United States Patent [19]

Takakuwa et al.

[11] **3,733,723**

[45] **May 22, 1973**

[54] **STEAMER**

[75] Inventors: **Shigeru Takakuwa**, Suita; **Kenichi Iwami**, Kawanishi; **Mitsuo Ide**, Takaishi, all of Japan

[73] Assignee: **Matsushita Electric Industrial Co., Ltd.**, Osaka, Japan

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[21] Appl. No.: **285,219**

[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** **38/69**
[51] **Int. Cl.** **A47j 51/00**
[58] **Field of Search** 38/77.5, 77.8, 77.83, 38/69; 68/222

[56] **References Cited**

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Primary Examiner—Patrick D. Lawson
Attorney—Richard K. Stevens, Davidson C. Miller and Robert J. Frank et al.

[57] **ABSTRACT**

A steamer having pressure imparting means for imparting pressure to a flexible tank containing water for compressing the tank thereby forcedly feeding water in the tank into a vaporizing chamber, in which steamer manual push button means are provided so that steam can be ejected and ejection of steam can be ceased as desired in response to the manipulation of the manual push button means.

14 Claims, 10 Drawing Figures

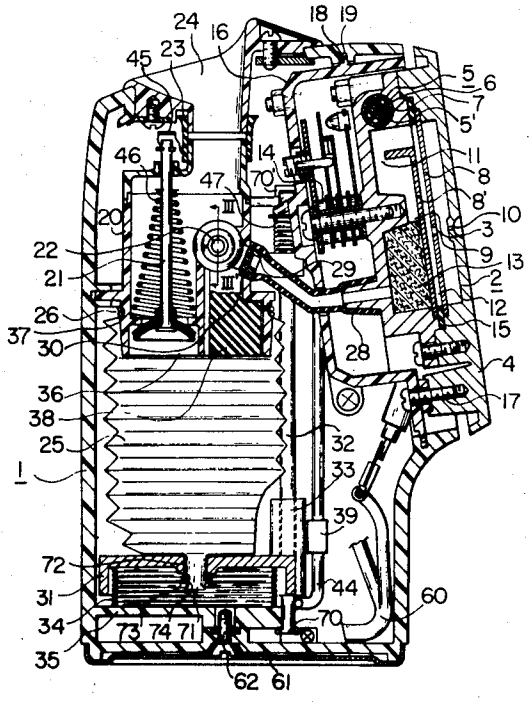

FIG. 1

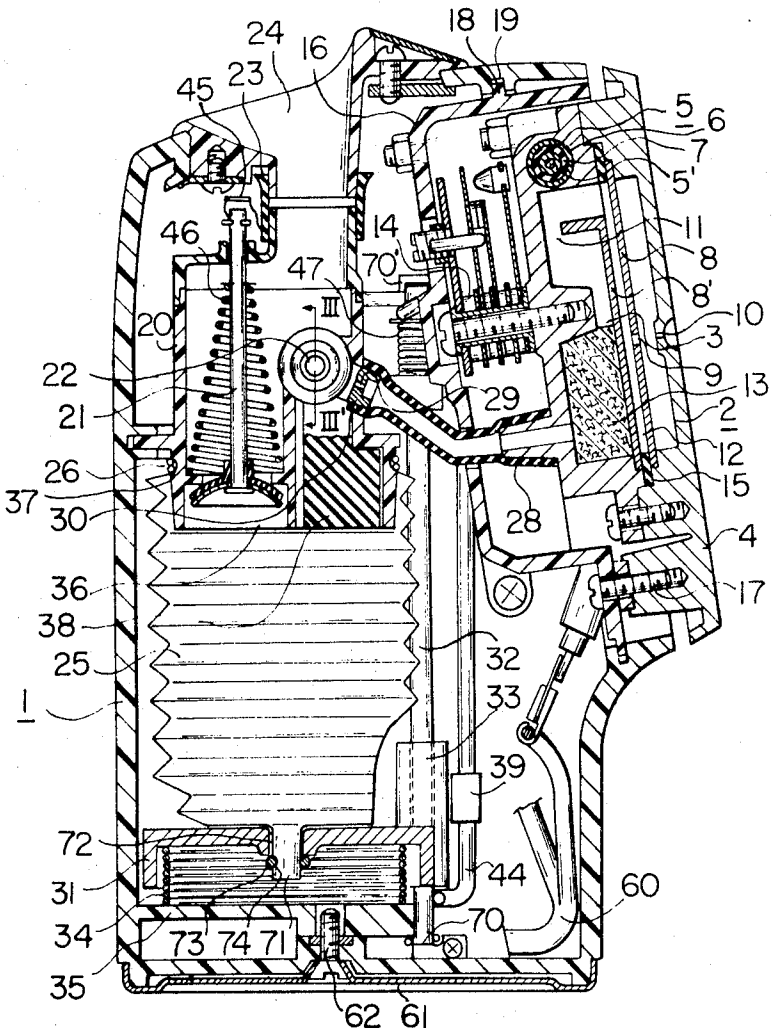
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FIG. 2

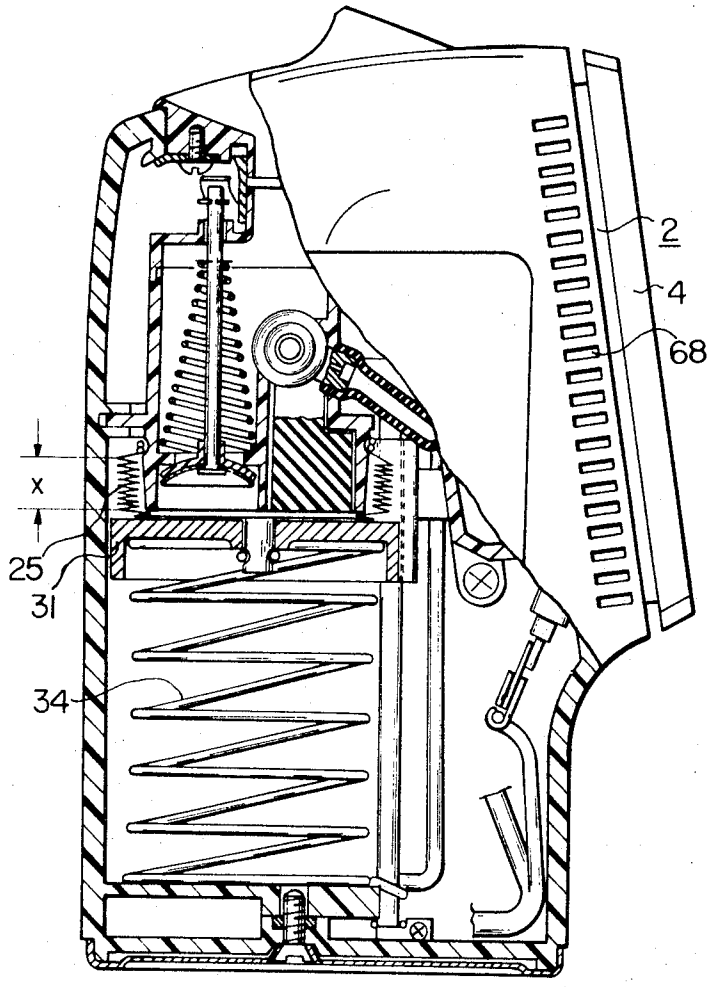


FIG. 3

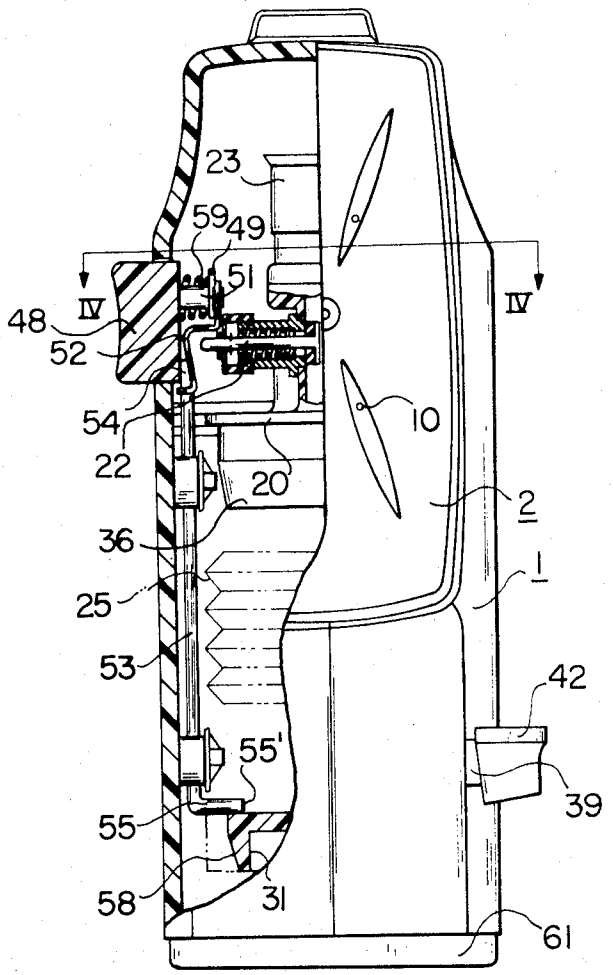


FIG. 4

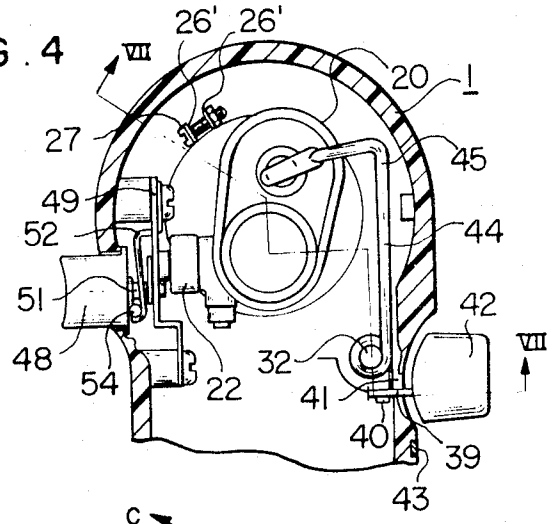


FIG. 5

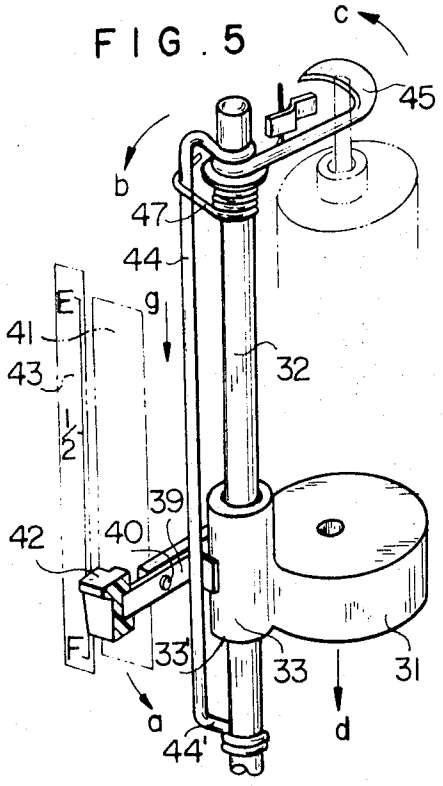


FIG. 6

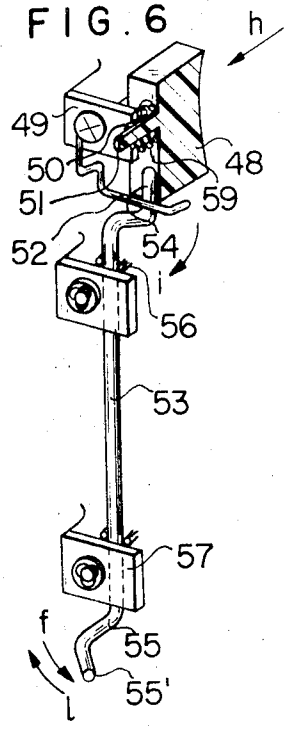


FIG. 7

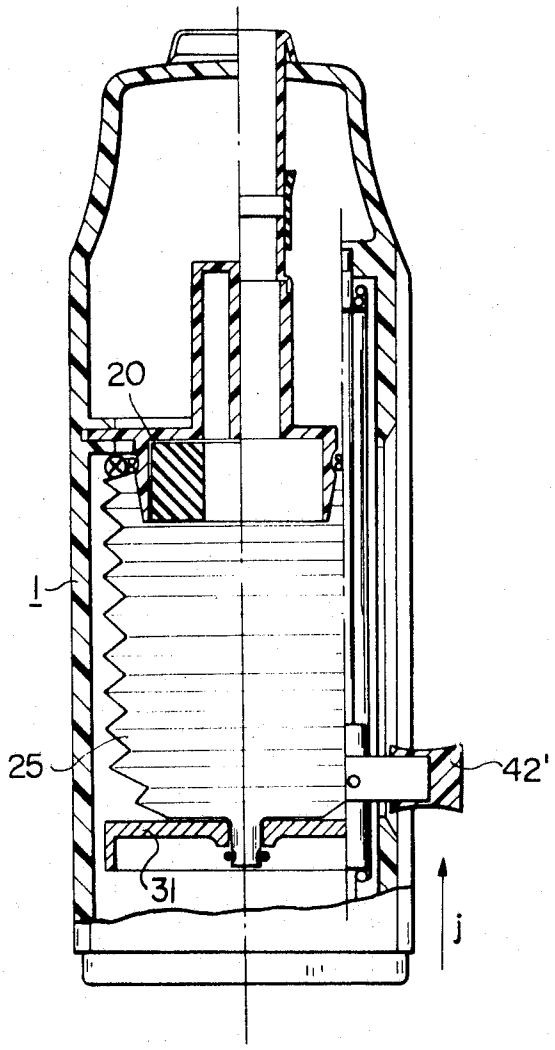


FIG. 8

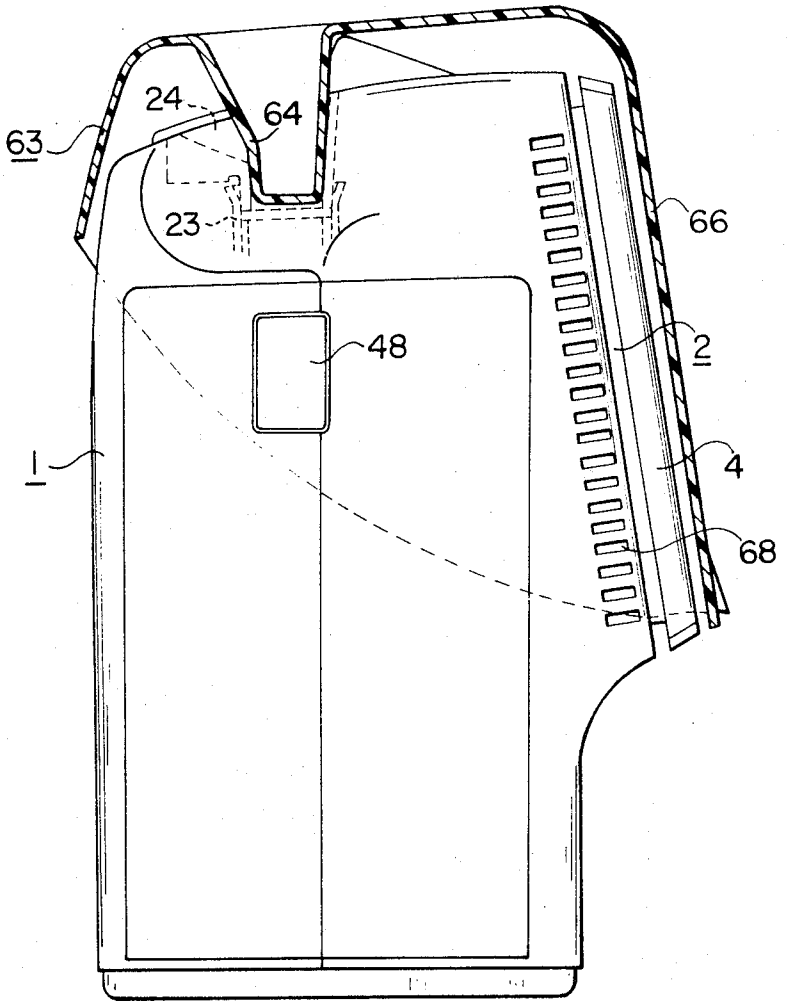


FIG. 10

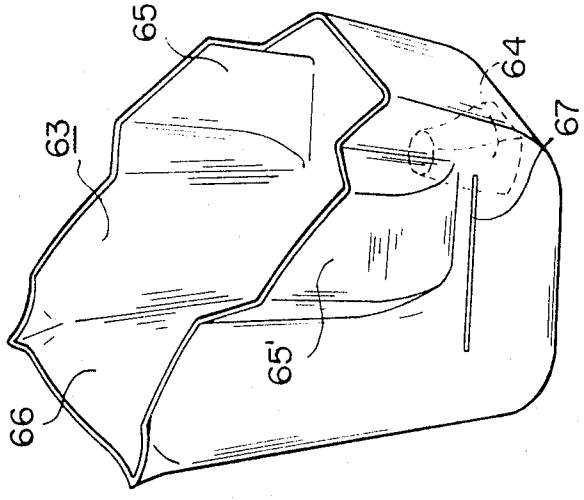
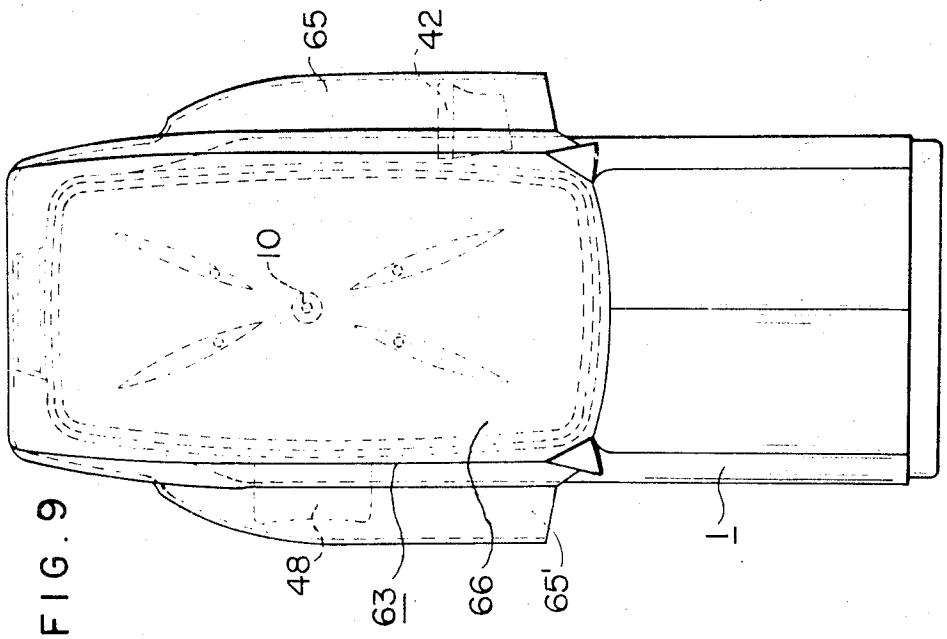


FIG. 9



STEAMER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a steamer for finishing fabrics such as clothing with steam.

2. Description of the Prior Art

Irons, presses and like means are generally used to apply heat and pressure to fabrics such as clothing in the presence of a spray of liquid such as water for finishing the clothing. Recently, finishing with steam only is increasingly preferred for the removal of wrinkles and curls produced on woolen fabrics, knit products or clothes during manufacture or for the removal of stains or fine wrinkles attached to or produced on the fabrics during use since steam would not in any way adversely affect the features and properties of the fibers forming the fabrics. Finishing means of this kind are disclosed already in publications, for example, U.S. Pat. No. 3,372,499 and U.S. Pat. No. 3,436,851. However, the prior art steam finishing means of this kind have been very inconvenient for handling in practical use. A steam finishing means used principally for the finishing of fabrics such as clothing must be such that not only it can sufficiently remove surface wrinkles and curls but also it can attain a full finishing effect on the interior and every part of the fabrics with simple manipulation.

SUMMARY OF THE INVENTION

With a view to solve the problem it is an object of the present invention to provide a steamer in which compressing means is provided to compress a freely expansible and contractible tank for forcedly feeding water within the tank into a vaporizing chamber so that the steamer can be operated to suit any desired operating conditions without being in any way restricted by the direction of ejection of steam.

Another object of the present invention is to provide a steamer which is provided with a manual actuating button for actuating a water filling valve so that water filling valve can be necessarily opened during filling or replenishing water into the tank or during discharging water from the tank in response to the depression of the manual actuating button.

A further object of the present invention is to provide a steamer which is provided with another manual actuating button for actuating a water feed valve so that steam can be ejected and ejection of steam can be stopped as desired in response to the manipulation of the manual actuating button and release of the depressing force imparted to the manual actuating button respectively thereby ensuring efficient use of steam without wasteful losses of steam.

Another object of the present invention is to provide a steamer in which a heater is embedded in the wall of the vaporizing chamber for ensuring sufficient vaporization of water forcedly supplied into the vaporizing chamber and a thermostat is mounted on the wall surface of the vaporizing chamber for maintaining the temperature within the vaporizing chamber at a predetermined constant value thereby ensuring satisfactory ejection of steam.

Other objects, features and advantages of the present invention will be apparent from the following detailed description taken in conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a side elevation with parts in vertical section of a steamer embodying the present invention.

FIG. **2** is a view similar to FIG. **1**, but showing a tank in a fully compressed state.

FIG. **3** is a front elevation with parts in vertical section of the steamer, the section being taken on the line III—III', in FIG. **1**.

FIG. **4** is a section taken on the line IV—IV' in FIG. **3**.

FIG. **5** is an enlarged perspective view illustrating the manner of operation of a manual actuating button for actuating a water filling valve.

FIG. **6** is an enlarged perspective view illustrating the manner of operation of another manual actuating button for actuating a water feed valve.

FIG. **7** is a section taken on the line C—C' in FIG. **4**.

FIG. **8** is a side elevation of the steamer in the state in which a protective cover is fitted on the steamer casing.

FIG. **9** is a front elevation of the steamer covered with the protective cover.

FIG. **10** is a perspective view of the protective cover.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. **1–6**, a steamer according to the present invention comprises a casing **1** of plastic material such as ABS or noryl resin forming a grip portion to be grasped by hand. A steam ejecting section **2** is mounted on the casing **1** and includes therein a vaporizing chamber **3** defined by a block of material such as an aluminum alloy and a base **4** of the same material as that of the block. A heater **5** is embedded in the wall of the block defining the vaporizing chamber **3**. This heater **5** is of the armored type in which an electric resistance wire **5'** extends through a protective sheath **6** and is electrically insulated from the protective sheath **6** by a heat resisting electrical insulator **7** such as a mass of compressed magnesium oxide particles. A cord **60** is connected to the heater **5** for supplying current thereto. A pair of partition plates **8** and **8'** are disposed opposite to each other within the vaporizing chamber **3**. The partition plate **8** nearer to the base **4** is provided with a relatively small opening **9** at a position opposite to one of a plurality of steam ejection openings **10** bored in the base **4**. Such an arrangement is advantageous in that the opening **9** in the partition plate **8** can be easily cleaned from the exterior when the opening **9** is clogged. The other partition plate **8'** is bent in the form of L to define a space **11** between the bent portion thereof and one of the inner wall surfaces of the vaporizing chamber **3** so that a detour passage **12** for steam can be defined between the partition plates **8** and **8'**.

A mass of metal fibers **13** is packed within the vaporizing chamber **3** in order to sufficiently vaporize water fed into the vaporizing chamber **3**. A thermostat **14** is mounted on one of the outer wall surfaces of the block defining the vaporizing chamber **3** at the side remote from the base **4** so that the temperature within the vaporizing chamber **3**, which is heated by the heater **5**, can be adjusted and maintained at a desired value. A packing **15** is mounted between the base **4** and the block defining the vaporizing chamber **3** for sealing the base **4** steam-tightly. A cover **16** is secured to the steam ejecting section **2** by screws **17** so as to completely

cover the thermostat 14. This cover 16 is of a plastic material such as a phenol resin having a relatively high resistance to heat. This cover 16 is provided with a projection 18 along its peripheral surface and this projection 18 fits in a corresponding recess 19 of the casing 1 in such a manner as to define a hollow space between the steam ejecting section 2 and the casing 1. Further, this cover 16 ensures reliable operation of the thermostat 14 which is sharply sensitive to the heat generated by the heater 5, and at the same time, prevents undesirable overheating of the casing 1 by the heat of steam existing in the steam ejecting section 2. A plurality of heat radiating openings 68 are provided on the side wall portions of the casing 1 adjacent to the steam ejecting section 2.

A tank mounting member 20 is disposed within the casing 1, and a water filling valve member 21 and a water feed valve member 22 are mounted in the tank mounting member 20. A water filling port 24 is disposed above the tank mounting member 20 within the casing 1 and is sealed by a packing 23 in fluid-tight relation. An expansible and contractible tank 25 is secured at 27 upper end opening to a portion 37 of the tank mounting member 20 in fluid-tight relation by means of a snap ring 26. This tank 25 is molded from a plastic material such as polypropylene or polyethylene by a method of, for example, blow molding. The thickness of the plastic film forming the tank 25 is desirably as thin as possible and is preferably from 0.1 to 0.5 mm since the hinge action of the plastic film is utilized for the expansion and contraction of the tank 25. Needless to say, any other various thicknesses may be selected as desired depending on the design. The tank 25 is in the form of a bellows having a closed bottom, and the diameter of the portion adjacent to the bottom is smaller than that of the portion adjacent to the upper end opening so that the tank 25 can be molded to have a uniform thickness at these portions. A fastening screw 27 is used to fasten the opposite ends 26' of the snap ring 26 so as to securely fasten the upper end opening of the tank 25 to the lower end portion of the tank mounting member 20. A water supply conduit 28 leads from the water feed valve member 22 mounted in the tank mounting member 20 to the vaporizing chamber 3 and is in the form of a tube of heat resisting material such as silicone rubber. A nozzle member 30 having a water flow regulating orifice 29 is disposed within the water supply conduit 28 at a position nearer to the water feed valve member 22 where the temperature is relatively low.

A pressure imparting member 31 is connected to the bottom of the tank 25 and is vertically movable by being guided by a guide rod 32 in the expanding and contracting direction of the tank 25. To attain the connection between the tank 25 and the pressure imparting member 31, the tank 25 is provided with an integral projection 71 extending downward from the center of the bottom surface thereof. This projection 71 fits snugly in an opening 72 in the pressure imparting member 31, and a rubber ring 73 is fitted in an annular groove 74 on the projection 71 to ensure a tight joint. The guide rod 32 is fixed in upright position adjacent to the inner wall of the casing 1 by being tightly received in holding portions 70 and 70' of the casing 1 at the upper and lower end thereof. The pressure imparting member 31 is formed with an integral guide ring 33, and the guide rod 32 extends through this guide ring 33 so that the pressure imparting member 31 can be smoothly guided along the guide rod 32. A compression spring 34 is disposed between a lower wall portion 35 of the casing 1 and the lower end surface of the pressure imparting member 31 so as to normally urge the pressure imparting member 31 upward for compressing the tank 25. An annular wall 36 extends from the portion 37 of the tank mounting member 20, at which the tank 25 is secured to the tank mounting member 20, toward the tank 25 so as to prevent water from remaining within the tank 25 in the position in which the tank 25 is fully compressed by the pressure imparting member 31. The annular wall 36 has a height which is equal to or greater than the height x of the tank 25 in the fully compressed state shown in FIG. 2. This annular wall 36 serves also to define a water passage for feeding water from the tank 25 into the water conduit 28 leading to the vaporizing chamber 3. In the fully compressed state of the tank 25, the substantial portion of the inner space of the tank 25 except the space defined by the annular wall 36 is occupied by a block 38 as best shown in FIG. 2. Thus, a minimum amount of water will remain within the tank 25 when the tank 25 is fully compressed as seen in FIG. 2.

Referring to FIG. 5, an L-shaped lever 39 is pivoted by a pivot pin 40 to an extension of the guide ring 33 which is integral with the pressure imparting member 31. A manual actuating button 42 is mounted on one end of the L-shaped lever 39 and projects externally from a window 41 bored in the wall of the casing 1. A water quantity indicator 43 is disposed on the outer surface of the casing 1 along the window 41 so that the quantity of water within the tank 25 can be indicated by the vertical movement of the manual actuating button 42. A rod 44 extends in parallel with the guide rod 32 for actuating the water filling valve member 21. This rod 44 is fitted at one end and at an intermediate portion thereof on a lower portion and an upper portion respectively of the guide rod 32 so as to be swingable around the axis of the guide rod 32. The other end of the rod 44 is provided with an arm 45 which is normally biased away from the upper end of the water filling valve member 21. In response to a first movement of the manual actuating button 42, the rod 44 swings in such a direction that the arm 45 is advanced to engage the upper end of the water filling valve member 21 to urge the valve member 21 to its partly open position, and in response to a second movement of the manual actuating button 42, the arm 45 forces the water filling valve member 21 further downward against the force of a spring 46 so that the water filling valve member 21 is urged to its full open position. A spring 47 is mounted on the guide rod 32 and engages the valve actuating rod 44 for normally biasing the rod 44 in a direction in which the water filling valve member 21 is kept in the closed position. Thus, in response to the depression of the manual actuating button 42, the lever 39 swings around the pivot pin 40 with the result that the bent end portion 39' of the lever 39 engaging the rod 44 causes swinging movement of the rod 44 against the force of the spring 47 and the arm 45 engages the upper end of the water filling valve member 21 for forcing the water filling valve member 21 slightly downward. As the manual actuating button 42 is further depressed, the water filling valve member 21 is urged to its full open position and the pressure imparting member 31 is

also forced downward against the force of the spring **34.**

Referring to FIG. **6,** another manual actuating button **48** is provided so that the water feed valve member **22** can be urged to its open position in response to the manipulation of the manual actuating button **48.** The manual actuating button **48** is provided with a projection **51** which extends into a small hole **50** in a guide plate **49** fixed to the casing **1** so as to ensure smooth manipulation of the manual actuating button **48.** A spring **52** is anchored at one end thereof to the guide plate **49.** The other end of the spring **52** extends toward the manual actuating button **48** so as to normally bias the manual actuating button **48** away from the water feed valve member **22** which is normally kept in the closed position. A locking rod **53** having an L-shaped engaging portion **54** at the upper end thereof and an L-shaped engaging portion **55** at the lower end thereof is rotatable around its axis by being supported at its intermediate portion by a plurality of pairs of projections **56** and a pair of supporting plates **57** provided on the inner wall surface of the casing **1.** The upper L-shaped end portion **54** of the locking rod **53** is disposed between the spring **52** and the inner end surface **48'** of the manual actuating button **48.** A portion of the pressure imparting member **31** is tapered as shown by **58** in FIG. **3** at a position opposite to the L-shaped lower end portion **55** of the locking rod **53.** A spring **59** is mounted on the projection **51** of the manual actuating button **48** for normally biasing the button **48** away from the water feed valve member **22.** A bottom cover **61** is fixed to the bottom of the casing **1** by a screw **62** as seen in FIG. **1.**

In operation, current is supplied at first to the heater **5** for heating the steam ejecting section **2** including the vaporizing chamber **3.** The manual actuating button **42** is depressed slightly for the purpose of filling water into the tank **25.** In response to the depression of the manual actuating button **42,** the lever **39** mounting the button **42** swings in a direction of the arrow *a* in FIG. **5** around the pin **40.** As a result, the valve actuating rod **44** swings in a direction of the arrow *b* in FIG. **5** around the guide rod **32** against the force of the spring **47** thereby advancing the arm **45** in a direction of the arrow *c.* The arm **45** engages the upper end of the water filling valve member **21** and urges the valve member **21** slightly toward the open position so that the interior of the tank **25** communicates with the atmosphere. When the manual actuating button **42** is further depressed from the above state against the force of the compression spring **34,** the pressure imparting member **31** is moved in a direction of the arrow *d* by being guided by the guide rod **32** thereby expanding the tank **25.** The expansion of the tank **25** can be smoothly carried out since air can now freely enter the tank **25.** As the pressure imparting member **31** is moved downward to a lower position within the casing **1,** the tapered portion **58** of the pressure imparting member **31** is finally brought to a position opposite to the lower engaging end portion **55** of the locking rod **53,** and the lower end **33'** of the guide ring **33** is also brought to a position very close to the lower end portion **44'** of the valve actuating rod **44.** When the manual actuating button **42** is further depressed from the above state, the tapered portion **58** of the pressure imparting member **31** urges the lower engaging end portion **55** of the locking rod **53** against the force of the spring **52** thereby causing rotation of the locking rod **53** in a direction of the arrow *e* in FIG. **6.** As soon as the upper surface of the pressure imparting member **31** moves downward past the lower extremity **55'** of the lower engaging end portion **55** of the locking rod **53,** the locking rod **53** is restored to the original position by being urged in a direction of the arrow *f* in FIG. **6** by the force of the spring **52** and engages at the engaging portion **55** thereof with the upper surface of the pressure imparting member **31** to lock the pressure imparting member **31** against upward movement. At the same time, the lower end **33'** of the guide ring **33** urges the valve actuating rod **44** in a direction of the arrow *g* in FIG. **5** against the force of the spring **47** so that the water filling valve member **21** is further biased toward the full open position by the arm **45.** Thereafter, water is filled into the tank **25** through the water filling port **24.** The steamer is ready for use when the temperature within the vaporizing chamber **3** attains a high level enough to vaporize water and the desired temperature is maintained within the vaporizing chamber **3** by the action of the thermostat **14.**

Ejection of steam can be easily done by merely pushing the manual actuating button **48.** More precisely, when the manual actuating button **48** is pushed in a direction of the arrow *h* in FIG. **6** against the force of the springs **59** and **52,** the upper engaging end portion **54** of the locking rod **53** swings in a direction of the arrow *i* in FIG. **6,** and at the same time, the lower engaging end portion **55** swings also in a direction of the arrow *e* in FIG. **6,** thereby unlocking the pressure imparting member **31** from the locked position. Thus, the pressure imparting member **31** is forced upward by the force of the compression spring **34** to impart pressure to the tank **25** for compressing the same. Simultaneously with this unlocking operation, the water feed valve member **22** is urged to the open position by the manual actuating button **48.** Therefore, water within the compressed tank **25** is fed into the vaporizing chamber **3** through the water passage including the water feed valve member **22,** orifice **29** in the nozzle member **30** and water conduit **28.** The water fed into the vaporizing chamber **3** is turned into steam in the vaporizing chamber **3** and steam is led through the space **11,** steam detour passage **12** and opening **9** to be ejected from the steam ejection openings **10.** When subsequently the force imparted to the manual actuating button **48** is released, the water feed valve member **22** is urged to the closed position again to shut off the feed of water into the vaporizing chamber **3** from the tank **25** and ejection of steam ceases. When the manual actuating button **48** is continuously pushed by hand, water within the tank **25** can be continuously fed into the vaporizing chamber **3** so that steam can be continuously ejected. In lieu of manually continuously pushing the manual actuating button **48,** a mechanism may be employed which can continuously maintain the manual actuating button **48** in the steam ejecting position once the button **48** is pushed. Such a mechanism can be easily realized by anyone skilled in the art on the basis of known techniques.

The quantity of water within the tank **25** decreases gradually with the ejection of steam. The water content of the tank **25** can be known from the reading of the water quantity indicator **43** since the manual actuating button **42** moves upward with the upward movement of the tank **25.** Upon completion of the steaming, the

same process as that taken in the water filling operation may be carried out for discharging water from the tank **25.**

When a large quantity of steam is required during steaming operation, the manual actuating button **42** may be manually forced upward to compress the tank **25** by the combined force of the manual force and the force of the compression spring **34.** In such a case, water can be fed into the vaporizing chamber **3** in a quantity larger than when it is temporarily or relatively continuously fed into the chamber **3** so that a larger quantity of steam can be obtained.

In a modification shown in FIG. **7,** the steamer is not provided with the compression spring **34.** This modification is constructed so that the tank **25** can be compressed by manually urging a manual actuating button **42'** upward in a direction of the arrow *j.* Thus, the structure shown in FIG. **7** is featured by the fact that the quantity of water fed into the vaporizing chamber **3** can be freely selected by the load or force imparted to the button **42'** in the upward direction.

Referring to FIGS. **8, 9** and **10,** a protective cover **63** is provided for protecting the steamer against damage and preventing unintensional water discharge and any other trouble. The protective cover **63** covers a part of the steamer including a part of the casing **1,** manual actuating buttons **42** and **48** and steam ejecting section **2.** This cover **63** is made of a plastic material such as polypropylene or ABS resin, but any other suitable material may be employed. The plastic material above described is most suitable from the viewpoint of portability, design image and ease of manufacture.

The protective cover **63** includes a water filling port cover portion **64** projecting inwardly from the bottom thereof so as to fit snugly into the water filling port **24.** Thus, even when water within the tank **25** is incompletely discharged or when the user forgets the discharge of water after he has used the steamer, water is prevented from spilling out of the water filling port **24.** A pair of button protecting portions **65** and **65'** project outwardly from the side walls of the protective cover **63** so as to cover the respective manual actuating buttons **42** and **48.** A base protecting portion **66** of the protective cover **63** extends to the lower end of the base **4** of the steam ejecting section **2** so as to prevent any damage to the external surface of the base **4.**

Thus, even if the user forgets to completely discharge water from the tank **25** before he stores the steamer in a storage or when the user carries the steamer while placing it in a bag or the like, such possibilities can be completely avoided that water spills out of the water filling port **24** or the manual actuating button **48** is unintensionally pushed by an external pressure to feed water into the vaporizing chamber **3** thereby giving rise to corrosion of the steam ejecting section **2.** Further, this protective cover **63** is detached from the casing **1** prior to the use of the steamer so that it can be used as a water metering cup. In such an application, it is convenient to put a suitable mark **67** on the protective cover **63** so as to indicate the water level corresponding to the capacity of the tank **25.**

The embodiment above described has been illustrated in the type in which the tank **25** and the pressure imparting member **31** are integrally connected to each other so that the tank **25** follows the vertical movement of the pressure imparting member **31.** However, a spring may be disposed within the tank **25** for normally biasing the tank **25** in the expanding direction and the pressure imparting member **31** may not be connected integrally with the tank **25.** This modification is effective in preventing the tank **25** from being deformed or distorted. Further, a cover of heat insulating material may be used to cover substantial portions of the steam ejecting section including the thermostat to provide a thermally insulated unit, and this thermally insulated unit may be mounted on the casing.

We claim:

1. A steamer comprising an outer casing serving as a grip portion to be grasped by hand, steam ejecting means mounted on said casing and including a heater and a vaporizing chamber, a tank mounting member disposed within said casing and having a water filling valve member and a water feed valve member therein, an expansible and contractible tank fixed at an open end portion to said tank mounting member for containing water therein, pressure imparting means for imparting pressure and compressing said tank for forcedly feeding water contained within said tank into said vaporizing chamber, a water passage leading from said tank to said vaporizing chamber, and manual push button means for manually actuating said water feed valve member and said pressure imparting means.

2. A steamer as claimed in claim **1,** comprising a pressure imparting member securely connected to the bottom of said tank, a compression spring disposed between the lower surface of said pressure imparting member and said casing, a guide rod for guiding said pressure imparting member in the expanding and contracting direction of said tank, a valve actuating rod mounted at one end thereof on a lower portion of said guide rod and at an intermediate portion thereof on an upper portion of said guide rod so as to be swingable around and vertically movable on said guide rod, said valve actuating rod having at the other end thereof an arm normally biased away from the upper end of said water filling valve member, a lever pivoted to said pressure imparting member by a pivot pin and having one end thereof suitably bent to be engaged by said valve actuating rod, and a first manual actuating button mounted on the other end of said lever, whereby, in response to a first movement of said first manual actuating button, said valve actuating rod is caused to swing around said guide rod and said arm is advanced to a position engaging and actuating said water filling valve member for urging said water filling valve member toward the open position.

3. A steamer as claimed in claim **2,** comprising a guide plate fixed to said casing, a second manual actuating button mounted on said guide plate for advancing and retracting movement relative to said guide plate thereby actuating said water feed valve member, a locking rod mounted on said casing so as to be rotatable around its axis, said locking rod having an L-shaped upper engaging end portion engaged by the inner surface of said second manual actuating button and an L-shaped lower engaging end portion spaced normally from the upper surface of said pressure imparting member, and a spring having one end thereof anchored to said guide plate and the other end thereof engaging the upper engaging end portion of said locking rod, whereby said locking rod engages at the lower engaging end portion thereof with the upper surface of said pressure imparting member when said pressure im-

parting member is moved to its lowermost position by the depression of said first manual actuating button.

4. A steamer as claimed in claim 3, wherein, in response to the actuation of said second manual actuating button, said water feed valve member is urged to its open position, and at the same time, the upper engaging end portion of said locking rod swings in the direction of the force imparted to said second manual actuating button, while the lower engaging end portion of said locking rod swings away from said pressure imparting member thereby unlocking said pressure imparting member from the locked position.

5. A steamer as claimed in claim 3, wherein a protective cover is detachably fitted on said casing so as to cover the members including said steam ejecting means, said first manual actuating button and said second manual actuating button.

6. A steamer as claimed in claim 1, wherein said pressure imparting means includes a pressure imparting member securely connected to the bottom of said tank, a compression spring disposed between the lower surface of said pressure imparting member and said casing, and a guide rod for guiding said pressure imparting member in the expanding and contracting direction of said tank.

7. A steamer as claimed in claim 6, wherein said tank is in the form of a bellows of plastic material having a closed bottom, and the portion adjacent to said closed bottom has a diameter smaller than that of the portion adjacent to the open end thereof.

8. A steamer as claimed in claim 6, wherein the tank-side open end portion of said water passage leading to said vaporizing chamber extends into said tank by a length substantially equal to the height of said tank in the fully compressed state, and means is provided in said tank so as to occupy substantially all the internal space of said tank except said open end portion of said water passage extending into said tank when said tank is in the fully compressed state.

9. A steamer as claimed in claim 1, wherein another manual actuating button is provided on said pressure imparting means and projects from said casing in the vicinity of the bottom of said tank.

10. A steamer as claimed in claim 1, wherein a spring is mounted within said tank for normally urging said tank in the expanding direction, and said pressure imparting member is not integrally connected to said tank.

11. A steamer as claimed in claim 1, wherein said steam ejecting means includes a base and a block defining said vaporizing chamber, said heater being embedded in one of the walls of said block, said base being securely fixed in fluid-tight relation to one wall surface of said block and having at least one steam ejection opening, and a thermostat is mounted on another wall surface of said block for sensing and adjusting the temperature within said vaporizing chamber.

12. A steamer as claimed in claim 11, wherein a pair of partition plates are disposed opposite to each other within said vaporizing chamber for forming a detour passage for steam, and the partition plate nearer to said base is provided with an opening at a position opposite to said steam ejection opening in said base.

13. A steamer as claimed in claim 11, wherein a cover of heat insulating material is used to cover substantial portions of said steam ejecting means including said thermostat to provide a thermally insulated unit, and said thermally insulated unit is mounted on said casing.

14. A steamer as claimed in claim 11, wherein nozzle means is disposed in said water passage leading from said tank to said vaporizing chamber to regulate the quantity of water fed into the vaporizing chamber from said tank, and said nozzle means is disposed at a position nearer to said tank where the temperature is relatively low.

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