

No. 763,981.

PATENTED JULY 5, 1904.

W. HUPCHEN.

MEANS FOR REMOVING PODGUM, FUR, OR HAIR FROM WATER.

APPLICATION FILED MAR. 16, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

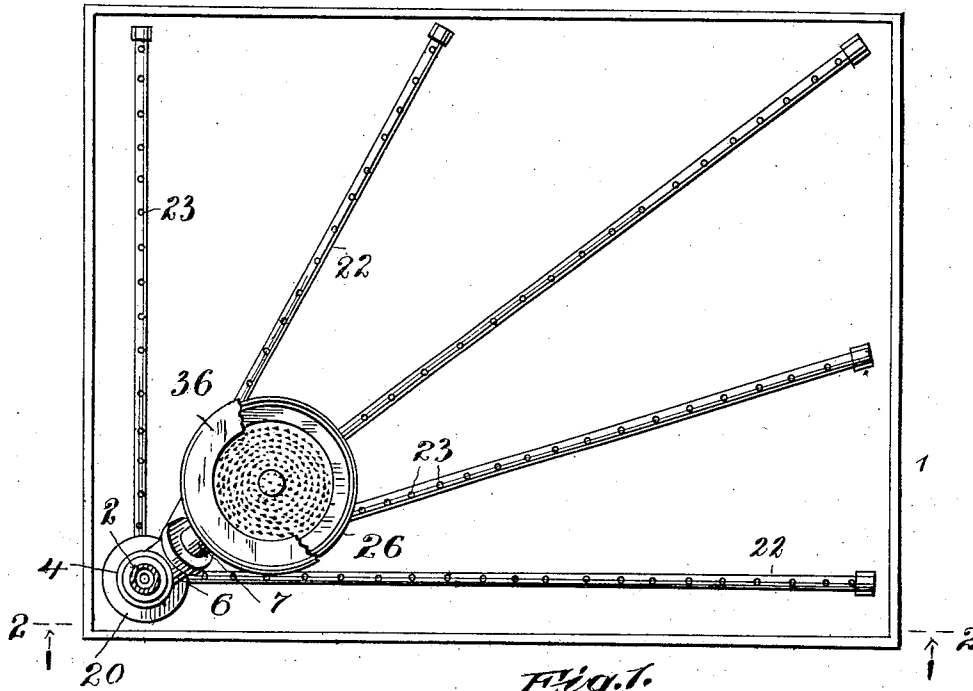


Fig. 1.

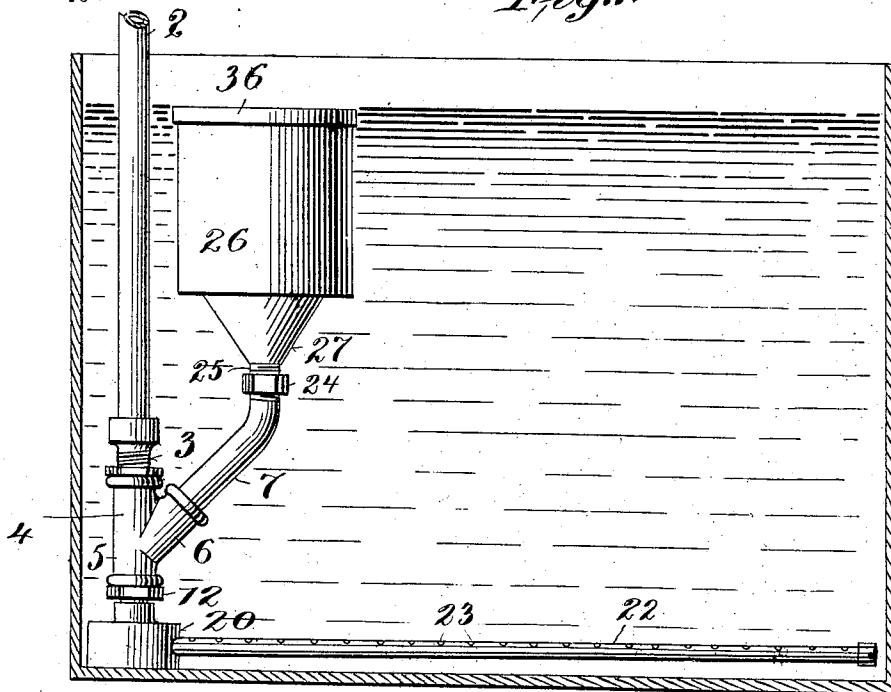


Fig. 2.

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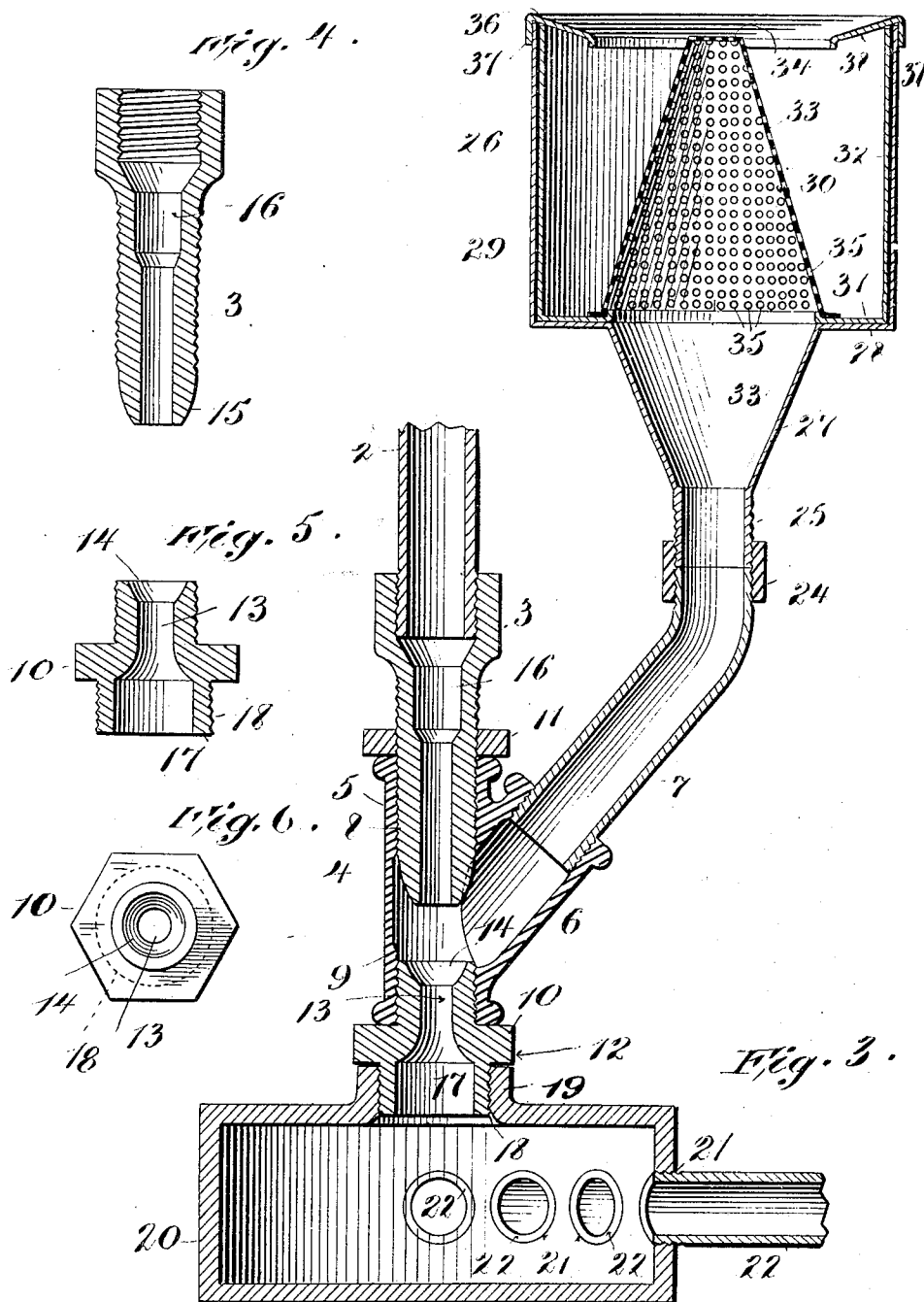
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM HUPCHEN, OF NEW YORK, N. Y., ASSIGNOR OF FIFTY-HUNDREDTHS TO SAMUEL MUNDHEIM, OF NEW YORK, N. Y.

MEANS FOR REMOVING PODGUM FUR OR HAIR FROM WATER.

SPECIFICATION forming part of Letters Patent No. 763,981, dated July 5, 1904.

Application filed March 16, 1903. Serial No. 147,930. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HUPCHEN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Means for Removing Podgum Fur or Hair from Water, of which the following is a specification.

In the process of making felt hats the mat is frequently plunged into boiling water immediately under a set of rolls and then passed into the rolls, where it is subject to their action for some minutes. The mat is then removed from the rolls and again plunged into this water and again passed into the said rolls, and this process is continued for some time until the mat has thoroughly felted. If any podgum fur or hair remains in the water and comes in contact with the mat, it will not felt properly, and so is injured or ruined. To prevent this, it is the custom to remove the water at frequent intervals and clean the tank, a very difficult thing to do because of the machinery immediately above it.

The object of my invention is to provide a means that will not only heat the water and maintain it at the proper temperature, but will also keep it free from the objectionable fur and hair, and this I accomplish by utilizing the same principles as those utilized in my invention shown, described, and claimed in my application filed March 13, 1903, and bearing Serial No. 147,929, in which the steam-pipe is passed through the strainer and funnel and is concentric with their axis.

In the embodiment of my invention set forth in this application I provide a tank with a steam-pipe extending to its bottom and parallel therewith, and at one side thereof is a strainer, which is connected at its lower end with the steam-pipe, and its upper is on a level with the surface of the water in the tank by which means water is drawn into the steam and passed back into the tank in a heated condition while podgum fur and hair is separated out.

For a more exact description of my invention reference is to be had to the accompa-

nying drawings, forming a part thereof, in which—

Figure 1 is a plan view of an embodiment of my invention applied to a tank. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1 and looking in the direction of the arrows. Fig. 3 is an enlarged sectional view of my improved separator and heater; and Figs. 4, 5, and 6 are detailed views.

Similar reference characters designate similar parts throughout the various views.

The tank 1 may be of any suitable shape which may be placed under rolls, (not shown,) although a rectangular tank is generally best suited for the purpose, and a steam-pipe 2 extends vertically to the nozzle 3 of an inspirator 4. The inspirator 4 in addition to the nozzle 3 comprises a casing 5, which has a projection 6 at one side, to which a pipe 7 is secured, and is screw-threaded at 8 and 9 for the nozzles 3 and 10, which are screw-threaded to engage therewith. A jam-nut 11 determines the position of the nozzle 3 with regard to the casing 5, and the nozzle 10 is preferably provided with a hexagonal collar 12, by means of which it is secured in place. The bore 13 of the nozzle 10 is flared at its upper end 14 to correspond with the reduced end 15 of the nozzle 3, and the bore 16 of the nozzle is sufficiently reduced to form a jet of steam when in use, as is usual in inspirators of this class. The lower end of the bore 13 is enlarged to the flange 17, which is screw-threaded at 18 to engage the neck 19 of the distributor 20. The distributor 20 comprises a hollow body portion with openings 21 and radial pipes 22 passing therefrom. These pipes are closed at their outer ends and provided with perforations 23, through which the water flows from inspirator into the tank. It is obvious that the pipes 22 may be left open, if desired, in which case the perforations may be dispensed with. However, for the particular purpose of this separator and heater I find that the best results are obtained in the manner first mentioned.

To the upper end of the pipe 7 is secured a coupling 24, which also engages the threads

on a nipple 25 on the bottom of the funnel 26. The funnel 26 is provided with a conical bottom 27, which has a horizontal flange 28, which is united to a vertical and upwardly-disposed wall 29. A strainer 30 is inserted in the funnel 26, with walls 31 and 32, that fit against the flange 28 and walls 29, respectively, and has an upwardly and inwardly disposed conical bottom 33, with a flat top 34 and perforations 35. A cap 36 with a vertical flange 37 and a downwardly and inwardly disposed flange 38 surrounds the upper edge of the walls 29 and may be adjusted within the limits of the length of the flange 37 to raise or lower the upper surface of the liquid in the tank. This tank is also provided with a source of liquid-supply and a drain, neither of which is shown, as they form not part of the invention herein described and may be as shown in my other application above mentioned.

Assuming the tank 1 to be filled with cold water and the apparatus to be in the condition described, the operation is as follows: Steam is turned into the pipe 2, which passes through the inspirator 4, distributor 20, and into the tank through the pipes 22. As soon as sufficient steam has condensed, water flows into the strainer 30 and funnel 26 and from thence through the pipe 7 to the inspirator 4, where it joins the steam and reenters the tank through the pipes 22 in a heated condition and soon is at the boiling-point, and podgum fur and hair is deposited against the strainer, where it is accessible and may readily be removed without expense or delay. The water may be used indefinitely without cleaning the tanks unless dyed mats are used, in which case the water must be changed whenever the mats of a different color are worked in the machine above the tank. This practice which my invention allows is much better than the one in common

use, which is to clean and empty the tank every day or oftener to get rid of the podgum fur, not only because this expense is entirely avoided, but also because the water if free from this fur improves with use and enables the felting of the mat to take place with greater rapidity.

While I have shown and described a tank with one separator and heater, it is obvious that others may be employed or that they may be placed in any convenient position instead of the corner or that any other changes may be made either in the location or proportion of parts, and I regard all such changes as within the scope of my invention.

Having thus described one embodiment of my invention, what I claim is—

1. In a podgum fur and hair removing apparatus, a funnel with a strainer therein, a steam-pipe external thereto, and an inspirator connecting said steam-pipe and funnel.

2. In a podgum fur and hair removing apparatus, a strainer, an inspirator, a distributor, and a perforated pipe connected to said distributor.

3. In a podgum fur and hair removing apparatus, a funnel, an inspirator, a steam-pipe, and means for connecting these parts and means on said funnel for regulating the level of the surface of the water.

4. In a podgum fur and hair removing apparatus, a funnel, straining and heating means connected therewith and a cap on said funnel for regulating and determining the water level.

Signed in the city, county, and State of New York this 12th day of March, 1903.

WILLIAM HUPCHEN.

Witnesses:

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O. E. EDWARDS, Jr.