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(54) **STEAM OUTPUT CONTROL STRUCTURE FOR STEAM CLEANER**

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(57) **ABSTRACT**

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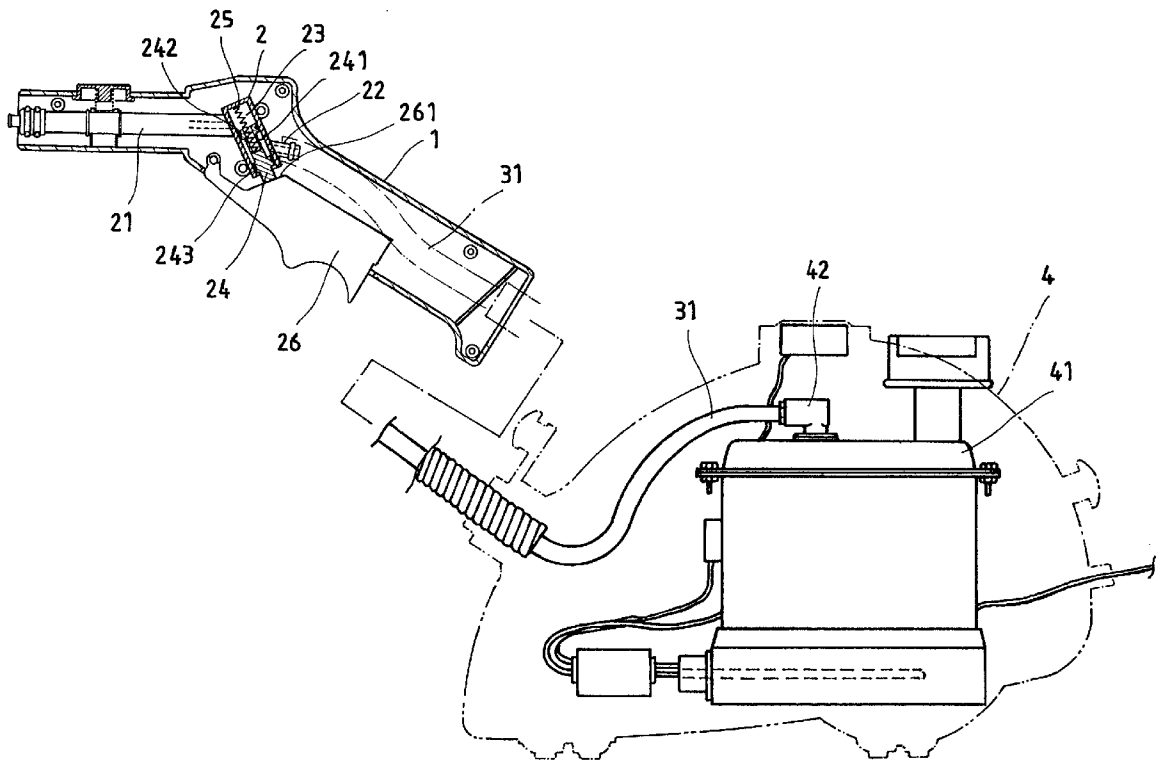
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A steam output control structure includes a hose extended from the housing of a steam cleaner and having a grip at the end, a control valve mounted in the grip for output of steam, a heat-resisting high-tension tube connected between the control valve and the steam output port of the steam cleaner, the control valve having a spout for steam output and a valve rod supported on a spring member and adapted to close the steam passage between the spout and the heat-resisting high-tension tube, and a control knob pivoted to the grip and adapted to open the valve rod for letting steam pass from the heat-resisting high-tension tube to the spout.

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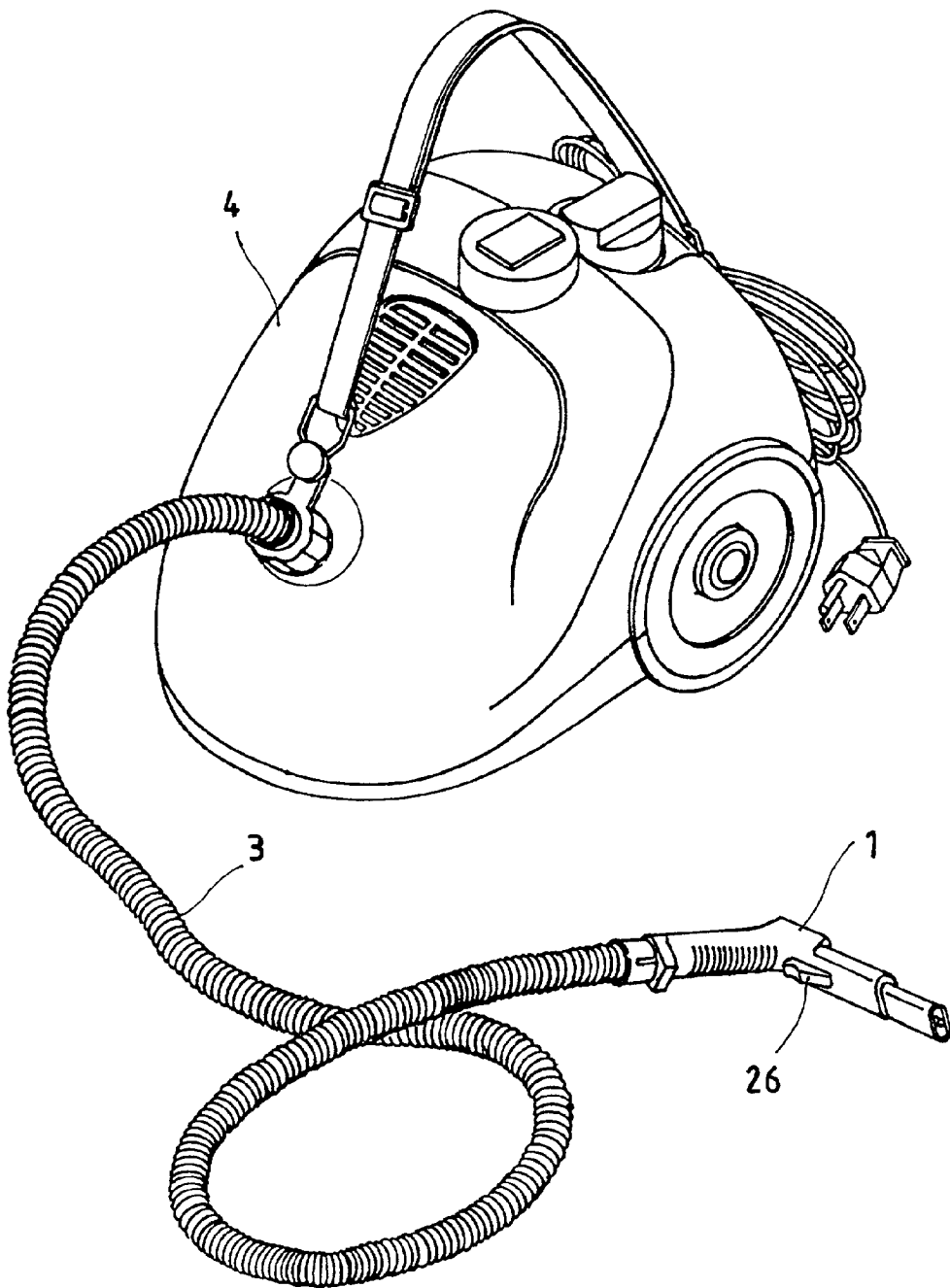
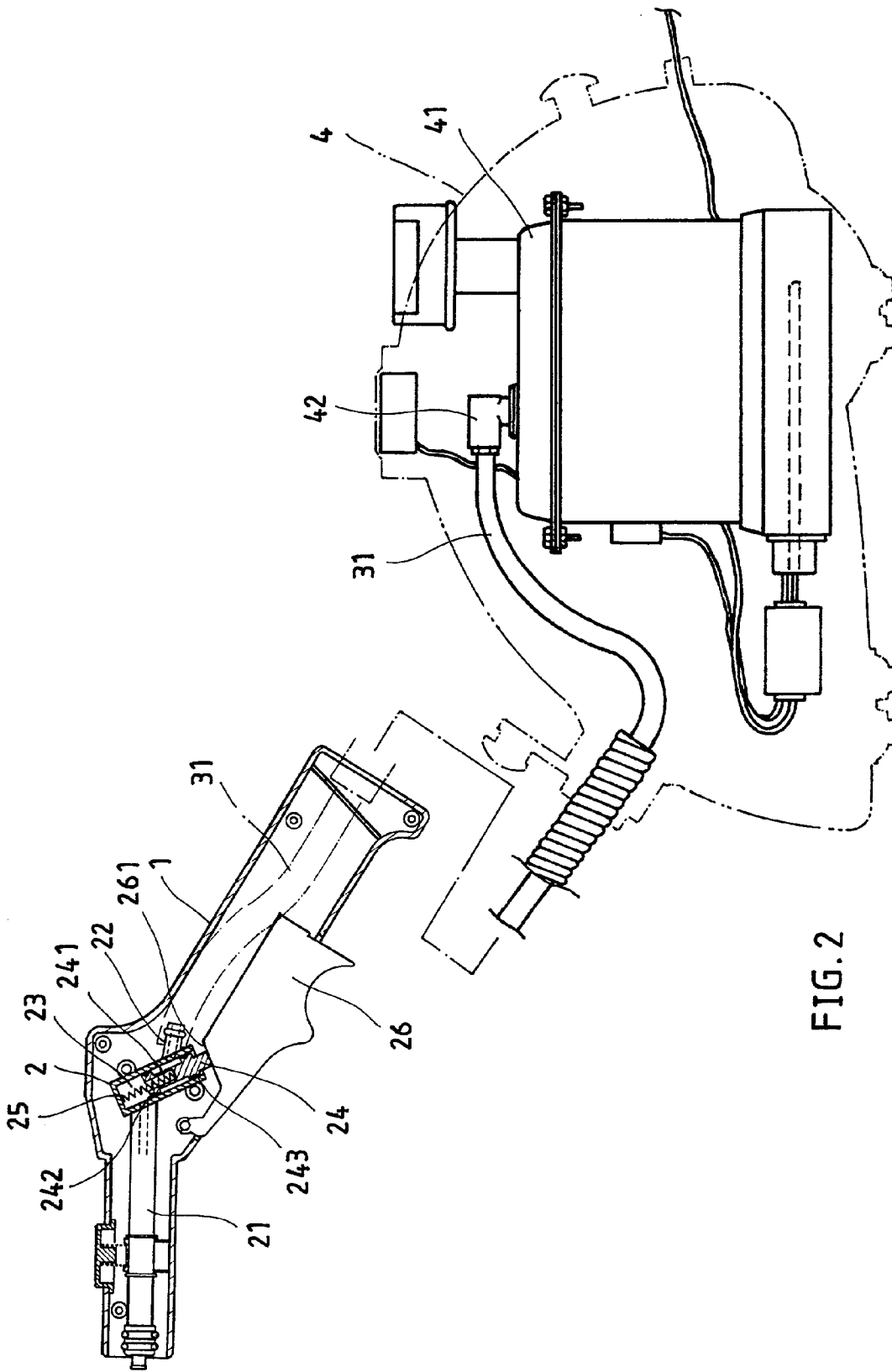


FIG.1



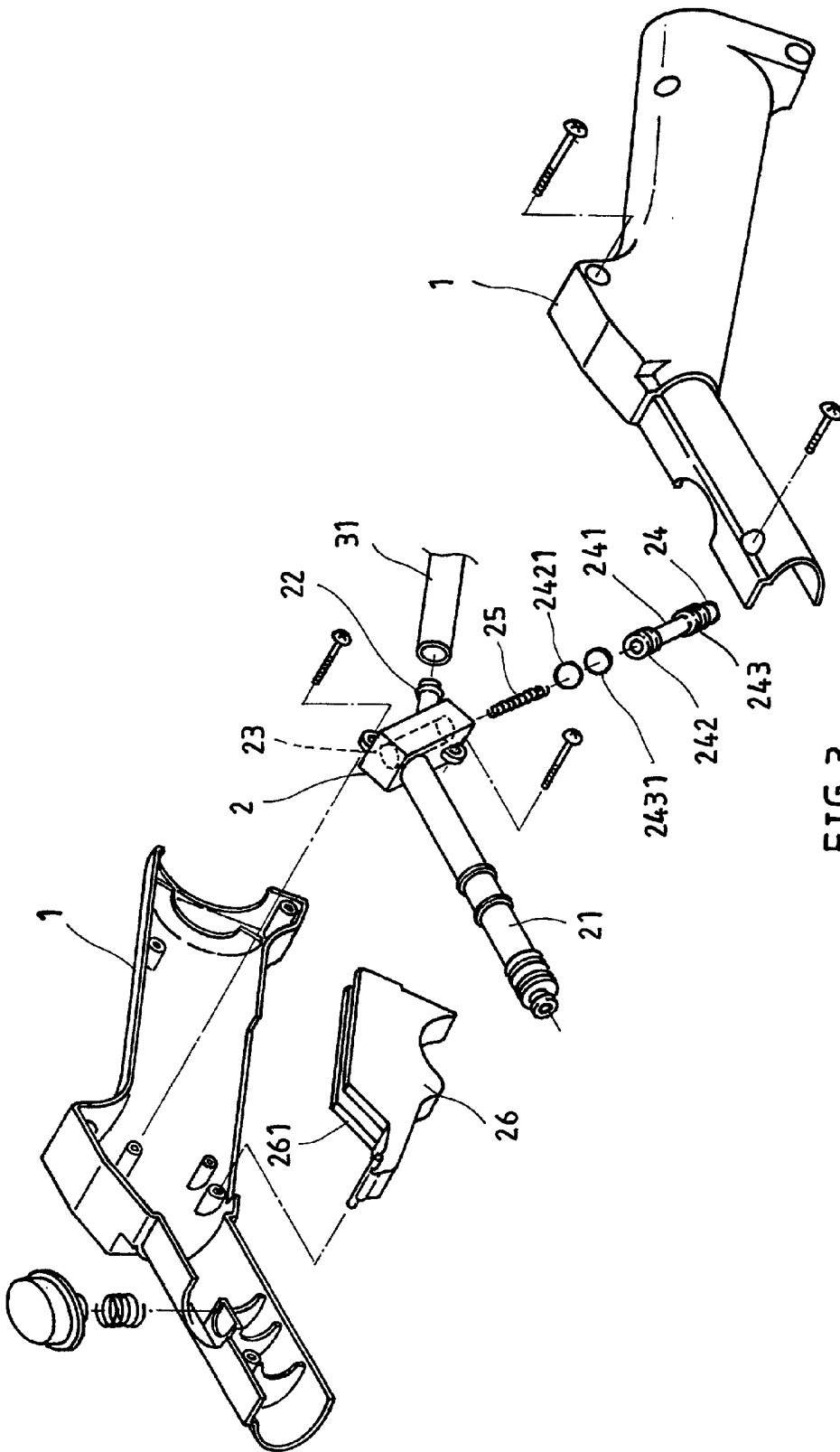


FIG. 3

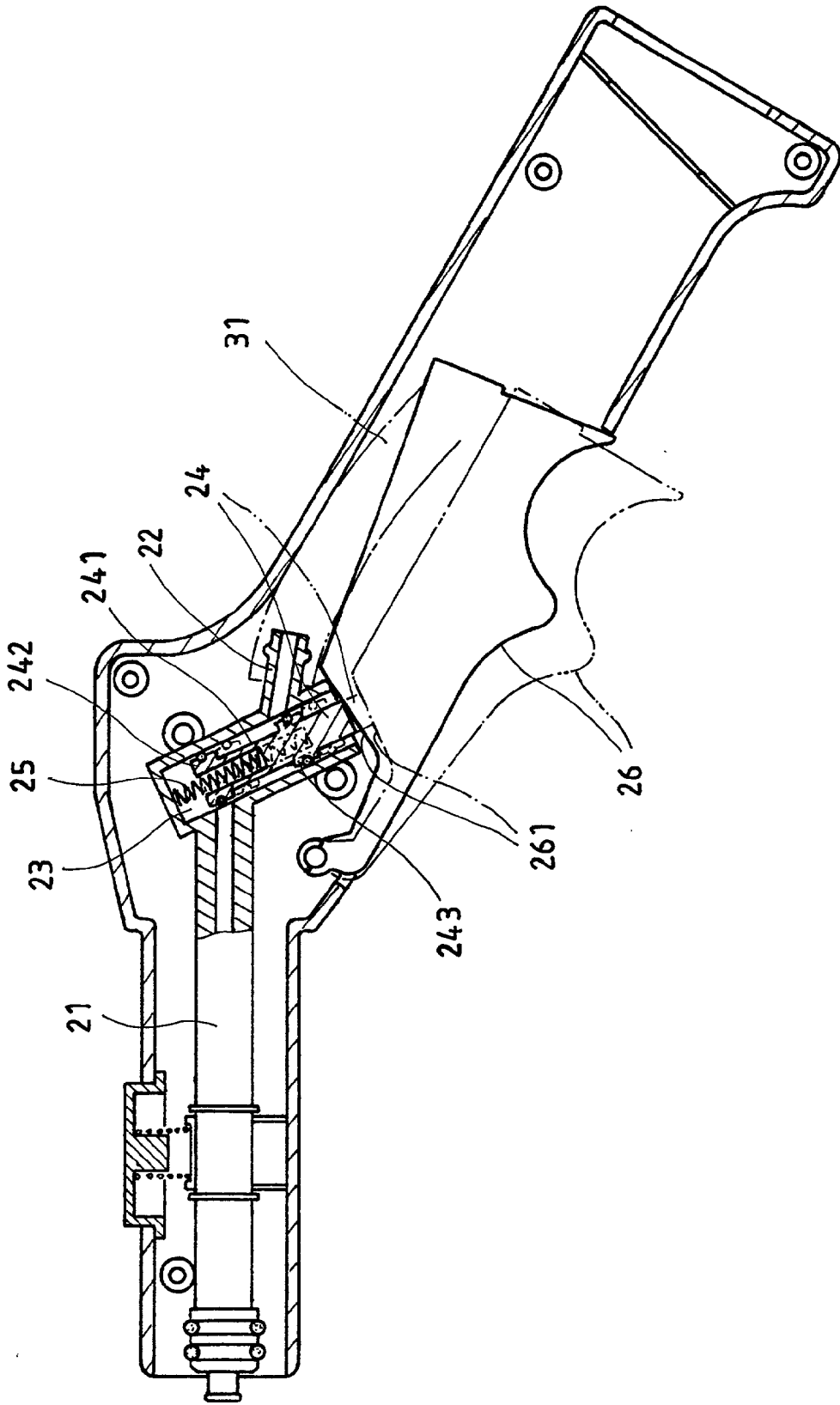


FIG. 4

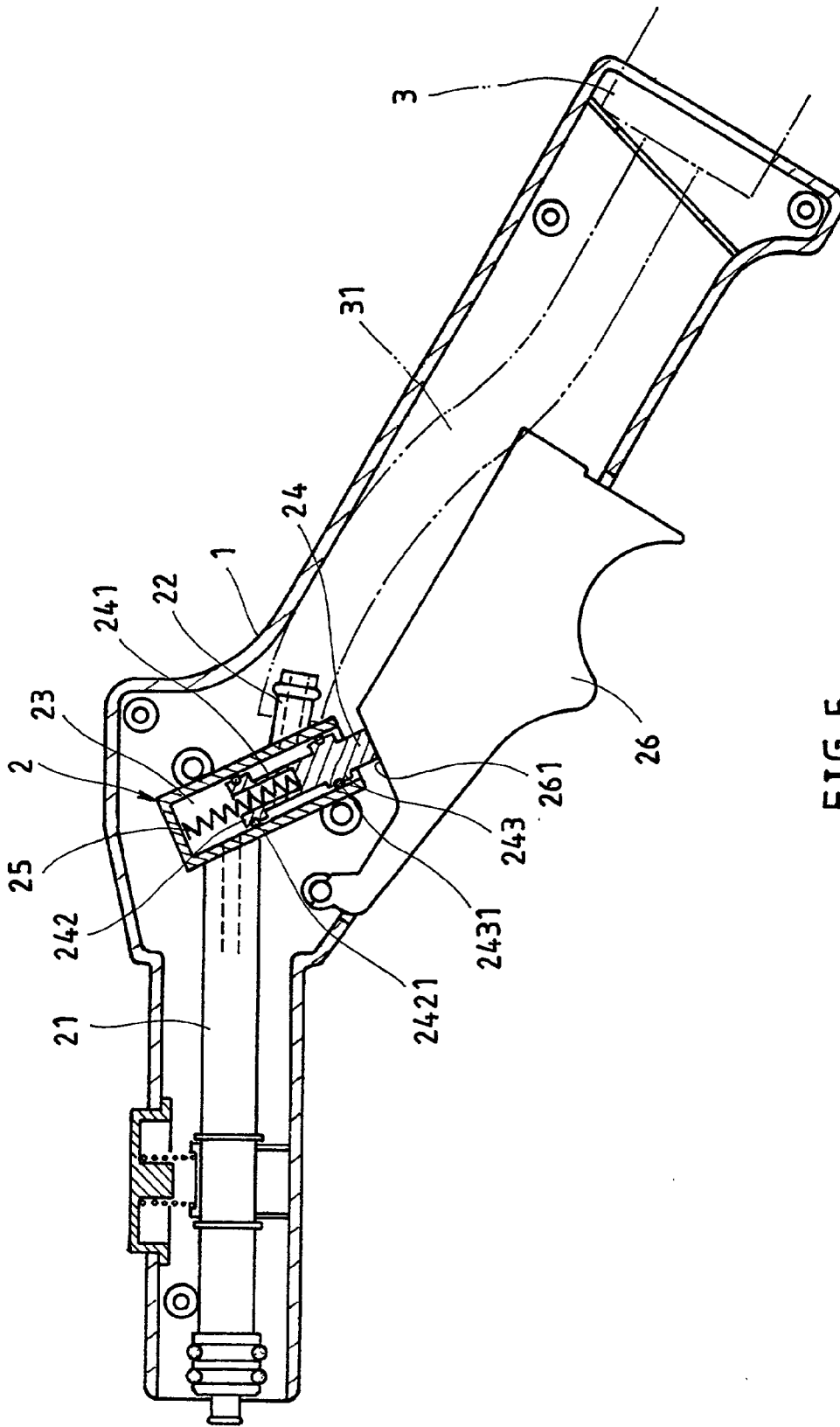


FIG. 5

STEAM OUTPUT CONTROL STRUCTURE FOR STEAM CLEANER

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a steam cleaner, and more particularly, to a steam output control structure for steam cleaner that uses a spring member and a control knob to control the position of a control rod, to further close/open the steam passage.

[0002] Various steam cleaners have been disclosed for home use, and have appeared on the market. These steam cleaners commonly comprise a steam chamber adapted to heat water into steam, a steam hose for output of steam. During operation, steam is directly guided out of the steam hose for application. When turning off the electric heater in the steam chamber, residual steam still continuously escapes out of the steam chamber, and water drops tend to be produced at the spout of the steam hose to wet the floor or carpet.

SUMMARY OF THE INVENTION

[0003] The present invention has been accomplished to provide a steam output control structure for steam cleaner, which eliminates the aforesaid problem. It is the main object of the present invention to provide a steam output control structure for steam cleaner, which can easily be operated to stop the output of steam during operation of the steam cleaner. According to the present invention, the steam output control structure comprises a hose extended from the housing of a steam cleaner and having a grip at the end, a control valve mounted in the grip for output of steam, a heat-resisting high-tension tube connected between the control valve and the steam output port of the steam cleaner, the control valve having a spout for steam output and a valve rod supported on a spring member and adapted to close the steam passage between the spout and the heat-resisting high-tension tube, and a control knob pivoted to the grip and adapted to open the valve rod for letting steam pass from the heat-resisting high-tension tube to the spout.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] FIG. 1 is an elevational view of a steam cleaner constructed according to the present invention.

[0005] FIG. 2 is a sectional view showing the arrangement of the steam output control structure in the steam cleaner according to the present invention.

[0006] FIG. 3 is an exploded view of a part of the steam output control structure, showing the structure of the grip and the control valve according to the present invention.

[0007] FIG. 4 is a schematic drawing showing the action of the control knob and the control valve according to the present invention.

[0008] FIG. 5 is a sectional view of a part of the present invention, showing the control valve positioned in the grip, the push portion of the control knob stopped at the bottom end of the valve rod.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009] Referring to FIGS. from 1 through 5, a steam cleaner 4 is shown having a hose 3 extended from the front side of the housing thereof. The hose 3 has a grip 1 at the remote end (the end remote from the housing of the steam

cleaner 4). A control valve 2 is installed in the grip 1, having one end terminating in a spout 21 and the other end terminating in a steam inlet pipe 22, which is connected to one end of a heat-resisting high-tension tube 31. The heat-resisting high-tension tube 31 is inserted through the hose 3 and connected to the steam outlet pipe 42 of the steam chamber 41 of the steam cleaner 4. The control valve 2 has a valve hole 23 extended to the bottom side thereof and disposed in fluid communication with the spout 21 and the steam inlet pipe 22. The valve hole 23 receives a spring 25, and a valve rod 24 supported on the spring 25. The valve rod 24 has an expanded top end 242, and expanded bottom end 243, and a neck 241 connected between the expanded top end 242 and the expanded bottom end 243. Two seal rings 2421 and 2431 are respectively mounted on the expanded top end 242 and expanded bottom end 243 and disposed in close contact with the peripheral wall of the valve hole 23 of the control valve 2 to seal the gap between the control valve 2 and the valve rod 24. A control knob 26 is pivoted to the grip 1, having a push portion 261 disposed in contact with one end of the valve rod 24 remote from the spring 25.

[0010] When pressing the control knob 26 during the operation of the steam cleaner 4, the push portion 261 is forced to move the valve rod 24 upwards in the valve hole 23 against the spring 25, enabling steam to pass from the steam inlet pipe 22 to the spout 21 through the space inside the valve hole 23 around the neck 241 of the valve rod 24 for cleaning application. On the contrary, when releasing the control knob 26, the spring 25 immediately pushes the valve rod 24 to its original position to close the passage between the steam inlet pipe 22 and the spout 21, and therefore steam is stopped from passing out of the control valve 2.

[0011] It is to be understood that the drawings are designed for purposes of illustration only, and are not intended for use as a definition of the limits and scope of the invention disclosed.

What the invention claimed is:

1. A steam output control structure installed in a steam cleaner having a steam chamber and a steam outlet pipe for output of steam and adapted to control the output of steam from the steam cleaner, comprising a hose extended from a front side of the housing of the steam cleaner, a grip fixedly fastened to one end of said hose remote from the housing of the steam cleaner, a control valve mounted in said grip, a heat-resisting high-tension tube connected between said control valve and the steam outlet pipe of the steam cleaner and adapted to guide steam from the steam outlet pipe of the steam cleaner to said control valve for application, said control valve comprising a spout at a front side thereof, a steam inlet pipe disposed at a rear side thereof and connected to one end of said heat-resisting high-tension tube, a valve hole extended to a bottom side thereof and disposed in fluid communication with said spout and said steam inlet pipe, a valve rod mounted in said valve hole and moved between a first position where said valve rod closes the passage between said spout and said steam inlet pipe and a second position where said valve rod opens the passage between said spout and said steam inlet pipe, and a spring member mounted in said valve hole to hold said valve rod in said first position, and a control knob pivoted to said grip and stopped at one end of said valve rod outside said valve hole and adapted to move said valve rod to said second position against said spring member.

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