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(54) **STEAM IRONING APPARATUS**

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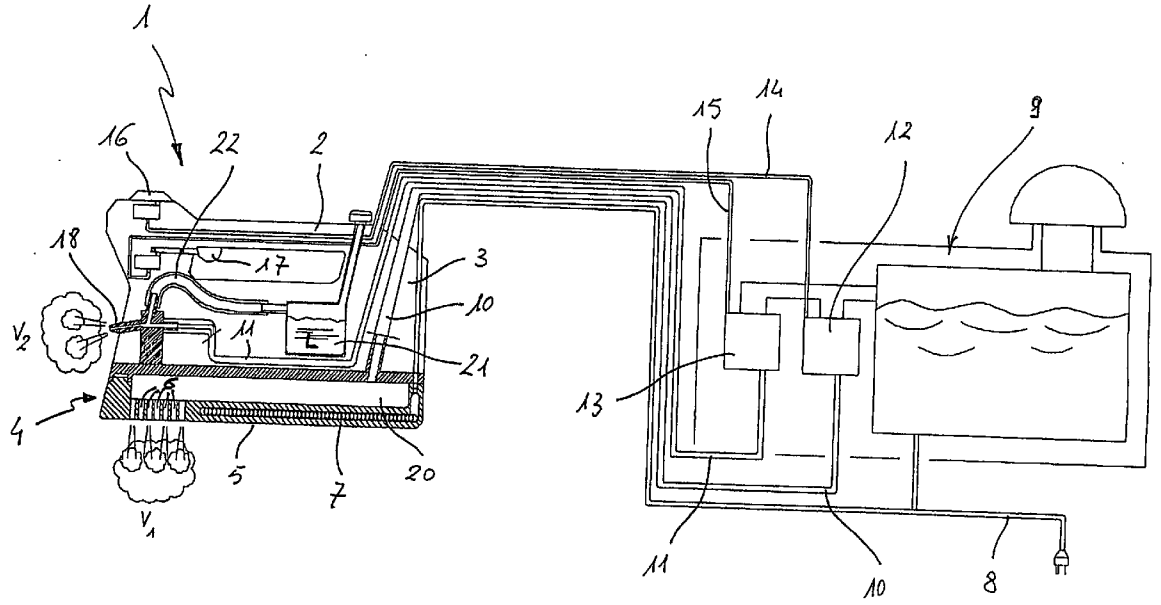
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(57) **ABSTRACT**

The present invention refers to a steam ironing apparatus, which comprises a smoothing iron that is provided frontally with a nozzle **18,** as well as a conduit **11** communicating with said nozzle **18** for the passage of steam therethrough; the ejection of steam from the nozzle **18** is controlled with the aid of valve means **13.** The apparatus further comprises control means **17** for the actuation of the valve means **13,** as well as containment means **21** for a liquid L that are in communication with the conduit **11** so that the steam flowing through the conduit **11** mixes up with the liquid L flowing in from the containment means **21** so as to produce humidified steam X**12** for ejection through the nozzle **18.**



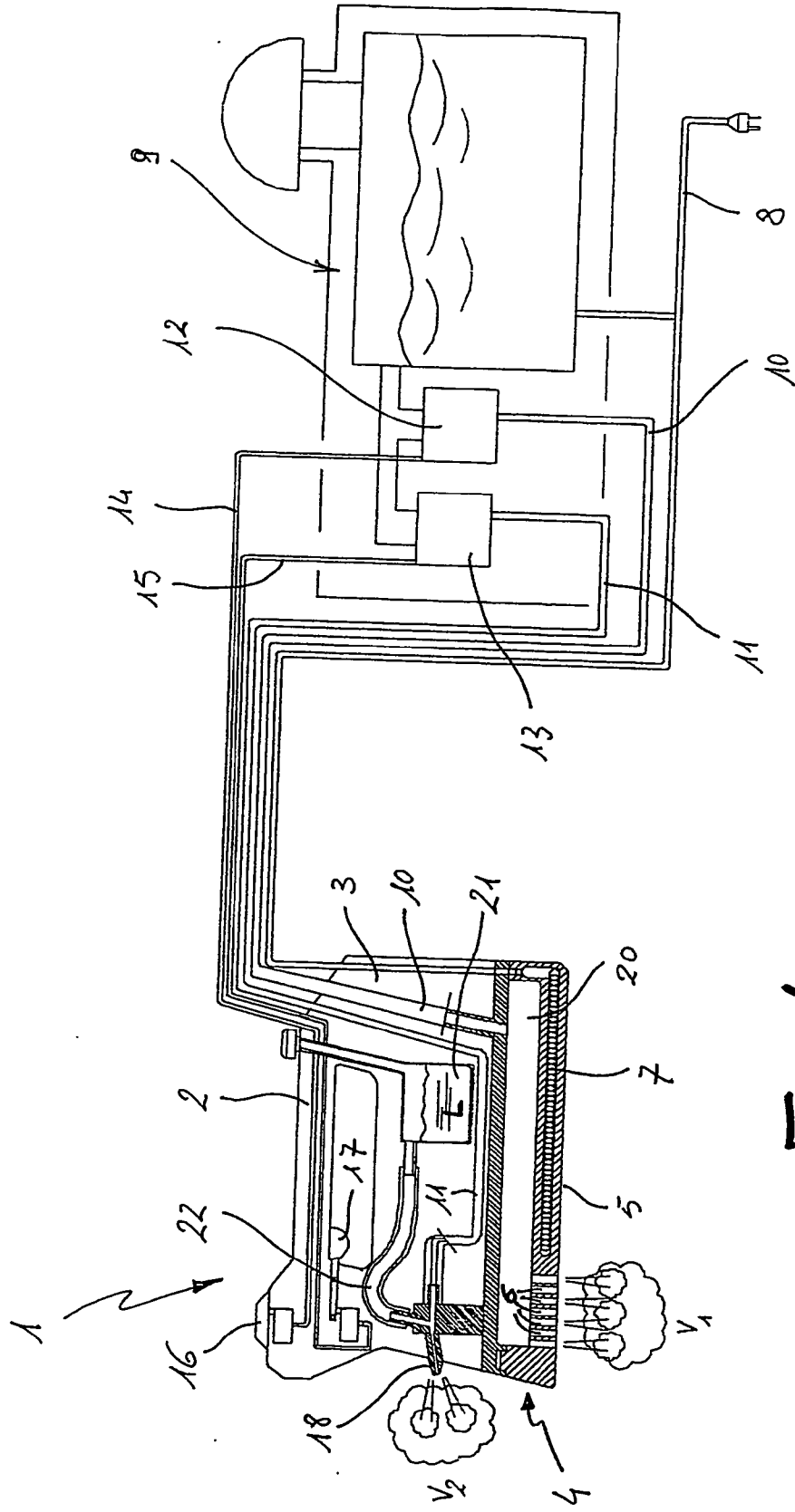


Fig. 1

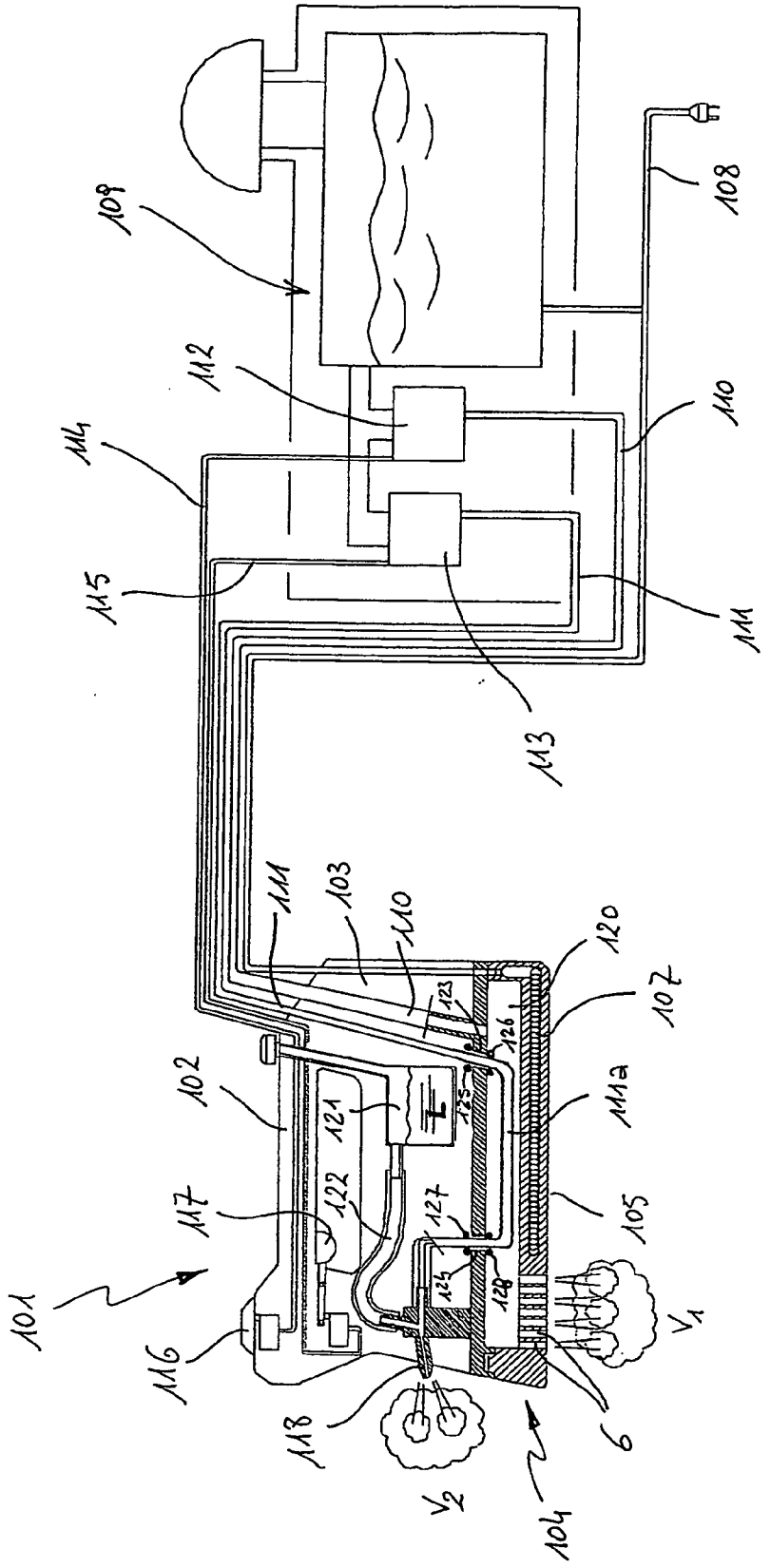

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Fig. 2

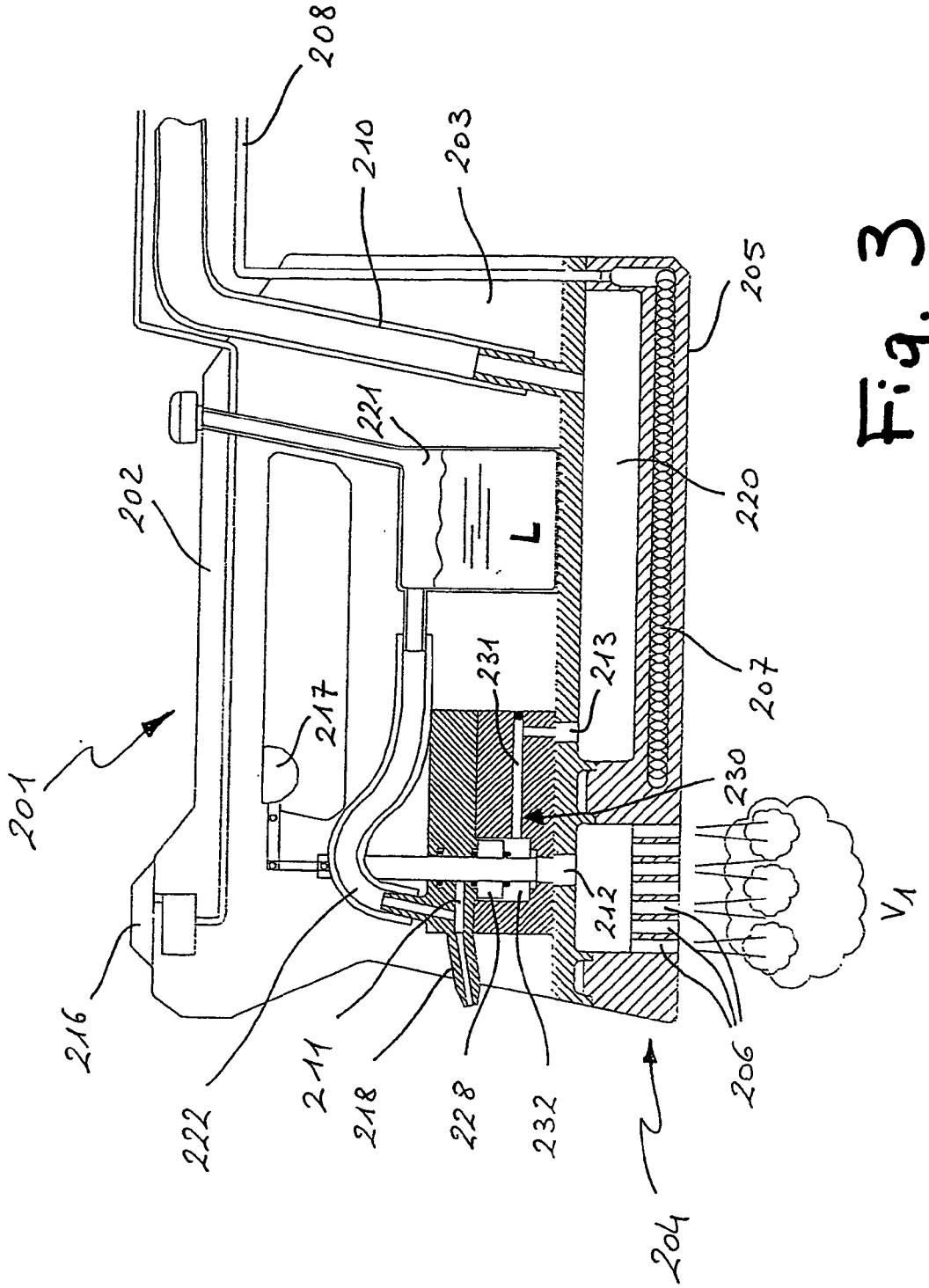

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Fig. 3

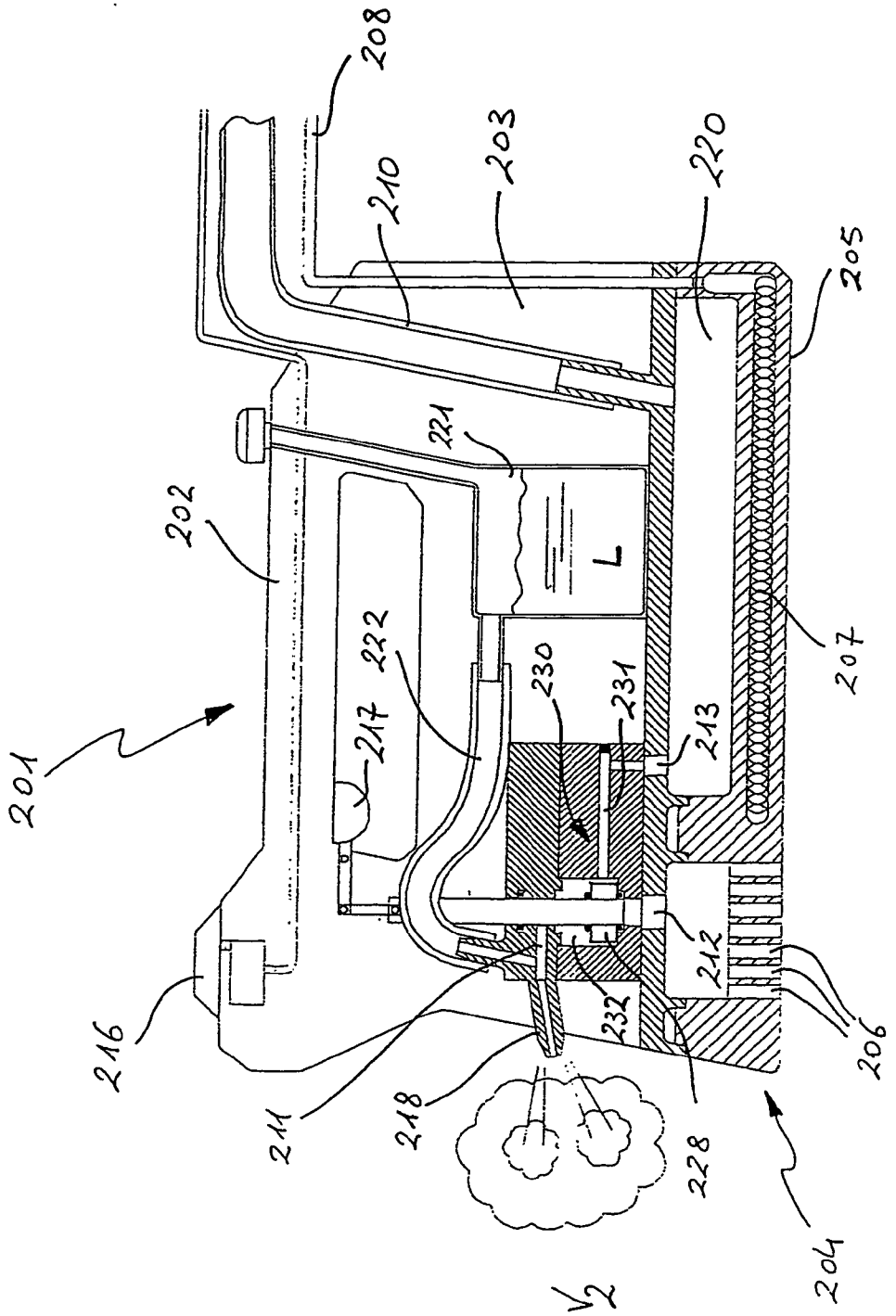

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Fig. 4

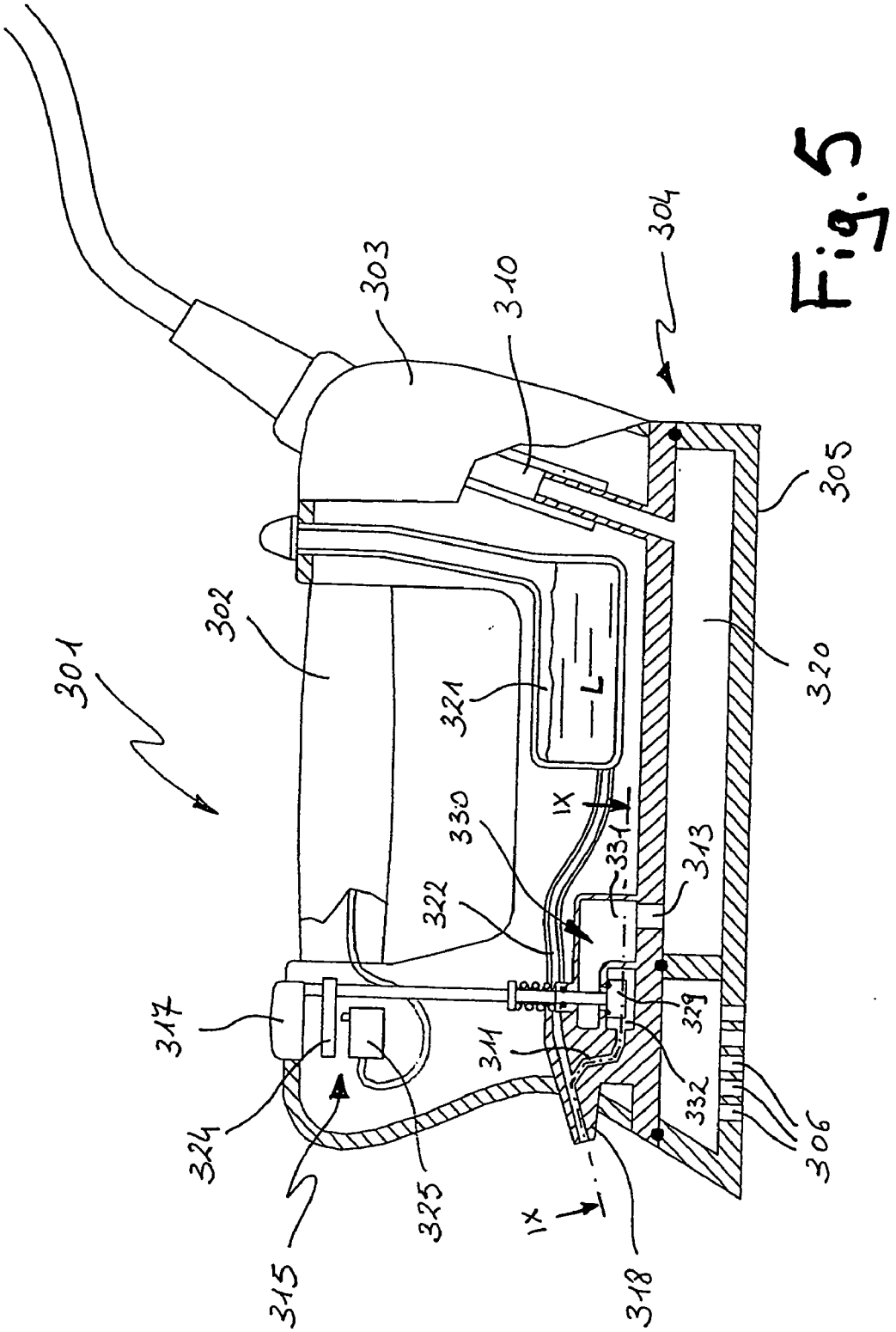

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Fig. 5

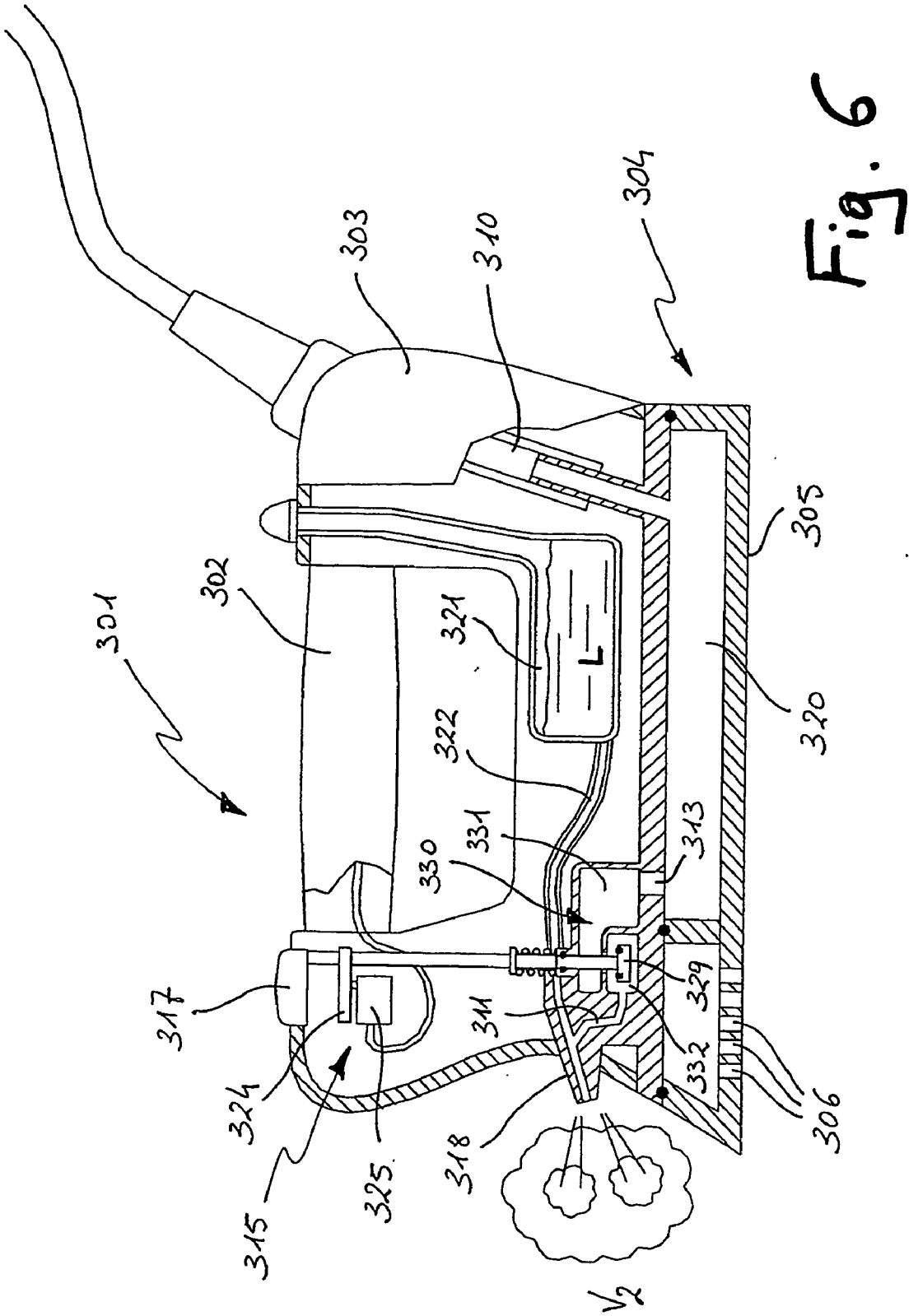

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Fig. 6

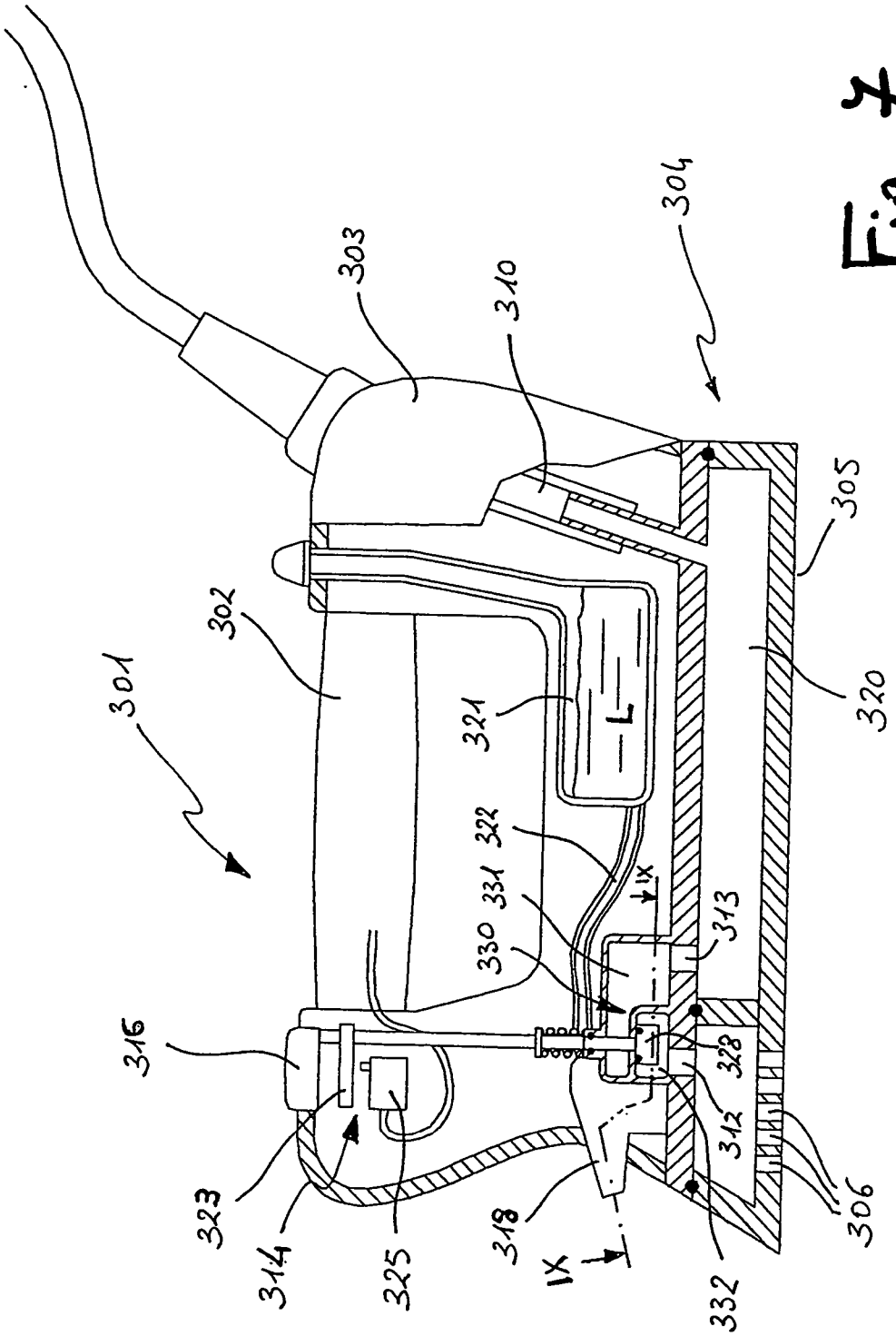

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Fig. 7

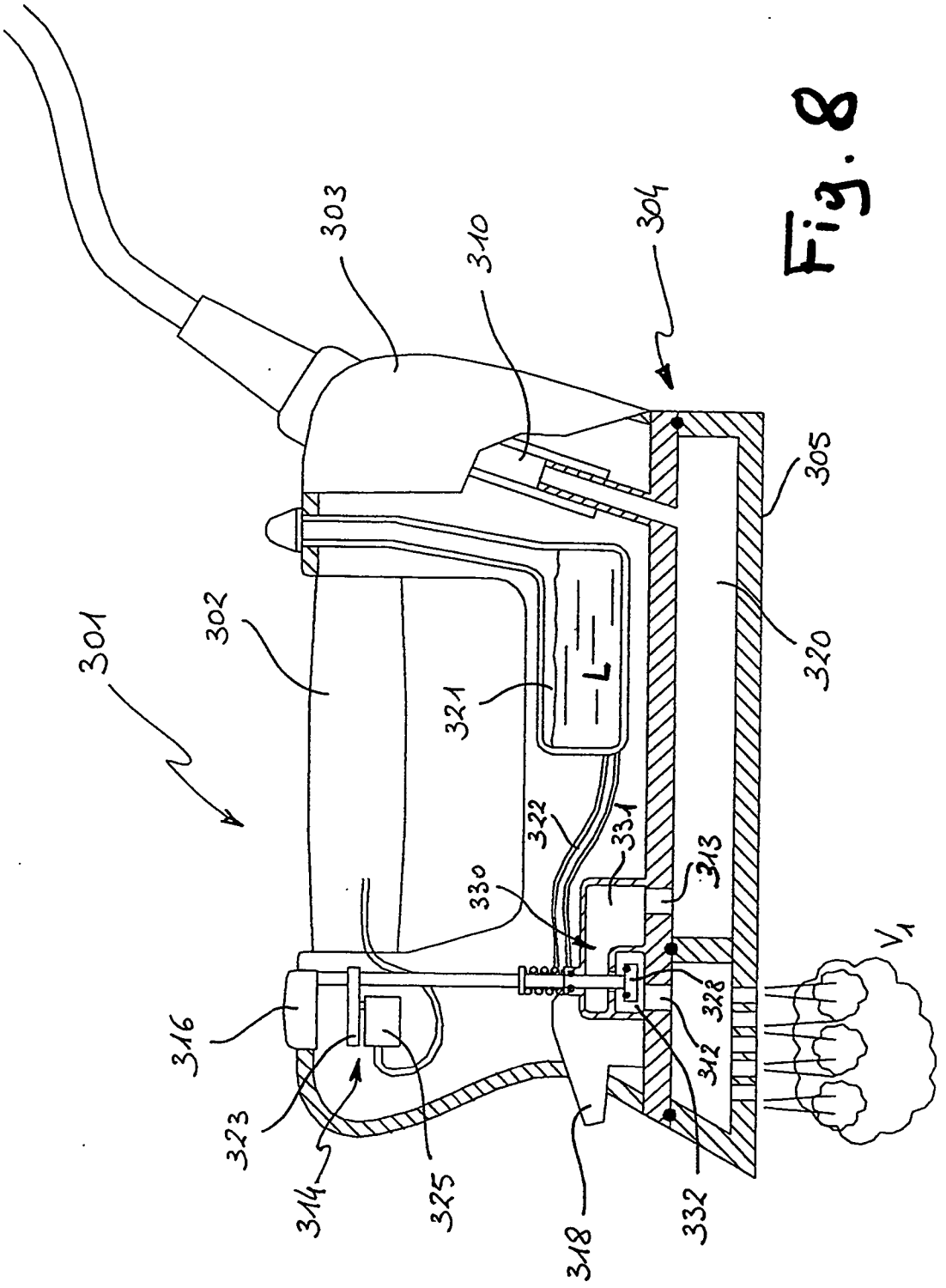

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Fig. 8

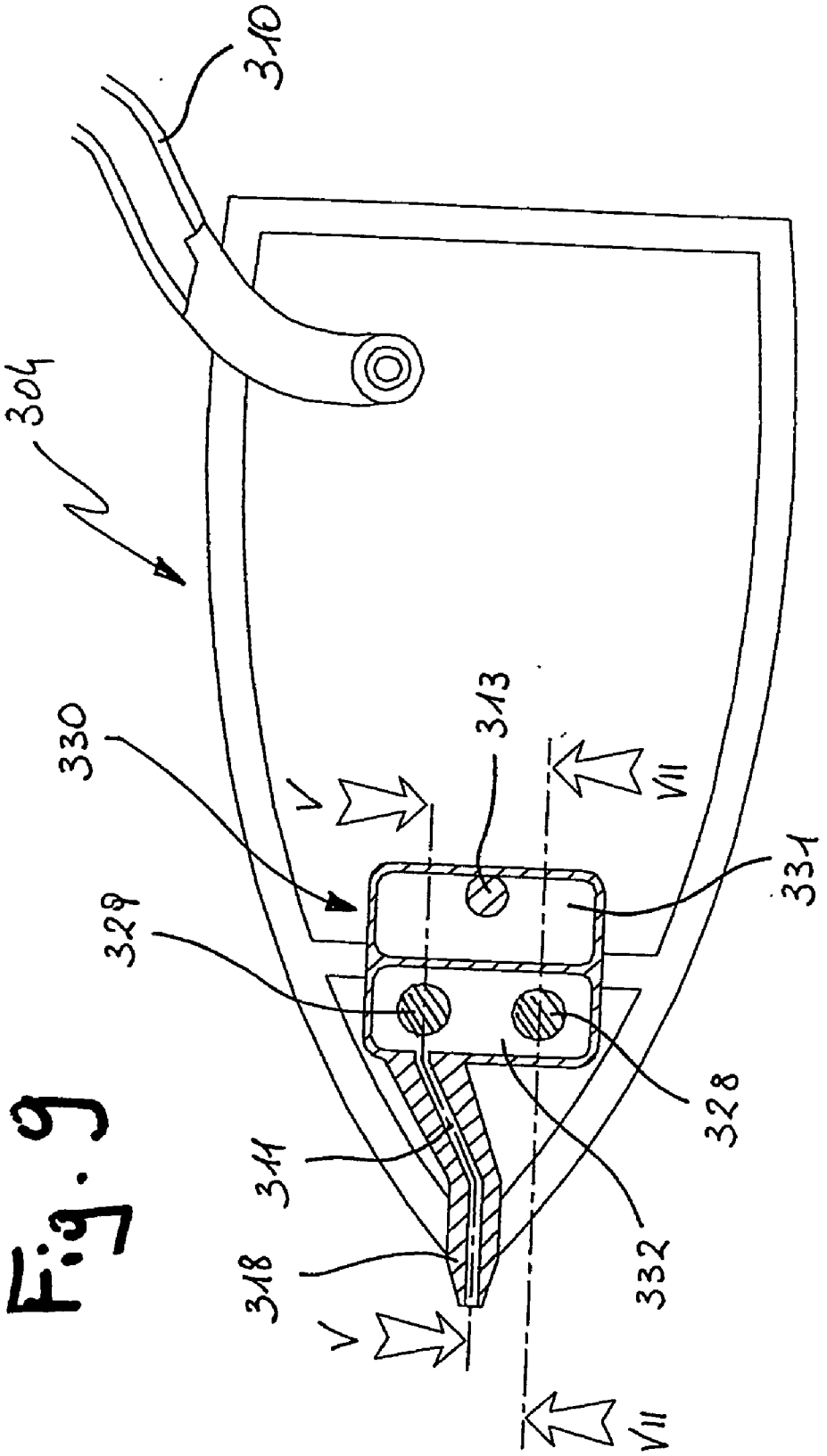


Fig. 9

STEAM IRONING APPARATUS

[0001] The present patent application refers to a steam ironing apparatus for steam-assisted ironing of garments and clothing items, which comprises a steam generator arranged in connection with a smoothing iron, or flatiron, provided with control means for selectively triggering steam emissions from a front steam-ejection nozzle.

[0002] Steam-assisted clothing ironing apparatuses of the currently known kinds are generally known to comprise a steam generator, or boiler, which is adapted to produce steam and supply it to the heated plate of a smoothing iron. The lower or bottom surface of such a plate is provided with a plurality of perforations, from which the steam is capable of being emitted towards the clothing item to be ironed, thereby improving the ironing result. There may be furthermore provided a temporary emission of a jet of steam under pressure through one or more apertures arranged in the front portion of the smoothing iron itself, the emission of the steam jet is triggered by the user with the aid of control means that are generally provided on the handle of the smoothing iron itself.

[0003] The European patent application no. 0 999 303 refers to a steam smoothing iron of a professional type comprising first and second steam-ejection apertures arranged on the lower surface of the plate and in the front portion of the iron, respectively. These apertures are connected internally, via corresponding first and second conduits, with a steam-inflow control valve that is housed in the plate and is adapted to be actuated from the outside.

[0004] The European patent application no. 1 178 147 refers again to a steam ironing apparatus comprising a stationary steam generator and a flatiron which is connected to said steam generator via a flexible conduit and is equipped with a heated plate provided with a plurality of steam-ejection perforations subdivided into two separate chambers, in which these chambers are arranged frontally and centrally with respect to the flatiron, respectively. Between the steam generator and the perforations of the **15** central chamber there is provided, in the direction of flow of the steam, a steam-flow reducing/shut-off device that is capable of being switched into any of a first control setting, in which steam is conveyed at its maximum flow rate towards the perforations of the central chamber, and a second control setting in which said steam flow rate is reduced. In both such switching positions, anyway, the flow rate of the steam flowing to the perforations of the front chamber remains constant and unaltered.

[0005] A typical drawback that is found in the above described prior-art apparatuses lies in the fact that the degree of moisture of the steam being ejected from the front portion of the smoothing iron does not differ from the degree of moisture of the steam that is on the contrary ejected from the central perforations of the plate; the steam jet being ejected from the front portion of the smoothing iron is useful in assisting ironing of clothing portions that are particularly difficult to reach with the plate of the flatiron and/or may exhibit such creases, sewing seams, pleats, and the like, as to require a particularly intense ironing action. For such an ironing action to be capable of being achieved, the degree of moisture of the steam being ejected from the front portion of the flatiron should actually be sensibly higher than the degree of moisture of the steam flowing out from the central perforations of the iron plate, in order to be able to soften the fibres to a suitably greater extent in view of boosting the ironing effect.

[0006] Another drawback that is generally found in prior-art apparatuses is connected with the presence, within the smoothing iron, of small pumps adapted to be actuated manually with the aid of a control push-button so as to cause a spurt of water or steam under pressure to flow towards a spray nozzle arranged on the front side of the flatiron; these pumps, and therefore the various component parts thereof, must necessarily be of an extremely small size in order to be able to be conveniently housed within the flatiron. As a result, they are particularly expensive and subject to possible breakdowns owing to said small size of their component parts.

[0007] It is therefore a main object of the present invention to do away with the afore described drawbacks of prior-art solutions by providing a steam ironing apparatus which enables the degree of moisture of the steam being ejected to be duly differentiated between the front portion of the flatiron and the lower surface of the plate of the same iron.

[0008] Within the main object as set forth above, it is a purpose of the present invention to provide a steam ironing apparatus which is simpler in its construction and more reliable in its operation.

[0009] Another purpose of the present invention is to provide an apparatus of the above indicated kind, which is low in costs and is further capable of being manufactured with the use of readily available, generally known materials, machinery and techniques.

[0010] According to the present invention, these aims, along with further advantageous features that will become apparent in the following description, are reached in a steam ironing apparatus incorporating the characteristics as recited in the appended claim **1**.

[0011] Anyway, features and advantages of the present invention may be more readily understood from the description that is given below of some preferred, although not sole embodiments that are illustrated by way of non-limiting example with reference to the accompanying drawings, in which:

[0012] **FIG. 1** is a partially cross-sectional side view of the apparatus according to the present invention;

[0013] **FIG. 2** is a partially cross-sectional side view of a second embodiment of the apparatus according to the present invention;

[0014] **FIG. 3** is a partially cross-sectional side view of a third embodiment of the apparatus according to the present invention, in a first operating position thereof;

[0015] **FIG. 4** is a view of the embodiment illustrated in **FIG. 3**, in a second operating position thereof;

[0016] **FIG. 5** is a side, partially cross-sectional view along the section line V-V of a fourth embodiment of the apparatus according to the present invention, in a first operating position thereof;

[0017] **FIG. 6** is a view of the embodiment illustrated in **FIG. 5**, in a second operating position thereof;

[0018] **FIG. 7** is a side, partially cross-sectional view along the section line VII-VII of the embodiment illustrated in **FIG. 5**, in a third operating position thereof;

[0019] **FIG. 8** is a view of the embodiment illustrated in **FIG. 5**, in a fourth operating position thereof;

[0020] **FIG. 9** is a plan, partially cross-sectional view along the section line IX-IX of the embodiment illustrated in **FIG. 5**.

[0021] With reference to the above cited Figures, the steam ironing apparatus according to the present invention comprises a smoothing iron **1** provided with a handle **2**, a body **3** and, on the bottom side, a plate **4** whose lower surface **5** is provided with a plurality of steam-ejection perforations **6**. Within said plate **4** there is embedded a heating element **7**, such as for instance an electric heating element powered from the power mains via the power-supply cable **8**.

[0022] To complete the steam ironing apparatus according to the present invention there is furthermore provided a steam generator **9** that is adapted to supply steam to the smoothing iron **1** via a first conduit **10** and a second conduit **11**; the steam supply through said first and said second conduits **10**, **11** is controlled by first and second valve means **12**, **13**, respectively, such as for instance electromagnetic valves actuated, via the electric circuits **14**, **15**, by first control means **16** and second control means **17**, respectively, which are arranged externally on the smoothing iron **1**, preferably in correspondence of the handle **2** thereof.

[0023] Within the plate **4** there may be provided means adapted to produce dry steam; such means may for instance be constituted by a vaporization chamber **20** communicating with the first conduit **10** and arranged adjacent to the heating element **7**. The dry steam generated in this chamber **20** is obtained by heating up steam to the optimum ironing temperature and the resulting vaporization of possible water particles that may have condensed along the flowpath of the steam in the first conduit **10**.

[0024] The emission of steam V_1 through the perforations **6** generally occurs in a continuous manner and is actuated with the aid of the first control means **16** controlling said first valve means **12**.

[0025] The second steam conduit **11** is in communication with an ejection nozzle **18** provided in the front portion of the smoothing iron **1** so as to generate a spurt-like ejection of steam V_2 with the aid of said second control means **17** controlling said second valve means **13**.

[0026] The steam ironing apparatus according to the present invention further comprises containment means **21** adapted to hold a liquid L, such as for instance water, said containment means being in communication with said second conduit **11** via a third conduit **22**; the connection of said second conduit **11** with said third conduit **22** is preferably situated close to the nozzle **18**. The transfer of the liquid L from the containment means **21** along the third conduit **22** up to the connection thereof with said second conduit **11** is obtained, according to a preferred embodiment, owing to the Venturi effect that is brought about by the pressure drop caused by the passage of steam through the second conduit **11**.

[0027] In an advantageous manner, said containment means **21** may be comprised of a reservoir housed inside the body **3** of the smoothing iron **1**, so as this occurs in the embodiment that is illustrated in **FIG. 1**, or they may be arranged somewhere outside the smoothing iron **1** itself.

[0028] The operation of the apparatus is as follows: in order to obtain a spurt of humidified steam V_2 ejected from the nozzle **18**, all it takes is to just actuate the second control means **17** temporarily, so that the second valve means **13** are caused to switch over from a first operating shut-off condition, in which the flow of steam along the second conduit **11** is prevented, to a second operating open-valve condition, in which the steam is enabled to flow along said second conduit **11** and reach the nozzle **18**: in this second operating condition of said valve means, the liquid L, as drawn from said containment means **21** through the third conduit **22** owing to the action of the pressure drop that is brought about by the passage of steam along the second conduit **11**, mixes up with the steam in the zone where the third conduit **22** connects with the second conduit **11**, thereby creating a water-steam mixture, which may also be referred to as humidified steam, being ejected from the nozzle **18**.

[0029] The flow of steam V_1 being ejected through the perforations **6**, as controlled with the aid of the first valve means **12** which have likewise a first operating shut-off setting and a second operating open-valve setting that can be selected through the first control means **16**, is on the contrary comprised of dry steam owing to the passage thereof through the afore mentioned vaporization chamber **20**.

[0030] It can therefore be readily appreciated how the steam ironing apparatus according to the present invention is actually capable of reaching the afore indicated aims and ensuring all of the advantages deriving therefrom: in fact, a generation of steam is obtained, which, when emitted from the smoothing iron **1**, actually has a degree of moisture that is differentiated between the flow of steam V_1 ejected through the perforations **6** and the spurt of steam V_2 ejected through the nozzle **18**.

[0031] In addition, the pressure drop that is brought about by the steam flowing through the second conduit **11** so as to be able to draw out the liquid L from the containment means **21**, enables the pump to be omitted which is usually employed in the traditional prior-art apparatuses to ensure the same task. The smoothing iron is therefore simplified to a considerable extent in its construction under a correspondingly significant reduction in costs. An improved reliability is at the same time obtained thanks to the absence of a number of small-size component parts that are potentially subject to failure and breakdown.

[0032] It will be readily appreciated that the invention that has been described above by mere way of example is open to a number of different applications and may be the subject of a number of modifications and different embodiments without departing from the scope of the same innovatory concept.

[0033] So, for instance, **FIG. 2** can be noticed to illustrate a second embodiment of the present invention which is substantially similar to the previously described one, wherein a length **111***a* of the second steam conduit **111** upstream of the site at which it connects with the third conduit **122**, passes through the interior of the vaporization

chamber **120** via an inlet aperture **123** and an outlet aperture **124** that are suitably sealed with the aid of appropriate sealing means **125**, **126**, **127**, **128**. In this way, also the steam flowing through the second conduit **111** is heated to the optimum ironing temperature before leaving the iron through the nozzle **118**.

[**0034**] **FIGS. 3 and 4** illustrate a third embodiment of the steam ironing apparatus according to the present invention, which comprises a smoothing iron **201** provided with a handle **202**, a body **203** and, on the bottom side, a plate **204** whose lower surface **205** is provided with a plurality of steam-ejection perforations **206**. Within said plate **204** there is embedded at least a heating element **207**, such as for instance an electric heating element powered from the power mains via the power-supply cable **208**. There is further provided a vaporization chamber **220** for producing dry steam through heating and the resulting vaporization of possible water particles that may have formed by the condensation of the steam flowing in from the steam generator (not shown) through a first steam-inlet conduit **210**. The flow of steam from the steam generator to the smoothing iron **201** is triggered with the aid of first control means **216** provided somewhere on the outside of the smoothing iron **201** itself, preferably on the handle **202** thereof.

[**0035**] Said vaporization chamber **220** is communicating, via a first aperture **213** and distribution means **230** comprising a manifold **231** and a distribution chamber **232**, with both a nozzle **218**, located on the front side of the smoothing iron **201**, and the perforations **206** through the interposition of valve means **228**. These valve means are advantageously comprised of a two-way valve **228** housed in said distribution chamber **232** located adjacent to the manifold **231**. Said distribution chamber **232** is communicating with both a second conduit **211**, which therefore connects the same chamber **232** with the outlet of the nozzle **218**, and a second aperture **212** which is in turn communicating with the perforations **206**.

[**0036**] The two-way valve **228** is capable of being actuated with the aid of second control means **217**, such as for instance a push-button actuating an electromagnetic valve by means of an electric pulse; these second control means **217** are located somewhere on the outside of the smoothing iron **201**, preferably on the handle **202** thereof. Accordingly, the two-way valve **228** has a first operating setting, illustrated in **FIG. 3**, in which the steam is delivered to the perforations **206** through the distribution chamber **232** and the second aperture **212**, and a second operating setting, illustrated in **FIG. 4**, in which the steam is delivered to the nozzle **218** through the distribution chamber **232** and the second conduit **211**.

[**0037**] The steam ironing apparatus according to the present invention further comprises containment means **221** adapted to hold a liquid L, such as for instance water, said containment means being connected with said second conduit **211** via a third conduit **222**. The transfer of the liquid L from the containment means **221** along the third conduit **222** up to the connection thereof with said second conduit **211** is obtained, according to a preferred embodiment, by virtue of the Venturi effect that is brought about by the pressure drop caused by the passage of steam through the same second conduit **211**.

[**0038**] In an advantageous manner, said containment means **221** may be comprised of a reservoir housed inside the body **203** of the smoothing iron **201**, so as this is the case in the embodiment illustrated in **FIGS. 3 and 4**, or they may be arranged somewhere outside the smoothing iron **201** itself.

[**0039**] The operation is as follows: when the two-way valve **228** is in its first operating condition (**FIG. 3**), the steam, whose flow is controlled by the first control means **216**, flows in a continuous manner from the steam generator to the vaporization chamber **220** via the first conduit **210**; the dry steam V_1 produced in said chamber **220** is conveyed, through the first aperture **213**, along the manifold **231** up to the distribution chamber **232** and from this chamber, through the second aperture **212**, to the perforations **206** to be eventually ejected towards the surface of the fabrics or clothing item being ironed.

[**0040**] In order to obtain a spurt of humidified steam V_2 ejected from the nozzle **218**, all it takes is to just actuate the second control means **217**, so as to temporarily switch over the two-way valve **228** into the second operating setting (**FIG. 4**) thereof: in this way, the two-way valve **228** is caused to convey the flow of dry steam from the distribution chamber **232** to the nozzle **218** through the second conduit **211**; at the site where said second conduit **211** connects with the third conduit **222**, the steam mixes up with the liquid L, which is sucked in by the pressure drop brought about by the passage of the same steam through the second conduit **211**, thereby creating a water-steam mixture, which may also be referred to as humidified steam, being ejected from the nozzle **218**.

[**0041**] It should be noticed how, in this third embodiment of the present invention, the entire flow of the steam flowing in from the steam generator is diverted towards either the perforations **206** or the nozzle **218**, depending on the setting of the valve **228**.

[**0042**] FIGS. **5** through to **9** illustrate a fourth embodiment of the steam ironing apparatus according to the present invention, which comprises a smoothing iron **301** provided with a handle **302**, a body **303** and, on the bottom side, a plate **304** whose lower surface **305** is provided with a plurality of steam-ejection perforations **306**. In a similar manner as in the afore described embodiments, within said plate **304** there is embedded at least a heating element (not shown), such as for instance an electric heating element. There is further provided a vaporization chamber **320** for producing dry steam through heating and the resulting vaporization of possible water particles that may have formed by the condensation of the steam flowing in from the steam generator (not shown) through a first steam-inlet conduit **310**.

[**0043**] Said vaporization chamber **320** is communicating, via a first aperture **313** and distribution means **330** comprising a manifold **331** and a distribution chamber **332**, with both a nozzle **318**, located on the front side of the smoothing iron **301**, and the perforations **306** through the interposition of respective valve means **328**, **329**. These valve means are advantageously comprised of a first and a second valve **328**, **329** housed in said distribution chamber **332** located adjacent to the manifold **331**. Said distribution chamber **332** is provided with a second conduit **311**, which actually connects the same chamber **332** with the outlet of the nozzle **318**, and a second aperture **312** which is in turn communicating with the perforations **306**.

[0044] The above mentioned valves **328**, **329** are capable of being actuated with the aid of respective first and second control means **316**, **317**, such as for instance a pair of push-buttons located somewhere on the outside of the smoothing iron **301**, preferably on the handle **302** thereof.

[0045] Accordingly, the first valve **328** has a first operating shut-off setting, illustrated in **FIG. 7**, in which the flow of steam towards the perforations **306** is totally prevented, and a second operating open-valve setting, illustrated in **FIG. 8**, into which the valve can be switched by the actuation of the push-button **330**, and in which steam is allowed to flow from the manifold **331** towards the distribution chamber **332** and, from this chamber, towards the perforations **306** via the aperture **312** for being ejected therethrough.

[0046] Likewise, also the second valve **329** has a first operating shut-off setting, illustrated in **FIG. 5**, in which the flow of steam towards the nozzle **318** is totally prevented, and a second operating open-valve setting, illustrated in **FIG. 6**, into which the valve can be switched by the actuation of the push-button **331**, and in which steam is allowed to flow from the manifold **331** towards the distribution chamber **332** and, from this chamber, towards the nozzle **318** via the second conduit **311** for being ejected therethrough.

[0047] In an advantageous manner, to said first and second control means **316**, **317** there are associated respective actuator means **314**, **315** to turn on and off the flow of steam supplying the smoothing iron **301** from the steam generator (not shown); these actuator means **314**, **315** may be comprised of respective links or plates **323**, **324** adapted to preferably act on a common micro-switch **325**, or two respective micro-switches, when either one or the other of said push-buttons **316**, **317** is actuated by the user. Accordingly, the actuation of the micro-switch **325** will therefore cause an electromagnetic valve (not shown) to open, thereby enabling the steam to flow from the steam generator to the smoothing iron **301** via the first conduit **310**.

[0048] The steam ironing apparatus according to the present invention further comprises containment means **321** adapted to hold a liquid L, such as for instance water, said containment means being connected, via a third conduit **322**, with said second conduit **311** at a point situated close to the nozzle **318**. The transfer of the liquid L from the containment means **321** along the third conduit **322** up to the connection thereof with said second conduit **311** is obtained, according to a preferred embodiment, by virtue of the Venturi effect that is brought about by the pressure drop caused by the passage of steam through the same second conduit **311**.

[0049] It should be noticed that the materials used to implement the present invention, as well as the shapes and the size of the individual component parts, may each time be selected so as to most appropriately fit any particular need or comply with any application-related requirement, without this implying any departure from the scope of the present invention.

1. Steam ironing apparatus comprising

a smoothing iron (**1**, **101**, **201**, **301**) that is provided frontally with a steam-ejection nozzle (**18**, **118**, **218**, **318**);

a first and a second conduit (**10**, **11**, **110**, **111**, **210**, **211**, **310**, **311**) for the passage of the steam flow, said second conduit (**11**, **111**, **211**, **311**) being in communication with said nozzle (**18**, **118**, **218**, **318**);

the ejection of steam from said nozzle (**18**, **118**, **218**, **318**) being controlled with the aid of valve means (**13**, **113**, **228**, **329**) having a first operating setting, in which said ejection of steam is prevented, and a second operating setting in which said ejection of steam is enabled;

control means (**17**, **117**, **217**, **317**) provided on the outside of said smoothing iron (**1**, **101**, **201**, **301**) to switch over said valve means (**13**, **113**, **228**, **329**) to and from said first and said second operating setting, characterized in that it further comprises containment means (**21**, **121**, **221**, **321**) adapted to hold a liquid (L), said containment means being in communication with said second conduit (**11**, **111**, **211**, **311**) via a third conduit (**22**, **122**, **222**, **322**) in such a manner that, when said valve means (**13**, **113**, **228**, **329**) are switched in said second operating setting thereof, the steam flowing through said second conduit (**11**, **111**, **211**, **311**) mixes up with said liquid (L) flowing in from said third conduit (**22**, **122**, **222**, **322**) so as to produce humidified steam (V_2) to be ejected through said nozzle (**18**, **118**, **218**, **318**).

2. Steam ironing apparatus according to claim 1, characterized in that the transfer of said liquid (L) from said containment means (**21**, **121**, **221**, **321**) into said second conduit (**11**, **111**, **211**, **311**) is obtained by virtue of the pressure drop that is brought about by the passage of said steam flowing through said second conduit (**11**, **111**, **211**, **311**).

3. Steam ironing apparatus according to claim 1, characterized in that the connection of said second conduit (**11**, **111**, **211**, **311**) with said third conduit (**22**, **122**, **222**, **322**) is situated downstream of said valve means (**13**, **113**, **228**, **329**).

4. Steam ironing apparatus according to claim 1, characterized in that said containment means (**21**, **121**, **221**, **321**) are housed inside said smoothing iron (**1**, **101**, **201**, **301**).

5. Steam ironing apparatus according to claim 1, in which said smoothing iron (**1**, **101**, **201**, **301**) is provided on its bottom side with a plate (**4**, **104**, **204**, **304**) provided with a plurality of perforations (**6**, **106**, **206**, **306**) for the ejection of steam towards the fabrics or clothing item being ironed, characterized in that within said plate (**4**, **104**, **204**, **304**) there are provided means (**20**, **120**, **220**, **320**) for the production of dry steam, said means being in communication with said perforations (**6**, **106**, **206**, **306**) in such a manner as to ensure that the steam ejected through said perforations (**6**, **106**, **206**, **306**) is constituted by dry steam (V_1).

6. Steam ironing apparatus according to claim 5, characterized in that said means (**20**, **120**, **220**, **320**) for the production of dry steam comprise a vaporization chamber (**20**, **120**, **220**, **320**) located adjacent to at least a heating element (**7**, **107**, **207**) embedded in said plate (**4**, **104**, **204**, **304**) and communicating with said first conduit (**10**, **110**, **210**, **310**) so as to let steam into said chamber (**20**, **120**, **220**, **320**).

7. Steam ironing apparatus according to claim 6, characterized in that said vaporization chamber (**20**, **120**) communicates directly with said first conduit (**10**, **110**) on a side, and said perforations (**6**, **106**) on the other side.

8. Steam ironing apparatus according to claim 5, characterized in that the passage of steam through said first and said second conduit (**10**, **11**, **110**, **111**) and the ejection of steam (V_1, V_2) from said perforations (**6**, **106**) and from said nozzle (**18**, **118**) are controlled by respective first and second valve means (**12**, **13**, **112**, **113**).

9. Steam ironing apparatus according to claim 8, characterized in that said first and second valve means (**12**, **13**, **112**, **113**) are capable of being actuated by first and second control means (**16**, **116**, **17**, **117**), respectively, which are provided on the outside of said smoothing iron (**1**, **101**).

10. Steam ironing apparatus according to claim 1, characterized in that at least a length (**111***a*) of said second conduit (**111**) upstream of the site at which said second conduit (**111**) connects with said third conduit (**122**), passes through the interior of said means (**120**) for the production of dry steam.

11. Steam ironing apparatus according to claim 1, wherein said first conduit (**210**, **310**) is communicating, via said means for the production of dry steam (**120**, **320**), with both said perforations (**206**, **306**) and said nozzle (**218**, **318**) through the interposition of distribution means (**230**, **330**) and valve means (**228**, **328**, **329**) adapted to selectively divert the flow of steam towards said perforations (**206**, **306**) and/or towards said nozzle (**218**, **318**).

12. Steam ironing apparatus according to claim 11, characterized in that said distribution means (**230**, **330**) comprise a manifold (**231**, **331**) and a distribution chamber (**232**, **332**) communicating with each other, said manifold (**231**, **331**) being further communicating with said means for the production of dry steam (**220**, **320**) via a first aperture (**213**, **313**), and said distribution chamber (**232**, **332**) being in communication with said second conduit (**211**, **311**) and/or said perforations (**206**, **306**) through the interposition of said valve means (**228**, **328**, **329**).

13. Steam ironing apparatus according to claim 12, characterized in that said valve means (**228**, **328**, **329**) are housed within said distribution chamber (**232**, **332**).

14. Steam ironing apparatus according to claim 11, characterized in that said valve means (**228**) are constituted by a two-way valve.

15. Steam ironing apparatus according to claim 14, characterized in that said two-way valve (**228**) has a first operating setting, in which the steam is delivered to said perforations **206** through said second aperture (**212**), and a second operating setting, in which said steam is delivered to said nozzle (**218**) through said second conduit (**211**).

16. Steam ironing apparatus according to claim 15, characterized in that said two-way valve (**228**) is capable of being switched over to and from said first and said second operating setting thereof with the aid of control means (**217**) located on the outside of said smoothing iron (**201**).

17. Steam ironing apparatus according to claim 15, characterized in that the flow of steam towards said nozzle (**218**) is totally shut off when said valve means (**228**) are in said first operating condition thereof, whereas the flow of steam towards said perforations (**206**) is totally shut off when said valve means (**228**) are in said second operating condition thereof.

18. Steam ironing apparatus according to claim 11, characterized in that said valve means (**328**, **329**) are constituted by a first valve (**328**) and a second valve (**329**).

19. Steam ironing apparatus according to claim 18, characterized in that said first valve (**328**) has a first operating shut-off setting, in which the flow of steam towards said perforations (**306**) is totally prevented, and a second operating open-valve setting, in which steam is allowed to flow from said manifold (**331**) towards said distribution chamber (**332**) and, from this distribution chamber (**332**), towards the perforations (**306**) via said second aperture (**312**) for being ejected therethrough.

20. Steam ironing apparatus according to claim 18, characterized in that said second valve (**329**) has a first operating shut-off setting, in which the flow of steam towards said nozzle (**318**) is totally prevented, and a second operating open-valve setting, in which steam is allowed to flow from said manifold (**331**) towards said distribution chamber (**332**) and, from this distribution chamber (**332**), towards said nozzle (**318**) via said second conduit (**311**) for being ejected therethrough.

21. Steam ironing apparatus according to claim 19, characterized in that said first valve (**328**) and said second valve (**329**) are capable of being switched over to and from said first and said second operating settings thereof with the aid of respective first and second control means (**316**, **317**) provided on the outside of said smoothing iron (**301**).

22. Steam ironing apparatus according to claim 1, characterized in that said steam (V_2) being ejected from said nozzle (**18**, **118**, **218**, **318**) is constituted by a temporary spurt of high-pressure humidified steam obtained through the temporary actuation of said control means (**17**, **117**, **217**, **317**).

23. Steam ironing apparatus according to claim 1, characterized by what has been described and illustrated with reference to the accompanying drawings.

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