A. H. HARTMAN.

DRINKING FOUNTAIN.

APPLICATION FILED APR. 9, 1910.

1,077,707. Patented Nov. 4, 1913.

Fig. 1.

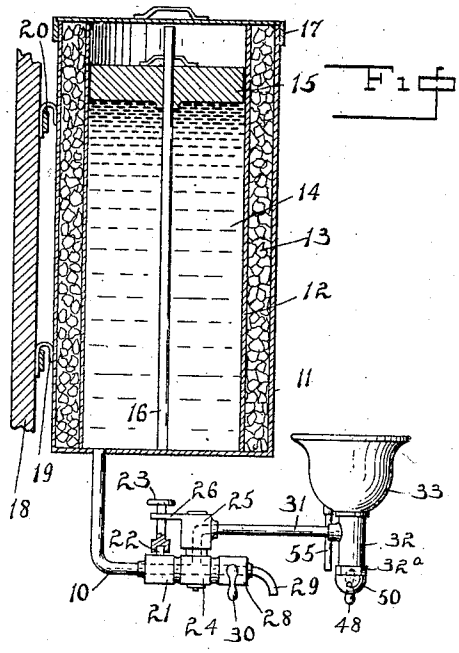


Fig. 2.

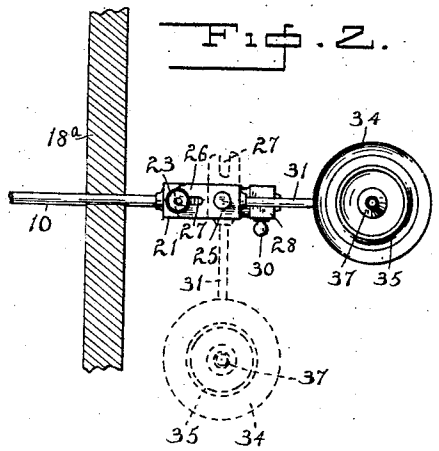


Fig. 3.

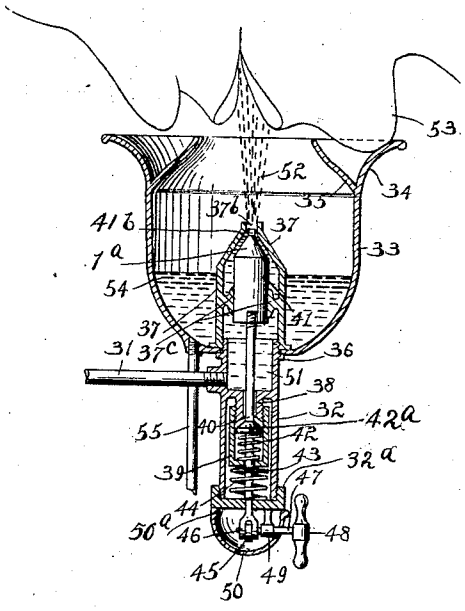
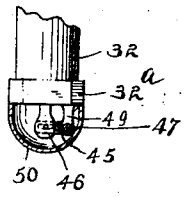


Fig. 4.



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DRINKING-FOUNTAIN.

1,077,707. Specification of Letters Patent. Patented Nov. 4, 1913.

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To all whom it may concern:

Be it known that I, AUGUST H. HARTMAN, a citizen of the United States, residing at Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Drinking-Fountains, of which the following is a specification.

My invention relates to drinking fountains and has particular reference to devices of this class which are designed to prevent the contact of the mouth of the user with the water container, and therefore especially adapted for use in public places.

It is a matter of common knowledge that disease germs may be transmitted from one person to another through the agency of the ordinary drinking cup in frequent use in railway stations and other public places, and the necessity of safeguarding the health of the people by eliminating this chance of contamination from public drinking receptacles has led to the passage of certain restrictive laws, some States going to the extent of forbidding the use of public drinking utensils on passenger trains.

The paramount object of the improvements which constitute the subject matter of this application for patent are:—to furnish a drinking fountain that will be sanitary in every respect, being so arranged that it will be practically impossible for the mouth of the user to come in contact with the orifice from which the water issues.

Other objects of my invention are, to provide a simple and efficient apparatus for the purpose in view; to produce a device for the purpose stated that can be adapted to use with the ordinary water cooler, or that may be attached to the supply pipe of a water system such as is in common use in the larger towns and cities; and to furnish means for preventing the entrance of dust or germs into the water pipes by forming closures for the outlets.

Further objects are to provide a device that will discharge the water in a jet or stream of moderate force that can be received directly into the mouth when placed in proper position over the nozzle, and to furnish means whereby it will be impossible for the user to reach the mouth of the discharge pipe with his lips, thus insuring a sanitary condition of the parts over which the water flows.

A further object of my invention is to provide a sanitary water reservoir provided with separate receptacles for the water and ice, and to furnish means in connection with such a water reservoir or tank whereby the pressure of the water may be increased in order to produce the desired flow in the drinking appliance connected therewith.

Other objects are to furnish a regulating valve to control the flow to the outlet orifice; to arrange the nozzle or outlet so that it can be turned at the point of its attachment to the supply pipe, thus permitting it to be placed out of the way when the particular situation in which it is installed makes it desirable, and to lock the nozzle with its protective cup in operative position.

It is also advantageous at times to be able to draw the water into an individual cup or other utensil and for this purpose I have combined my appliance with an ordinary faucet.

I accomplish the desired results above enumerated and others of minor importance by employing the apparatus illustrated in the accompanying drawing, which forms a part of this application, and in which the details of construction of my invention are disclosed in the following views:—

Figure 1 is a view, partly in elevation and partly in section, of a water tank or cooler of novel construction, to which is attached my improved sanitary drinking nozzle and protective cup; Fig. 2 is a top plan view of the fountain attachment showing the manner of connecting it to a water supply pipe; Fig. 3 is an enlarged view showing the drinking or discharge nozzle and connections in vertical section, and Fig. 4 is a fragmentary view showing the valve operating mechanism from another direction.

Referring to the details of construction the numeral 10 indicates a water pipe which may be connected directly to the supply pipe of a water system, or attached to a reservoir or tank, as shown in Fig. 1. The said tank comprises a cylindrical outer wall or casing 11, and an inner wall 12, which is spaced from the outer casing, leaving an interval, which constitutes an annular compartment, for the reception of the ice indicated by 13. The interior of the casing 12 is filled with the drinking water, which is thus kept entirely separate from the ice thus avoiding contamination from this source. Extending vertically from the bottom of the tank or cooler within the interior or water compart-

ment is a guide rod 16, which extends to the cover 17 of the tank, and upon this rod is slidably mounted a piston head 15, which is preferably made of metal or other heavy material. This piston fits the guide rod and the interior of the casing 12 so as to make a tight joint and the purpose of this weighted piston is to increase the water pressure in the tank. The cooler thus constructed may be supported in any convenient manner. I have shown it removably attached to a wall 18 by means of hooks 19 which engage suitable fastenings or sockets 20 secured to the face of the said wall. The tank outlet or discharge pipe 10 communicates with the water in the chamber 12, and its lower end is bent in a horizontal direction and has a threaded connection with a valve 21 which regulates the flow of water. The stem 22 of the valve has a squared projecting end to which is applied a wrench or operating handle 23. The pipe 10 terminates in a faucet 28 provided with a spout 29 and a handle 30. The said pipe 10 is furnished with a branch 31 which has a jointed or swivel connection with the pipe 10 at 24. A block 25 is mounted on the pipe 31 above its joint and projecting rearwardly from this block is an arm 26 having a marginal slot or notch 27 which is adapted to engage the handle or wrench 23, and when so engaged the pipe 31 is locked in extended or operative position as shown in Figs. 1 and 2, but may be swung around to the position shown in dotted outline, Fig. 2, when the wrench is removed from the stem 22 of the regulating valve. The pipe 31 has threaded connection with a cylindrical casing or barrel 32, which stands vertically and is closed at the lower end by a polygonal cap 32^a. This barrel is surmounted by a cup shaped receptacle 33, having its margin divided to form two diverging flanges 34, 35. The external flange 34 is expanded and curved outwardly while the inner flange 35 is curved in the opposite direction to form a somewhat contracted mouth to the interior of the receptacle. The said cup 33 has an opening in the bottom which fits over the upper end of the barrel 32, where it rests upon a peripheral flange 36, and is secured in place by a cylindrical valve casing or nozzle 37, which has a threaded connection with the upper end of said barrel. A partition extends transversely across the interior of the barrel 32, just below the inlet end of the pipe 31, and has depending therefrom an integral threaded nipple 38, upon which is screwed a packing sleeve 39. Extending vertically through suitable holes in the said sleeve and nipple, is a valve rod or stem 40 which extends upward into the interior of the nozzle 37, and is attached to the lower end of a cylindrical valve 41. Surrounding the said valve rod 40 within the packing sleeve is a spiral spring 42 which bears against a packing ring 42^a surrounding the said rod and adapted to engage a suitable seat in the lower end of the nipple 38 in order to make a tight joint but not interfere with the vertical movement of the valve rod. Attached to the rod 40 below the packing sleeve is a disk 43, and between this disk and the cap 32^a is arranged a coiled spring 44, which tends to press the rod upward and thus hold the valve 41 firmly against its seat. The upper end of this valve is made conical, as indicated at 41^a and terminates in a projection 41^b. The valve casing 37 is tapered to correspond with the form of the valve and is furnished with a contracted outlet 37^b into which the projection 41^b will enter when the valve is closed. In order to support the valve laterally, the inner wall of the casing is furnished with guide lugs 37^c spaced apart sufficiently to allow the free flow of the water through the casing. The lower end of said valve rod 40 is extended beyond the cap 32^a and terminates in a fork 46, to which is pivotally connected a crank arm 45, attached to a rock shaft 47, furnished with a handle 48 and supported in a hanger 49 attached to the cap 32^a. A hemispherical casing 50 hinged at 50^a serves to protect the parts below said cap and give a finished appearance.

The operation of my improved sanitary drinking fountain is very simple and will be readily understood by an unskilled person. The proper connections having been made as above set forth with a suitable water supply, and the valve 21 regulated by means of the handle 23 to give the required force to the jet from the nozzle 37, the water under pressure will enter the chamber 51 and press the valve 41 upward against its seat, thus supplementing the action of the spring 44. To use the fountain, the person who wishes to drink places his mouth just above the cup 33 and directly over the orifice 37^b of the nozzle. He then turns the handle 48 and this depresses the valve 41 and permits the water to escape in a moderate jet through the orifice 37^b and directly into the mouth of the operator, as shown in Fig. 3. As the valve 41 is under spring tension it must be held open until the person using it has satisfied his thirst and when through drinking the valve will close as soon as the handle is released. The division of the cup margin into two diverging flanges is for the purpose of preventing any possibility of bringing the mouth in contact with the nozzle, or the inner contracted margin 35, for if the mouth approaches this part the chin 53 will come in contact with the outer margin 34 and prevent the face from going lower. There will be more or less surplus water and all excess will fall back into the lower part 54 of the cup surround-

ing the valve casing, and be carried off by a drain pipe 55.

Having thus described my invention what I claim as new, is:—

1. In a drinking fountain, in combination with a pipe communicating with a source of water supply and having a valve therein, a valve-controlled discharge nozzle, a pipe connection between said nozzle and the supply pipe, and means connecting said nozzle pipe and the valve in said supply pipe, whereby the nozzle will be locked in operative position.

2. In a drinking fountain, in combination with a pipe communicating with a source of water supply and having a valve therein, an adjustable valve controlled discharge nozzle, a pipe connection between said nozzle and the supply pipe, and means connecting said nozzle pipe and the valve in said supply pipe, whereby the nozzle will be locked against adjustment to inoperative position.

3. In a drinking fountain, in combination with a valve-controlled pipe communicating with a source of water supply, a cup, a valve-controlled chambered nozzle, arranged within said cup, a pipe leading to the chamber in said nozzle, a swivel connection between said nozzle pipe and said supply pipe, and means for locking said nozzle pipe against swivel movements.

4. A drinking fountain, including a water supply pipe, a branch pipe having a swiveled connection with the supply pipe, a regulating valve for the supply pipe, means for locking said branch pipe in extended position, a nozzle attached to said branch, a valve for the nozzle, means for operating said nozzle valve, a cup surrounding said nozzle, and a discharge pipe for the cup.

5. A drinking fountain including a water supply pipe, a valve therefor, a faucet connected with said pipe, a branch pipe having a swiveled connection with the supply pipe, means for locking the branch pipe in extended position, a nozzle attached to the branch pipe, a valve controlling the orifice of said nozzle, a spring for the valve, means for operating said valve, and a cup surrounding the nozzle and extending above the said orifice, said cup having a double margin comprising an outer flaring portion and an inner contracted portion.

6. A drinking fountain comprising a water tank having a double wall, a rod extending vertically in said tank, a piston slidably mounted on said rod, a discharge pipe communicating with the tank, a branch pipe having a jointed connection with the discharge pipe, a nozzle connected with said branch pipe, a valve controlling the orifice of said nozzle, means for operating the said valve, a cup surrounding the nozzle, said cup having a contracted margin extending substantially above the end of the nozzle whereby contact of the lips of a drinker with the nozzle, is prevented.

7. A drinking fountain including a reservoir for water, said reservoir comprising a water compartment and an ice compartment, a gravity-operated piston arranged in the water compartment, a discharge pipe for the reservoir, a valve for said pipe, a branch pipe having a jointed connection with the discharge pipe, a faucet for the discharge pipe, means for locking the branch pipe in one of its positions, a nozzle attached to the branch pipe, a valve controlling the orifice in said nozzle, a cup surrounding said nozzle and having its margin divided into two diverging portions forming concentric flanges, means for operating the nozzle valve and an outlet for the cup.

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

AUGUST H. HARTMAN.

Witnesses:
WILLIAM VALENTINE,
WM. F. WATERBURY.