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**AN AEROSOL INHALER**

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**Foreign Technology Division  
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AN AEROSOL INHALER

by

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## AN AEROSOL INHALER

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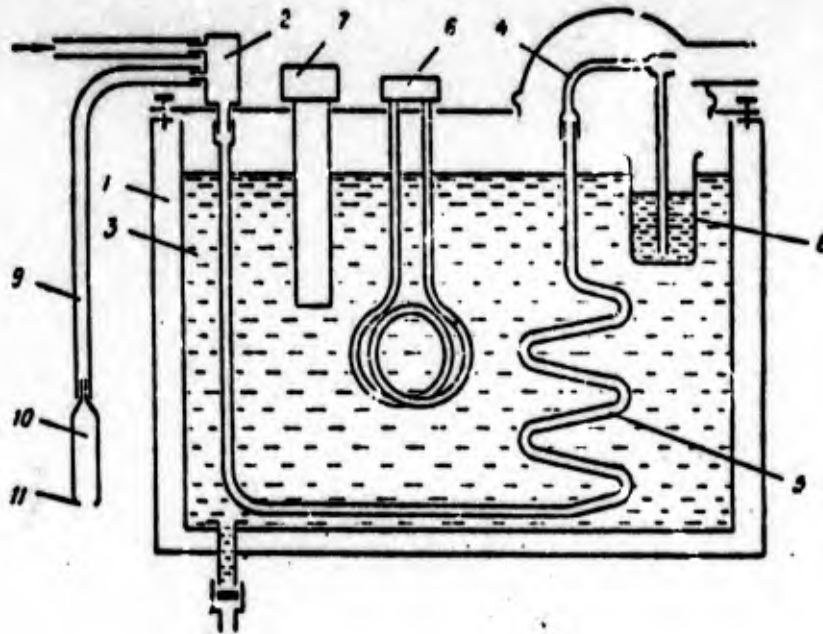
This invention is an item of medical equipment, an aerosol inhaler used for treatment of respiratory tracts.

Familiar aerosol inhalers consist of a housing with a water bath, an inlet fitting, a nozzle, a container with the medicinal solution to be sprayed, and a heating element. These inhalers do not guarantee optimum treatment conditions.

The purpose of this invention is to create an aerosol inhaler which will assure a uniform aerosol at a given controlled temperature, fed only when the patient inhales.

This is done by equipping the inhaler with a heat control (in the water bath), electrically connected to the heating element, and a coil connecting the inlet fitting and the nozzle, and also with a remote-control unit, pneumatically connected to the inlet fitting, in the form of a hollow bushing with an outlet opening.

The drawing shows a schematic cut-away of the proposed aerosol inhaler.



The aerosol inhaler consists of housing 1 with inlet fitting 2. The housing contains water bath 3 and nozzle 4 connected with inlet fitting 2 by means of coil 5 immersed in water bath 3.

Water bath 3 contains electrically-coupled heating element 6 and heat control 7, and also contains container 8 for the medicinal solution to be sprayed. In addition, the device has remote-control unit 9 which is pneumatically connected to inlet fitting 2; this is in the form of hollow bushing 10 with outlet opening 11.

Compressed gas enters inlet fitting 2 and is emitted to the atmosphere through hollowing bushing 10 and outlet opening 11 of remote-control unit 9. When the patient closes opening 11 with his finger during inhalation the gas from fitting 2 enters coil 5 in which it is heated on its way to nozzle 4. The heat carrier is the water in water bath 3 in which coil 5 is immersed. In nozzle 4 the gas sucks the medicinal solution from container 8. The solution is heated by the water in which container 8 is immersed. The heated aerosol thus obtained is fed as the patient inhales. This aerosol is uniform, since the sprayed medicinal solution and the gas are heated to the same temperature, determined by the temperature of the water in water bath 3. The required water temperature is main-

tained by heating element 6 using heat control 7. when the water becomes hotter than the proper controlled temperature, control 7 turns off heating element 6, and when the water cools down it turns it on.

#### OBJECT OF THE INVENTION

This aerosol inhaler, consisting of a housing with a water bath, an inlet fitting, a nozzle, a container with the medicinal solution to be sprayed, and a heating element, *is distinguished by the fact that*, to produce a uniform aerosol at a given controlled temperature, fed only when the patient inhales, it is equipped with a heat control (in the water bath), electrically connected to the heating element, and a coil connecting the inlet fitting and the nozzle, and also with a remote-control unit, pneumatically connected to the inlet fitting, in the form of a hollow bushing with an outlet opening.