April 8, 1969 B. J. STANSBURY 3,436,852

STEAM GENERATOR AND STEAM IRON COMBINATION

Filed June 12, 1967

Sheet 1 of 2

FIG. 1

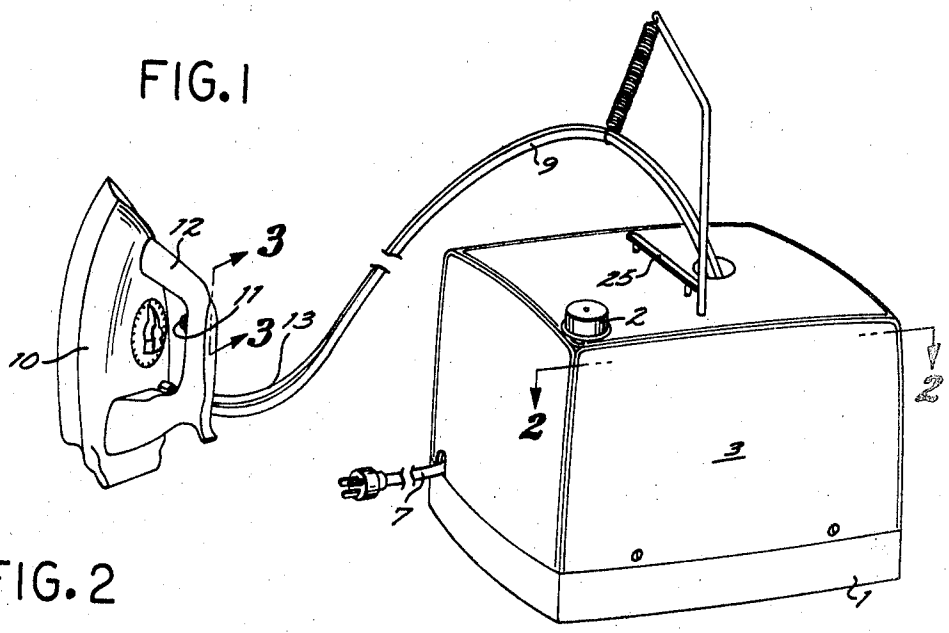
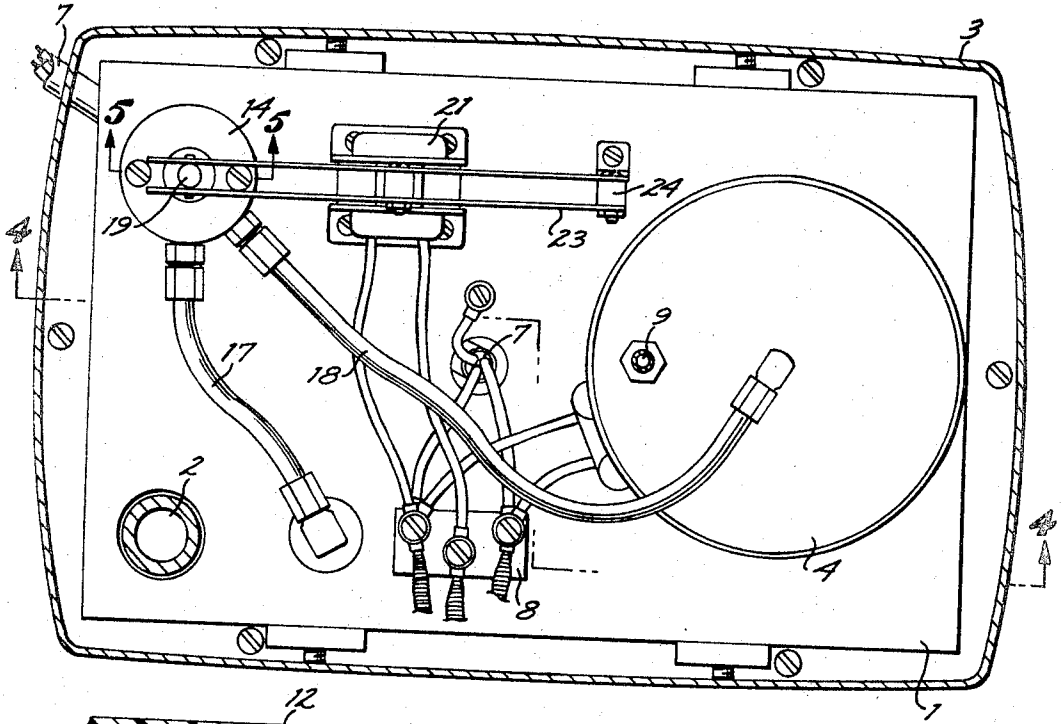


FIG. 2



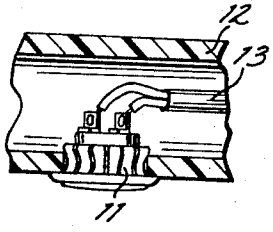


FIG. 3

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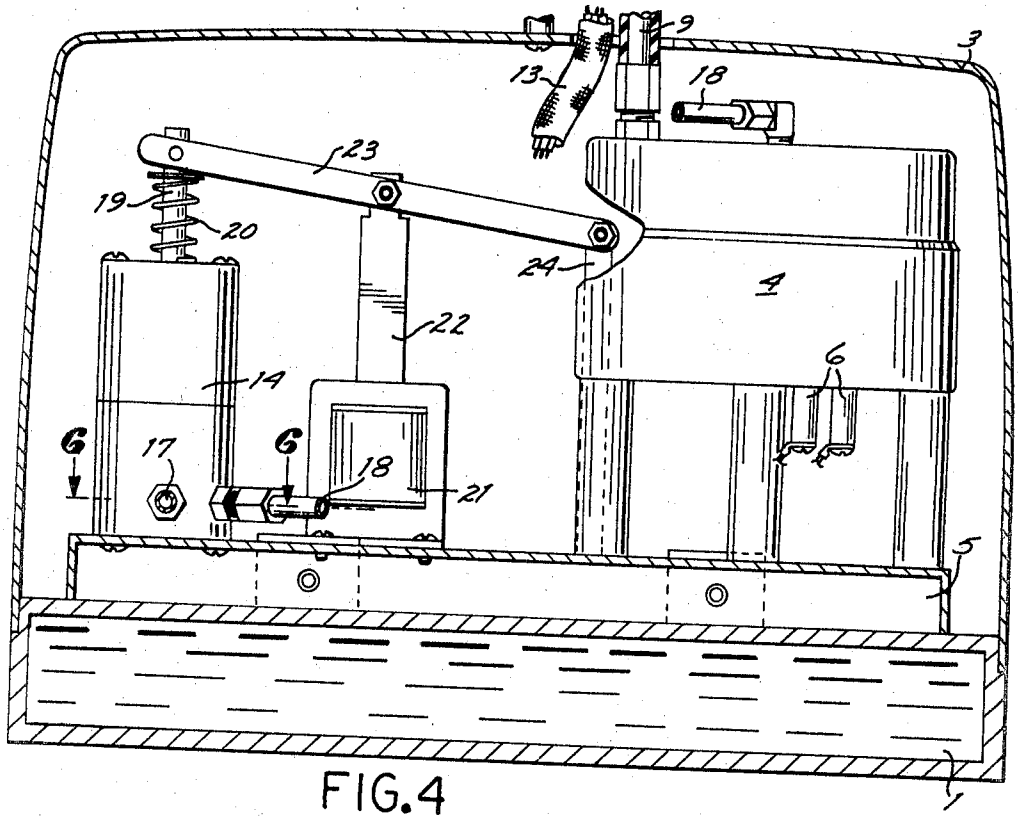
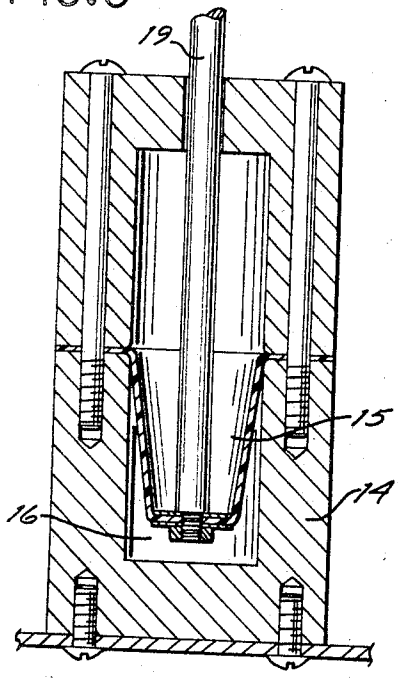


FIG.4

FIG.5



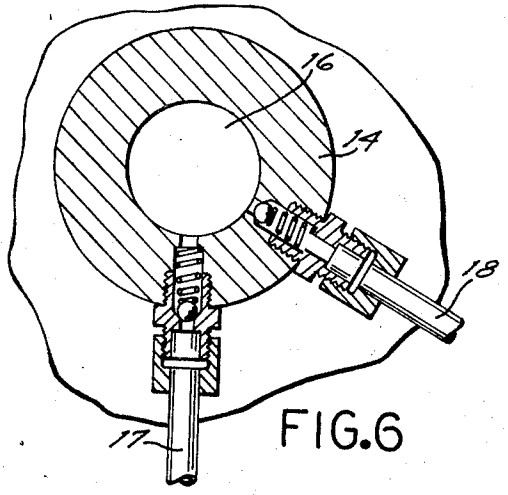


FIG.6

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3,436,852

STEAM GENERATOR AND STEAM IRON COMBINATION

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U.S. Cl. 38—77
6 Claims

ABSTRACT OF THE DISCLOSURE

In a steam generator and steam iron combination the steam iron and the generator are spaced a considerable distance apart, and to permit the entire assembly to be transported from place to place these parts, particularly the steam generator, the control therefore and the water supply reservoir, are in a compact form, and also the control mechanism for the steam generator is actuated from the steam iron through the medium of a switch positioned on said steam iron.

In a steam generator for a steam iron the generator is positioned at a considerable distance from the iron itself, and the generator supplies the steam to the iron rather than to have the steam generated within the iron itself. Consequently, the steam generator, the control therefor, and the water supply reservoir should all be in a compact form to permit the entire assembly to be readily moved from place to place as required by the operator.

An object of my invention is to provide a novel steam generator for a steam iron in which the operation of the steam pressing iron is materially improved so that adequate steam is provided on the ironing surface, and also the fabrics which are being worked upon will not be spotted by steam condensates.

Another object of my invention is to provide a novel pump construction which will convey water to the steam generator.

Still another object is to provide a novel means of operating the water pump in a simple, compact and effective manner.

Still another object of my invention is to provide a novel steam generator for a steam iron in which the water reservoir provides a base upon which the steam generator and the supply pump, as well as the electrical control leads, are all mounted.

Other objects, advantages and features of invention may appear from the accompanying drawings, the subjoined detailed description and the appended claims.

In the drawings

FIGURE 1 is a perspective view of my steam generator for a steam iron.

FIGURE 2 is an enlarged sectional view taken on line 2—2 of FIGURE 1.

FIGURE 3 is a sectional view of the electrical control button taken on line 3—3 of FIGURE 1.

FIGURE 4 is a sectional view taken on line 4—4 of FIGURE 2.

FIGURE 5 is a sectional view taken on line 5—5 of FIGURE 2.

FIGURE 6 is a sectional view taken on line 6—6 of FIGURE 4.

Referring more particularly to the drawings the numeral 1 indicates a hollow base forming a reservoir in which water is stored. Water is admitted to this reservoir through a vertical pipe 2 which extends into the top of the reservoir, enabling water to be added as required. A

cover 3 is attached to the base or reservoir 1 and encloses the following operating mechanisms:

A steam generator 4 is mounted on a base 5 which is attached to the top surface of the reservoir 1. The generator 4 has electrical heating elements 6 extending into it, whereby the steam is generated in the required amount. The heating elements 6 are heated from a normal electrical supply 7, and this supply can be plugged into a fitting, all of which is usual and well known in the art. The electrical lead 7 provides power to a panel 8, which panel is in turn connected to the generator 4 and to other units, as will be subsequently described. A steam hose 9 extends from the generator 4 to the steam iron 10, to thus supply steam to the iron as required. A switch 11 is provided in the handle 12 of the steam iron, and this switch controls the electrical supply to the heating elements 6. Thus the operator can control the quantity of steam generated by the steam generator 4. This generator is preferably of the flash type which will supply an almost instant quantity of steam as required. An electrical cord 13 extends from the switch 11 to the panel 8 to thus control the electrical current which passes into the generator 4.

To pump the required water supply from the reservoir 1 and thence into the generator 4, I provide a reciprocating pump 14 which is mounted on top of the reservoir 1 and preferably on the base plate 5. The pump 14 is of the diaphragm type which includes a cup-like diaphragm 15 positioned within the cylindrical pumping chamber 16. An intake pipe 17 extends from the reservoir 1 and thence into the pumping chamber 16. An outlet pipe 18 extends from the pumping chamber 16 into the generator 4. Thus water is pumped from the reservoir 1 into the generator 4 as required. The diphragm 15 is reciprocated within the chamber 16 by a pump rod 19 which extends into the top of the pump 14 and is attached to the flexible diaphragm 15 as shown. A coil spring 20 surrounds the pump rod 19 to normally push the pump rod upwardly on each stroke. The pump rod 19 is pushed downwardly on each stroke by the solenoid 21, which includes a core 22 attached at one end to a rocker arm 23. One end of the rocker arm 23 is attached to the pump rod 19 and the other end is pivotally attached to the post 24. Thus at each impulse of the solenoid 21 the rocker arm 23 will be swung downwardly to actuate the pump rod 19. The spring 20 then returns the pump rod 19 to its raised position, as shown in FIGURE 4. The electrical alternator to operate the solenoid 21 is usual and well known and is not a part of this invention. A handle 25 on the top of the cover 3 permits the entire steam generating unit and the reservoir to be readily picked up and moved from place to place as required. The generation of the steam in the generator 4 and the reciprocation of the solenoid 21 can both be controlled from the switch button 11, so that the operator will be able to control not only the heat in the generator 4 but also the supply of water to the generator by means of the pump 14. The pump 14 will be actuated and the heat elements 6 will function as long as the switch 11 is closed by the operator, and release of the switch 11 will turn off these units so that no further steam is generated until again required.

Having described my invention, I claim:

1. A steam generator and steam iron combination comprising a steam iron and a hollow base adapted to store water therein, a water supply pipe extending into the hollow base, a steam generating chamber, means mounting the steam generating chamber on said base, electrical heating elements extending into the steam generating chamber to heat the water therein, a water pump mounted on said hollow base, a water intake pipe extending from the hollow base to said pump, a water outlet pipe extending from the water pump to said steam generating

chamber, a steam hose extending from the steam generating chamber to said steam iron, and electrical motivating means coupled to said pump.

2. A steam generator and steam iron combination as recited in claim 1, and a switch button on the steam iron electrically connected to the electrical motivating means.

3. A steam generator and steam iron combination as recited in claim 1, said electrical motivating means comprising a solenoid.

4. A steam generator and steam iron combination as recited in claim 1, said electrical motivating means comprising, a solenoid, a switch button on the steam iron electrically connected to the solenoid.

5. A steam generator and steam iron combination as recited in claim 1, and a cover, means removably securing the cover to the base, said cover enclosing the steam generator, the pump, and the electrical motivating means, and a handle on the cover.

6. A steam generator and steam iron combination as recited in claim 1, and a cover, means removably securing the cover to the base, said cover enclosing the steam generator, the pump, and the electrical motivating means, a handle on the cover, said electrical motivating means comprising a solenoid, and a switch button on the steam iron electrically connected to the solenoid.

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