ABSTRACT: An improved garment steaming and drying apparatus is provided which has a rigid top and rigid base and an enclosure means which define a chamber in which the garments to be pressed may be hung. The apparatus of the present invention includes an improved unit which may be mounted in the base of the assembly to supply steam and hot air to the chamber, and which is compact and light so that the assembly may be readily portable, if so desired. The invention in one embodiment is constructed to have collapsible sides and a retractable top and base so as to be capable of being formed into a compact flat package when not in use so that it may conveniently be packed into a handbag or suitcase.
Fig. 3

Vent & Hamper Rack

Steamer Unit

Coin Operated Timer

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The apparatus of the present invention, as is the case with the apparatus of the aforesaid pending application, is particularly useful to dressmakers and tailors. It is contemplated that the apparatus in one of its embodiments may be constructed as a portable unit which may be formed into a compact and light package so as to be easily packed in a handbag or suitcase. In another embodiment, the apparatus may be constructed as a unit which is kept in a motel or hotel room, and which may be supplied by the motel or hotel as a service. The latter embodiment may, if desired, be coin operated.

In either case, it is a simple matter for the traveler to place his suit into the apparatus, and to have his suit freshly steam heated and effectively pressed within a relatively short time. All that he need do is to pour a quantity of water in a pan in the bottom of the apparatus, to plug the apparatus into the usual electrical outlet, and to turn it on. The apparatus is timed so that the water is initially boiled off to fill the apparatus with steam which moistens the garment and removes the wrinkles, and the apparatus is then activated so that warm air is blown through the chamber to remove the steam and to dry the garment. In this way, the garment is given a freshly pressed appearance within a relatively short time.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective representation of a portable embodiment of the apparatus of the invention, and illustrated in an extended position;
FIG. 2 is a perspective representation of a blower and heater unit which is mounted in the base of the apparatus; and
FIG. 3 is a perspective view of a modified embodiment of the invention which may, for example, be provided in motel rooms, or the like.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

The apparatus shown in FIG. 1 includes, for example, a substantially rigid top 10 and a substantially rigid bottom 12. A frame 11 is suspended from the top 10 by means of cords 16, and the frame has telescopic side portions 11a which may be moved in and out of a central portion of the frame, so that the apparatus may be widened to receive the garment, and can then be reduced to a narrow width for packaging when not in use. For the same reason, the bottom 12 is provided with hinged side portions 12a and 12b which may be opened out to the broader width when in use, and which may be turned up and into the narrower width when not in use. Both the top and bottom of the apparatus may be constructed of appropriate plastic material and in accordance with known techniques.

The cords 16 also extend around the frame side portions 11a and between the frame side portions and the bottom 12. An enclosure is provided in the form of a collapsible bag 18 which may, for example, be formed of an appropriate transparent plastic material. The plastic bag 18 extends from the frame 11 to the bottom 12, and together with the top 10 and bottom 12 forms an internal chamber 19 in which the garment 20 may be hung.

A handle 14 at the top 10 also serves as a suspension frame for the assembly, and it may be included pivotally mounted hook members 15 which permit the assembly to be hooked over the top 10. It will be understood that when the unit of FIG. 1 is unpacked, the side portions 11a are pulled out from the central frame 11, and the side portions 12a and 12b of the bottom 12 are turned down, and the hooks 15 are appropriately supported, so that the unit will assume the extended configuration both horizontally and vertically, such as shown in FIG. 1. The garment 20 is placed in the chamber 19 through the opening between the frame 11 and the top 10, and it is supported on a hanger which, in turn, is supported on any appropriate support means on the underside of the top 10. The frame 11 is then pulled up towards the top 10 to close the gap between the frame and the top.

A heater and blower unit 30 is supported on the bottom 12, and the unit 30 comprises a housing 32 which, in the illustrated embodiment, has a relatively flat rectangular configuration. The unit 30 includes a timer switch 34 which is accessible through the top of the housing 32. An aperture 36 is provided in the top of the housing 32 through which water is initially poured, and through which steam and hot air subsequently issue into the chamber 19.

In the operation of the unit, and after it has been unpacked and opened out to the configuration shown in FIG. 1, and suspended from an appropriate hook, the garment is first placed in the chamber 19, and a quantity of water is poured into the unit 32 through the aperture 36. The timer control switch 34a is then turned to the "on" position and the frame 11 is pulled up to the top 10 to close the chamber 19. The timer control switch 34a controls a timer 34, as will be described, and serves to turn on and set the timer. The water in the unit is quickly brought to a boil, and steam issues into the chamber 19. After a predetermined time interval, as established by the timer in the unit 32, a fan is energized, so that the hot air is blown through the aperture 36 into the chamber. The hot air blows the steam out of the chamber through appropriate vents, such as the vent 37 in the top portion of the chamber 19. In a very short time, the timer turns off the unit, and the freshly steam heated and pressed garment may be removed and is ready for wear.

The various components of the unit 32 are shown, for example, in FIG. 2. The unit includes a base 50 which has a generally rectangular configuration. A fan 52 having a relatively flat shape is mounted on the base 50, as is a flat water pan 54. An electrically energized heating element 56 is mounted in the pan 54 directly under the aperture 36 in the housing 32. The outlet of the fan 52 extends over the water pan 54, so that when the fan is energized, air blows across the heating element 56. The heated air rises up through the aperture 36 into the chamber 19. The timer 34 is mounted on the base 50 adjacent the fan 52, as is an electric motor 57 which drives the fan 52. The timer 34 is connected by appropriate electric cables 58 to the electric heating element 56 and to the electric motor 57, and the unit may be plugged into a usual electrical receptacle through a cable 60.

When the control switch 34a is turned on, the timer 34 is switched on and the electric heating element 56 is energized initially to boil off the water in the water pan 54, so as to fill the chamber 19 with steam. Subsequently, the timer energizes the fan 52 so that air is blown across the heating element 56 and up through the aperture 36 to blow hot air into the chamber 19 so as to remove the steam through the vent 37.

In the embodiment shown in FIG. 3, the same unit 32 described above may be used. In the latter embodiment, a rigid top 100 and a rigid bottom 102 are provided, each having a rectangular configuration, for example. The top and bottom are interconnected by appropriate rigid sidewalls 104, and doors 106 may be provided in the front of the unit. The unit is supported on casters or wheels 108, so that it may conveniently be wheeled from place to place.

A slot 110 is provided in the top 100, and the slot extends transversely across the top. The slot forms a support for hangers, such as the hanger 112, the hanger having a ball-like support which may be slotted into the slot 110. The slot 110 also provides a vent for the interior chamber 116 of the apparatus.

The apparatus of FIG. 3 may be constructed, for example, as shown by the coin operated timer 114. The latter embodiment may, for example, be provided directly in the motel room, for use by the occupant. It may be wheeled to a convenient location and plugged into the wall receptacle. A bracket may be provided if the unit is to be "wall mounted" in a fixed location.

The garments are then hung in the chamber 116 on the hangers, such as the hanger 112, and as before, a quantity of water may be placed in the steamer unit 32. The doors 106 are then closed and a coin is inserted into the timer 114, and the unit is switched on. The steamer unit 32 operates in the manner described, first to fill the chamber 116 with steam, and sub-

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sequently to cause warm air to be blown through the garments in the chamber for drying purposes.

An improved apparatus is provided, therefore, which in the case of the first embodiment, may be formed into a compact package to be readily portable, if so desired, and by which garments may quickly and conveniently be steamed to remove wrinkles, and subsequently dried to be ready for immediate wear.

1. A clothes steaming and drying apparatus comprising a rigid top, a rigid bottom and enclosure means interconnecting said top and said bottom to form an enclosed chamber in which garments to be pressed may be hung; a substantially rigid base mounted at the bottom of said apparatus; a fan having an essentially flat configuration mounted on said base; a flat water pan mounted on said base adjacent the outlet of said fan; an electrically energized heating element mounted adjacent said water pan and adjacent the outlet of said fan; and an electric timer switching unit mounted on said base adjacent said fan and electrically connected to said heating element and to said fan for initially energizing said heating element to boil off water in said pan, and for subsequently energizing said fan to blow air across said heating element; and a housing enclosing said base and having an opening therein to permit steam from the water in said pan and hot air from the fan to pass into said chamber.

2. The clothes steaming and drying apparatus defined in claim 1, in which said enclosure means is in the form of a collapsible plastic bag.

3. The clothes steaming and drying apparatus defined in claim 2, in which said top has a rectangular configuration, and in which said bottom has a rectangular configuration.

4. The clothes steaming and drying apparatus defined in claim 2, and which includes a plurality of cords interconnecting said top and said bottom and extending therebetween.

5. The apparatus defined in claim 4, and which includes a frame supported by said cords and slideable thereon so as to permit the chamber to be opened to receive the garment and said frame to be adjusted to a position adjacent said top to close the chamber.

6. The apparatus defined in claim 5, in which said frame includes telescoping side portions which may be extended laterally outwardly from a central portion, and in which said bottom has hinged side portions which may be turned down from a central portion.

7. The clothes steaming and drying apparatus defined in claim 1, in which said enclosure means is rigid, and which includes wheels supporting said base to permit the apparatus to be moved from place to place.

8. The apparatus defined in claim 7, in which said top includes a transverse slot therein for supporting hangers for the garments, and also for providing a vent for the aforesaid steam and hot air.