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PORTABLE STEAMING APPARATUS

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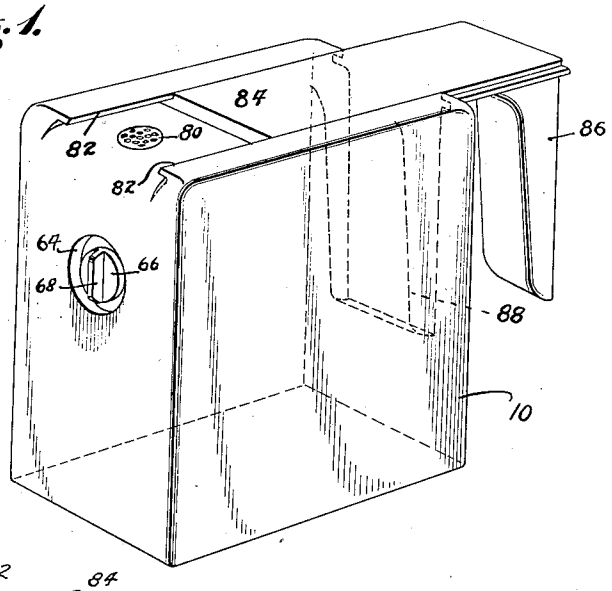
Fig. 1.



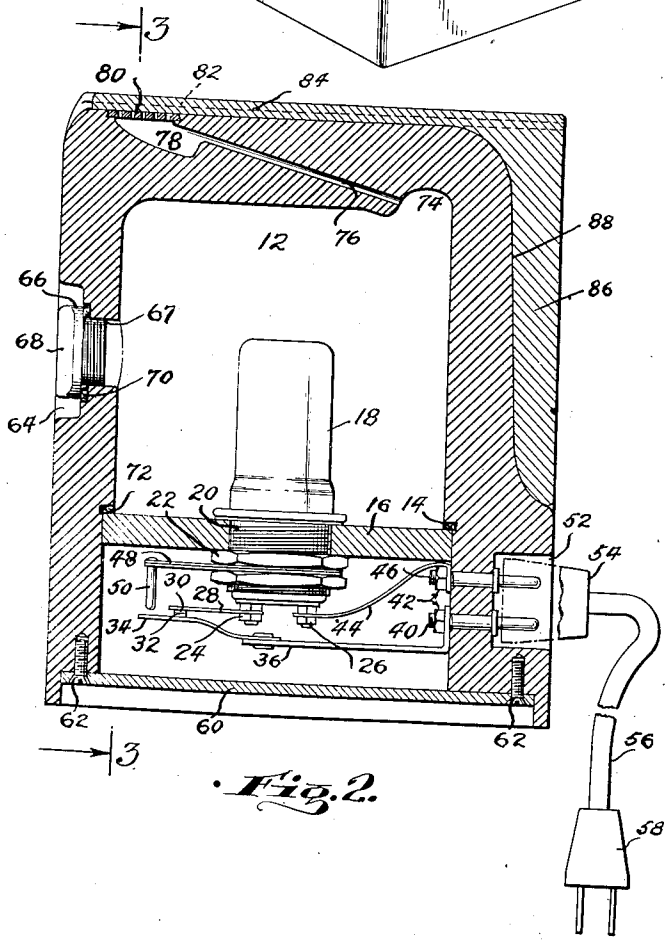


Fig. 2.

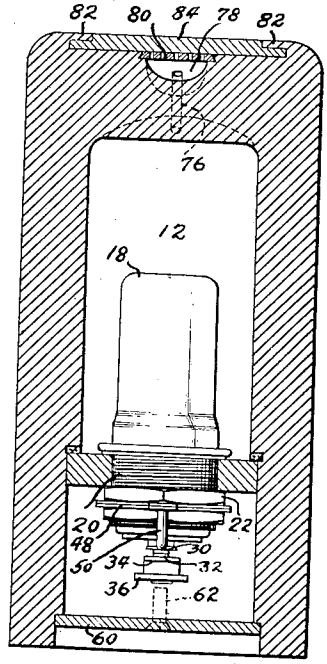


Fig. 3.

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PORTABLE STEAMING APPARATUS

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6 Claims. (Cl. 219—38)

This invention relates to portable steaming apparatus particularly designed for steaming garments whereby to remove wrinkles therefrom.

When traveling, or when in locations remote from tailoring establishments or valet service it has been found difficult to provide means for removing wrinkles from garments. It is not convenient for travelers to pack electric irons in their traveling bags, and even if it were convenient to carry such irons it is not possible on conveyances to provide a substitute ironing board which is necessary in using an iron to remove wrinkles from garments.

The present invention provides a device particularly suited for use in traveling or in locations where valet service is not available, and has for its principal object the provision of a portable steaming device which is neat, compact, of light weight construction, and which can readily be packed in a traveling bag wherein it will occupy a minimum of space without adding unduly to the weight of the bag.

Another object of the present invention is the provision of a device of the character indicated which is readily operable and which is very efficient in removing wrinkles from garments.

A still further object of the present invention resides in a novel handle construction which slides into a compartment or recess in the wall of the device when not in use, which handle is provided with a sliding member for covering the steam nozzle of the device whereby to insure against leakage should any liquid inadvertently remain in the device after use.

Other and further objects of this invention will be manifest from the following description and the accompanying drawing, in which drawing:

Fig. 1 is a perspective view of the device;

Fig. 2 is a vertical sectional view thereof; and

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Referring to the drawing in detail which shows the preferred embodiment of the invention comprising a casing or housing 10 of lightweight material, preferably plastic such as Lucite, Bakelite or the like. The casing which is preferably molded is provided with a recess 12 which constitutes a steam generating chamber.

The recess 12 has a shoulder 14 accommodating a plate 16 for supporting an immersion heater 18. The structural details of this heater are not illustrated inasmuch as the same do not constitute part of the present invention, and for the reason that any suitable heater or steam generating means may be employed.

The heater 18 is secured to the supporting plate 16 in any suitable manner as for example by its threaded extension 20 and nut 22.

The extension 20 also carries electric terminals 24 and 26. A contact member 28 is secured to the terminal 24 and carries a contact point 30 which normally is in engagement with another contact point 32 carried on a contact member 34. The contact member 34 is riveted or otherwise secured to an arm 36 which in turn is secured to one terminal 40 of a conventional electric connector 42 mounted in the wall of the casing 10. The other terminal 26 of the extension 20 has an arm 44 secured thereto, which arm in turn is secured to the other terminal 46 of the electrical connector 42.

A thermostatic bi-metal member 48 is also carried by the extension 20 and is provided with a downwardly projecting rod 50 having its free end in vertical alignment with the free end of the arm 34, but normally spaced therefrom.

As will be seen from Fig. 2 one end wall of the casing has a recess 52 formed therein to accommodate the connector 42 so that the connector will be within the outer plane of the wall whereby to be protected and to avoid interference with or injury to any garments when the device is packed in a traveling bag. A conventional electric receptacle or plug 54 is carried on one end of a conventional electric cord 56 for connection to the connector 42 in the usual manner. This cord has an electric plug 58 at its other end for connection to an electric wall outlet or other source of electric current.

A closure plate 60 is removably secured to the bottom of the casing by any suitable means such as screws 62 whereby to permit of the assembly of the parts of the device and to permit of access to the parts if desired.

In the end wall opposite the recess 52 another recess 64 is formed to accommodate a filler plug 66. A threaded bore 67 is formed in the base of the recess 64 and communicates with the interior of the steam generating chamber 12. The plug 66 has a thumb piece 68 on its exterior and is provided with a screw threaded extension at its other end whereby the same may be removably secured in the bore 64. A gasket or other leak preventing means 70 is provided intermediate the plug and the bottom of the recess 64 and another gasket or leak-preventing means 72 may be provided intermediate the plate 16 and the shoulder 14 of the casing.

As will be seen from Fig. 2 the upper portion of the steam generating chamber has a concave ex-

tension 74 providing a steam pocket. Adjacent this pocket a bore 76 of small diameter extends diagonally outwardly from the chamber to a condensate trap 78 in the top wall of the casing. The trap 78 is covered with a perforated plate 80 which forms the steam discharge nozzle for the device.

A pair of opposed flanges 82 is provided at the upper ends of the side walls of the casing 10. These flanges extend longitudinally of the side walls and are spaced from the top wall in which the plate 80 is positioned. A slide 84 is carried in the space between the flanges 82 and the top wall which as will be seen from Fig. 1 is adapted to slide in the said space to cover the discharge nozzle when the device is not in use and to uncover the same when the device is in use. The slide 84 has a handle 86 integral at one end thereof. This handle in addition to manipulating the slide 84 also serves as a handle for the device when in use.

The end wall of the casing adjacent the handle is provided with a recess 88 of substantially the same size and of the same contour or shape as the handle so as to accommodate the handle when the device is not in use. The outer surface of the handle is flush with or in the same plane as the outer surface of the end wall when the handle is in the recess 88.

In operation the filler plug 66 is removed, and with the handle side of the device lowermost, the desired amount of water or other liquid is poured through the recess 64 into the steam generating chamber 12 and the filler cap then restored. The electric plug 58 is then inserted in an electric outlet (not shown) and the device allowed to stand on its base or held by the handle until steam, generated, by the immersion heater 18, begins to escape by way of the bore 76 through the discharge nozzle 80.

The device may then be brought sufficiently close to the garment to be steamed whereby the steam issuing from the nozzle contacts the garment. The garment, during the steaming operation, may be held by one hand of the operator or suspended from a garment hanger leaving the other hand free to hold and manipulate the device. As the steam is applied to the various parts of the garment where wrinkles are to be removed the garment is moistened, whereby the wrinkles disappear and the garment is restored to its unwrinkled condition.

If desired in steaming ladies' garments a few drops of perfume may be placed in the water to impart a scent to the garment, or any other desired liquid may be employed, such as an oil to restore lost oil to the garment, if the material of the garment is of such a character as to require treatment of that nature.

The thermostatic or heat responsive member 48 is provided whereby the electric circuit to the heater 18 may be intermittently opened and closed to avoid overheating. This member also serves as a safety means should the device for example be left unattended by the operator or for any other reason. The electric circuit is automatically opened upon a rise in temperature above a predetermined degree by the said thermostatic element 48 flexing to cause the rod 50 to engage the contact 34 to thereby separate the contact points 30 and 32 whereby the current to the heater is cut off. After the device cools and the element 48 flexes back to its normal position the circuit is again closed to supply current to the heater.

After use, the device may be drained of the remaining unused liquid by removal of the filler cap 66 after which the cap may be restored and the handle moved into the recess 88 and the device stored away.

It will be appreciated that the present invention provides a device which is neat in appearance, compact, efficient and safe in operation, readily adapted for use and of light weight construction.

It is to be understood that while we have illustrated and described one embodiment of our invention we do not wish to be limited to such embodiment, as obviously various changes and modifications may be made therein without departing from the spirit and scope of our invention.

What is claimed is:

1. A portable device for steaming garments and the like comprising a hollow moulded body member forming a steam chamber and adapted to enclose a heating element, opposed flanges integral with and spaced from one wall thereof providing a guideway within the confines of the body, a discharge nozzle in the said wall, a handle having an extension slidable in said guideway and adapted to cover and uncover said nozzle.

2. A portable device for steaming garments and the like comprising a hollow moulded body member forming a steam chamber and adapted to enclose a heating element, a steam pocket in said chamber and provided with an outlet passage, opposed flanges extending longitudinally of and spaced from one wall thereof providing a guideway, a discharge nozzle in the said wall and being in communication with said passage, a handle having an extension slidable in said guideway and adapted to cover and uncover said nozzle.

3. A portable device for steaming garments comprising a housing, a steam generating chamber therein, means in said chamber for generating steam, a nozzle in the top wall of said casing and in substantially the same plane as the outer surface of said wall, a conduit formed in said casing leading from the said chamber to said nozzle for the discharge of steam from said chamber, a handle movable relative to said casing and having a longitudinally extending integral closure adapted for movement with the handle to cover and uncover said nozzle, said housing having a depression in one of its side walls for receiving said handle within the confines of the housing when the said closure is in position to cover said nozzle.

4. A portable device for steaming garments and the like comprising in combination a hollow moulded housing, an electric heating element, means for mounting said element in said housing, electric conducting means carried by said mounting means, heat responsive means for disconnecting said conducting means upon a rise in temperature above a predetermined degree, said housing having an orifice for admitting liquid to the interior thereof for contact with said heating element whereby to generate steam in said housing, a nozzle in the top wall of said housing, a conduit formed in said housing leading from the interior thereof to said nozzle for the discharge of steam, and a handle having an integral nozzle closure extension operable to cover and uncover said nozzle, said housing having a depression in one of its side walls for receiving said handle within the confines of the housing when said closure is in position to cover said nozzle.

5. A portable device for steaming garments and the like comprising in combination a hollow moulded housing, an electric heating element,

means for mounting said element in said housing, electric conducting means carried by said mounting means, heat responsive means for disconnecting said conducting means upon a rise in temperature above a predetermined degree, said housing having an orifice for admitting liquid to the interior thereof for contact with said heating element whereby to generate steam in said housing, a nozzle in one wall of said housing, a bore in said wall extending at an angle from said nozzle to the interior of said housing for the discharge of steam, a condensate trap formed in said housing in juxtaposition to said nozzle, and a handle having an extension operable to cover and uncover said nozzle.

6. A portable device for steaming garments and the like comprising in combination a hollow moulded housing, an electric heating element in said housing, electric conducting means carried by said mounting means, heat responsive means for disconnecting said conducting means upon a rise in temperature above a predetermined degree, said housing having an orifice for admitting liquid to the interior thereof for contact with said heating element whereby to generate steam in said housing, a nozzle in one wall of said housing, a conduit formed in said housing leading from the interior thereof to said nozzle for the discharge of steam, opposed longitudinally extending flanges on and within the confines of said housing, and a handle having an extension slidable intermediate said flanges to cover and uncover said nozzle.

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