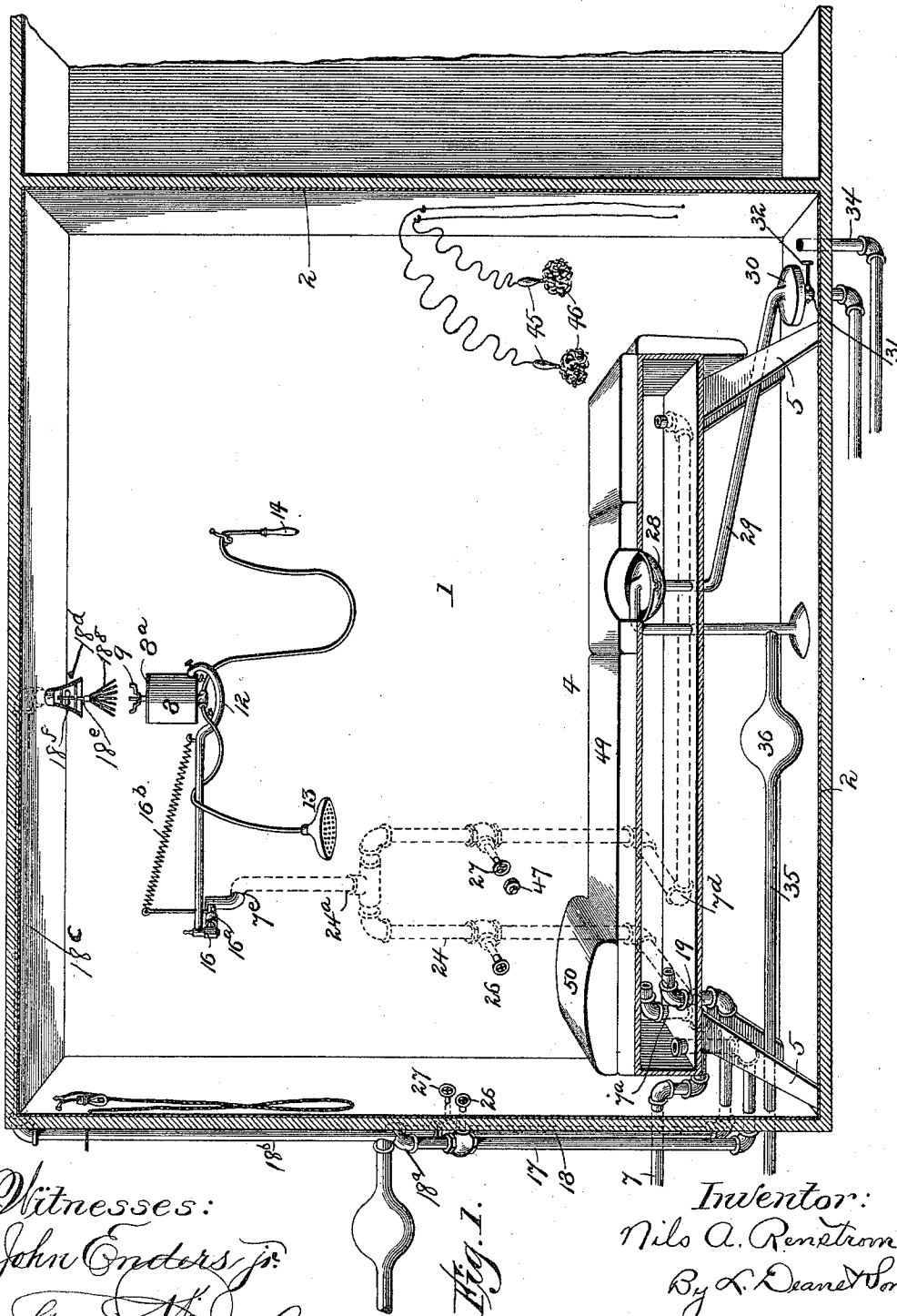


N. A. RENSTROM.
HYGIENE APPARATUS.

No. 585,344.

Patented June 29, 1897.



Witnesses:
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Edward Mearns.

Fig. 1.

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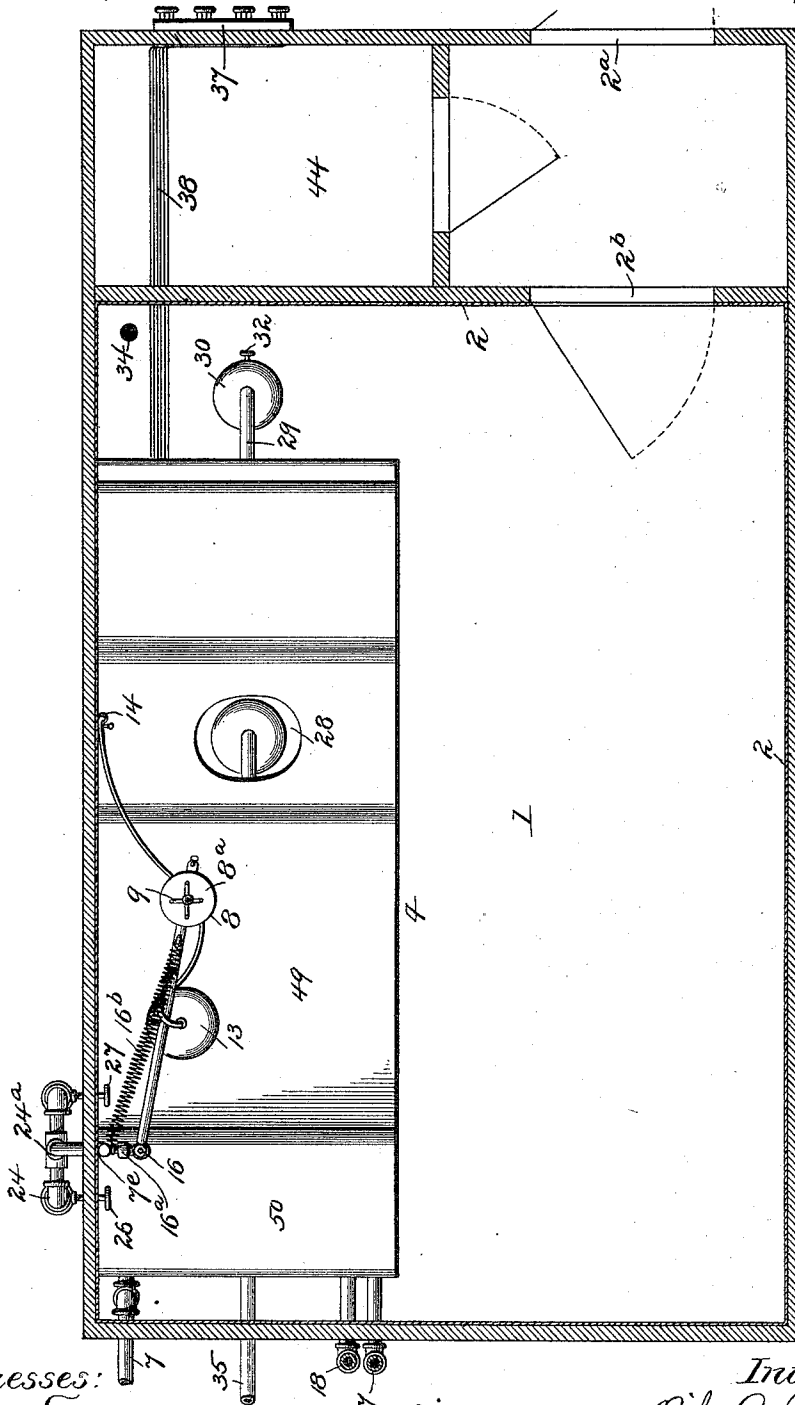
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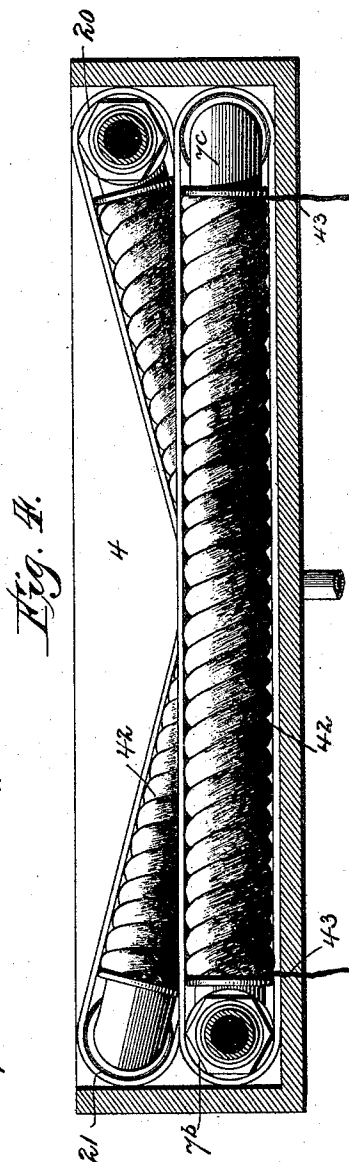
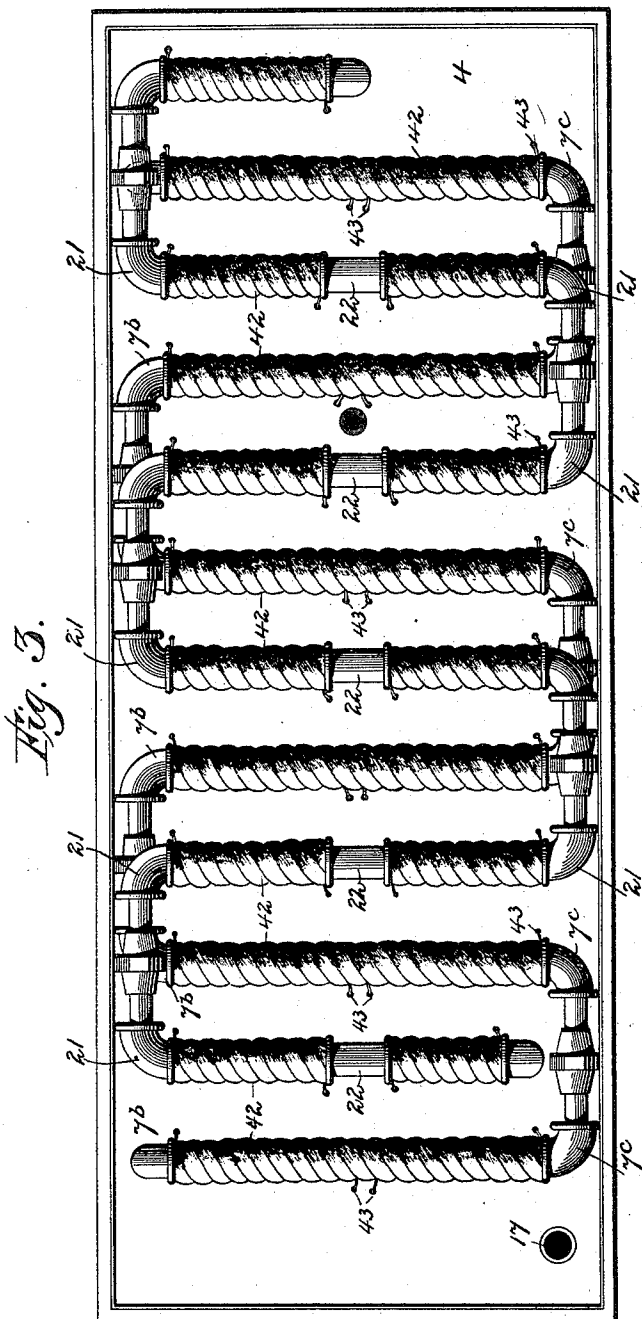
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N. A. RENSTROM.
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No. 585,344.

Patented June 29, 1897.



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(No Model.)

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N. A. RENSTROM.
HYGIENE APPARATUS.

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Fig. 5.

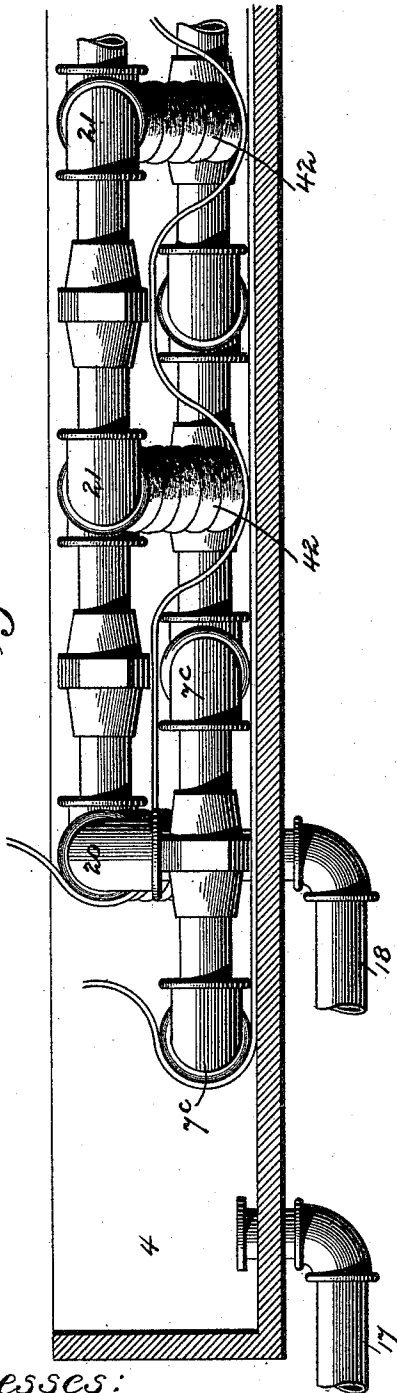


Fig. 7.

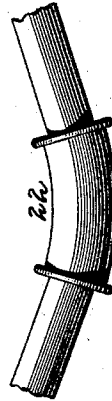
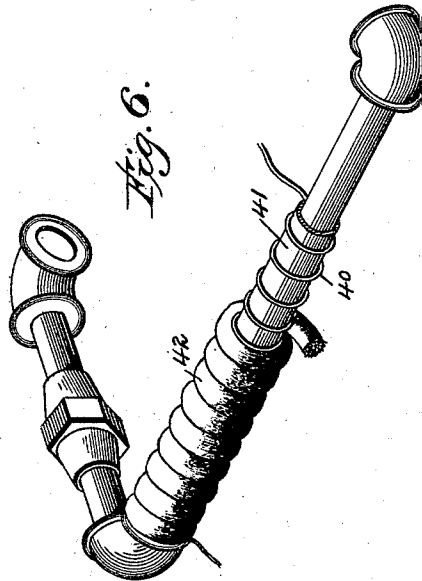


Fig. 6.



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UNITED STATES PATENT OFFICE.

NILS A. RENSTROM, OF OMAHA, NEBRASKA.

HYGIENE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 585,344, dated June 29, 1897.

Application filed May 8, 1896. Serial No. 590,694. (No model.)

To all whom it may concern:

Be it known that I, NILS A. RENSTROM, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Hygiene Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to hygienic apparatus for administering mist or vapor and electric baths and for internal purification, and also for ventilating, heating, and cooling the cabinets in which the baths are given as may be desired; and its object is to provide an improved construction of such apparatus which shall possess superior results with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional view showing the interior in perspective of an apparatus constructed in accordance with my invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a detail plan section, on an enlarged scale, of the pipes in the couch. Fig. 4 is an elevation of the same. Fig. 5 is a detail longitudinal section on an enlarged scale. Fig. 6 is a detail perspective view. Fig. 7 is a detail elevation.

In the said drawings the reference-numeral 1 designates a cabinet rectangular in shape and provided with a lining 2 of zinc and provided with doors 2^a and 2^b, (see Fig. 2), by which access may be had to the interior. The cabinet is preferably so constructed that it may be readily taken apart for transportation. Located in the cabinet is a lounge 4, comprising a top and bottom and end and side walls and supported by legs 5. In the said top is an opening for the evacuation of the person occupying the lounge or couch and provided with a receptacle, hereinafter described, for urine and fecal matter, the top of which is fastened to the top board of the lounge.

The numeral 7 designates a water-pipe extending from any suitable source of supply

under pressure and projecting through the cabinet-wall to the interior of the cabinet and through the bottom of the lounge at 7^a to the interior thereof, going across the lounge on the bottom thereof, as shown in Fig. 3, from 7^b to 7^c and from 7^c to 7^d, and so on, to the foot of the lounge, (the bends being made with ninety-degree L's and the connections with unions and nipples, as seen in Fig. 4,) where it projects through the bottom of the lounge and extends to bend 7^d, Fig. 1, and from thence through inside casing of the cabinet to and between the inside casing and outside covering to 7^e, where it again enters the cabinet and extends to and connects with the head 8, which is provided with a lid 8^a, through the center of which extends a pipe provided with a revolving sprayer 9, which is rotated by the force of the water, causing the latter to rise in the form of mist and fall upon the patient. The head is at its lower end provided with a shower device 12, which also connects with the water-pipe and is provided with stop-cocks, enabling the use of water alone from the pipe or medicated water from the head. It is also provided with a spraying device 13 and with a pipe provided with a syringe 14 for giving an injection. All the pipes are provided with stop-cocks within easy reach of the attendant or patient by means of which the supply may be cut off or regulated.

The numeral 16 designates a swivel-joint enabling the head to be turned sidewise, and with a similar joint 16^a for letting it down when pouring fluid into the head. The numeral 16^b designates a spring for holding the head up in place.

The numeral 17 designates a cold-air pipe extending from the inside of the cabinet to the space between the top and bottom of the lounge for cooling the cabinet.

The numeral 18 designates an air-pipe extending from the outside of the cabinet through the bottom of the lounge at 19 to the pipe immediately underneath the top and at the side of the lounge (indicated at 20, Fig. 4) and extending down into a forty-five-degree L (see Fig. 4) at the bottom and center of the lounge between the water-pipes shown in Fig. 1. From the said L it extends to the pipe underneath the top on the other side at

21, then from 21 to 22 and from 22 to 21, and so on to the foot of the lounge, as shown in Fig. 3, the bends at the upper ends 21 being ninety-degree L's and the bends at the center 22 forty-five-degree L's, as shown in Fig. 4. The connections at the ends are made with unions and nipples. The air and water pipes may run from head to foot, as well as from side to side of the lounge.

10 The numeral 24, Fig. 1, designates a cold-water pipe extending from water-pipe 7 and connecting with the hot-water pipe 24^a for cooling the water.

The air-pipes 17 and 18 are connected at 15 their upper ends by a branch pipe 18^a, with which is connected a vertical pipe 18^b, provided at its upper end with a horizontal pipe 18^c. This latter pipe extends into the cabinet and is provided with a bell 18^d, located 20 immediately above the head 8, provided with a rotatable shaft 18^e, having spiral wings 18^f and at its lower end provided with fan-blades 18^g. This is used as a ventilating device, the air passing to the bell and, acting on the spiral wings, will rotate the shaft and fans, causing a circulation of air to be kept up in the cabinet. When the spraying device is in use, the fans will also tend to spread the mist or spray throughout the cabinet and cause it to 30 be widely distributed therein.

The pipes above mentioned are made of metal with the exception of the syringe and spraying-pipes, which are made of rubber. The water and air pipes are provided with 35 stop-cocks 26 and 27, extending into the cabinet, so as to be within reach of the patient.

The fecal receptacle 28, before referred to, is provided with a pipe 29, extending below the couch to a sewer or drain for carrying 40 away the contents of the receptacle.

The numeral 30 designates a glass receptacle for receiving evacuations and enabling the same to be inspected, being provided with a pipe 31, the said pipe being provided with 45 a stop-cock 32 and is connected with the free end of the fecal receptacle and extends to a sewer or drain.

The numeral 34 designates a pipe for carrying away water from the cabinet. A rubber pipe 35 extends outside of the cabinet for drawing off foul air by means of an electric fan placed in the hall 36.

At one end of the cabinet and outside thereof is a switchboard 37, (see Fig. 2,) connected 55 with an electric battery or dynamo. Also connected with the switchboard are insulated conducting-wires 38. These wires extend through the bottom of the lounge and connect with the wires 40, wound upon the air and water 60 pipes inside the lounge, which are naked wires, as shown in Fig. 6, with asbestos paper interposed between them and the pipes, and asbestos thread is wound in between the wires, insulating them from each other. One of the 65 pipes is shown uncovered in Fig. 6, the numeral 41 designating the asbestos paper and 42 the asbestos thread. Each pipe is wound in

two sections, the dividing-line of the sections being at the center of the straight pipes and at the forty-five-degree L's of the bent pipes. 70 The ends of the wires are connected with insulated wires extending through the bottom of the lounge at points 43 on slats under the bottom of the foot end of the lounge where they gather in a bunch and extend into the wardrobe 44 and spread out on the end wall inside 75 and are connected with the switchboard, a hole being cut through the wall the size of the switchboard, which hole, after the connections are made, is covered on the inside with boards 80 for protection. The object of sending the electric current around the pipes is to heat them and the water flowing inside and the fresh air blowing through the pipes into the cabinet. 85

The numeral 45 designates electrodes connected with the switchboard provided with sponges 46, whereby a current of electricity may be sent through the patient.

An electric button 47, within easy reach of 90 the patient, is connected with a suitable alarm for calling an attendant.

An electric lamp for lighting the cabinet is located in the latter.

The numeral 49 designates a mattress made 95 in four sections with a pillow 50 secured thereto, and when an injection is administered to a patient the sections are folded over upon each other to elevate the hips.

A waterproof covering is placed upon the 100 lounge and formed with a hole or aperture, the edges of which are secured to the hole in the top board communicating with the fecal receptacle. Said covering laps over the sides and ends of the lounge, fitting tight to the 105 outside of the side and end boards, so as to protect the electric wires inside from water.

A layer of asbestos cloth or paper should be placed on the bottom of the lounge and between the water-pipes and air-pipes and on 110 top of the pipes.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a hygiene apparatus of the character 115 described, the combination with the cabinet and the hollow lounge or support located therein, the water-pipe extending into said lounge and crossing the same from side to side and then extending upwardly, and the rotatable spraying device connected therewith, of 120 the air-bell located above said spraying device and connected with an air-pipe, the rotatable shaft, the spiral wings and the fan-blades, substantially as described. 125

2. In a hygiene device of the character described, the combination with the cabinet and the hollow lounge or body-support located therein, of the water-pipe passing through said lounge and then extended upwardly and provided with a spraying and shower device, the 130 connected air-pipes one of which passes into and communicates with the lounge while the other extends therethrough, the vertical pipe

connected with said air-pipes, the horizontal pipe connected therewith, the bell located above the spraying and shower device, the rotatable shaft provided with spiral wings and the fan-blades, substantially as specified.

5 3. In a hygiene device of the character described, the combination with the cabinet, the lounge or body-support connected therewith and the rotatable spraying device located in
10 the upper part of the cabinet, of the air-bell located above said spraying device and connected with an air-pipe, the rotatable shaft, the spiral wings and the fan-blades, substantially as specified.

15 4. In a hygiene apparatus of the character described, the combination with the cabinet, the hollow lounge or body-support connected therewith, the water-pipe passing through

said lounge and then extended upwardly and provided with a spraying and shower device 20 and the connected air-pipes, one of which passes into and communicates with the lounge while the other extends therethrough, of the mattress, the fecal receptacle communicating with the lounge and mattress, the draw-off 25 pipe, the glass receptacle connected therewith, the pipe connected with said receptacle, and the suction-pipes connected with said fecal receptacle, substantially as described.

In testimony whereof I affix my signature 30 in presence of two witnesses.

NILS A. RENSTROM.

Witnesses:

N. P. FEIL,

F. W. MASTERS.