free escape of air and vapor from said cylinder.

4. In a press comprising as co-acting elements a head and a buck, automatic means in at least one of said elements to induce a flow of air through the garment in the press, said means comprising a chamber having a plurality of fine perforations opening therefrom through the working face of the element, a suction plunger working in said chamber, spring means to normally separate the plunger from the perforated wall of the chamber, said wall and plunger being forced into contact during the pressing operation, and means to permit a free escape of air from the space between the plunger and perforated chamber wall.

In testimony whereof I affix my signature.

EDWARD H. ESHELMAN.

Witness:
NOMIE WELSH.