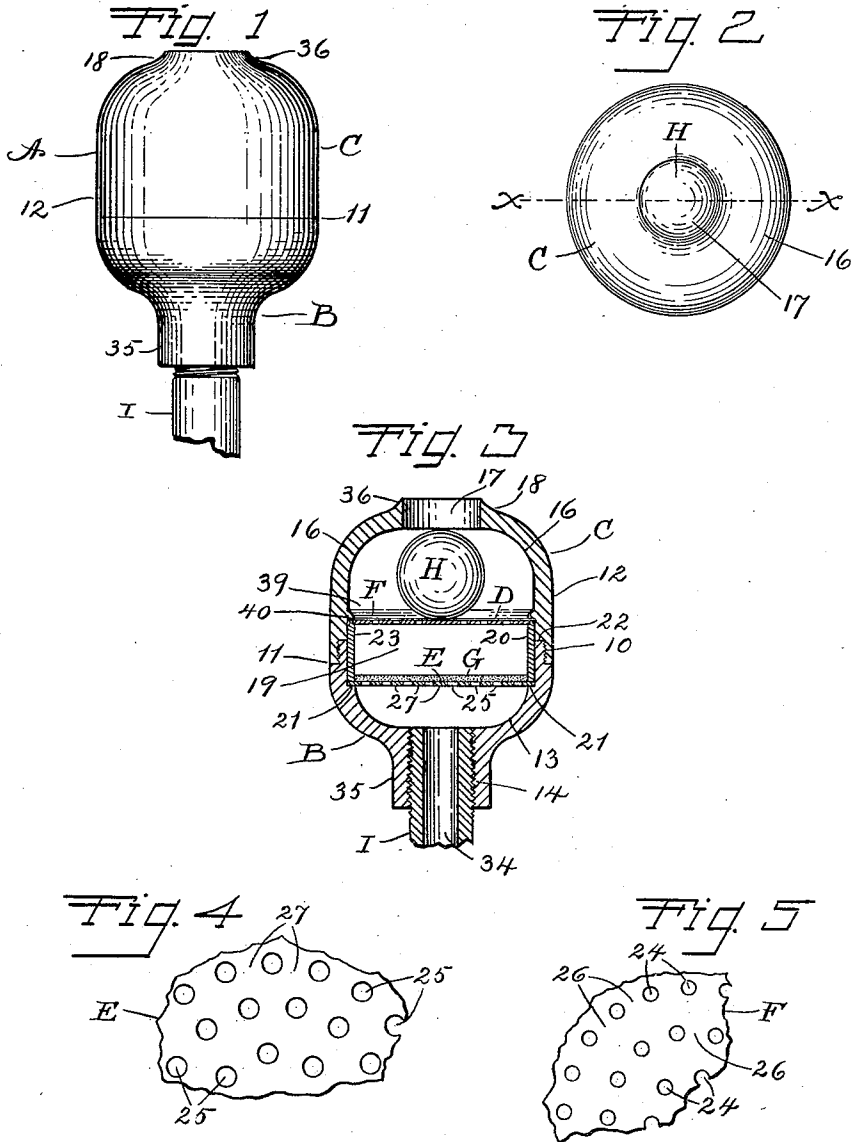


E. BURR.
 SANITARY DRINKING FOUNTAIN.
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1,065,586.

Patented June 24, 1913.



WITNESSES

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ELLSWORTH BURR, OF MIDDLETOWN, CONNECTICUT.

SANITARY DRINKING-FOUNTAIN.

1,065,586.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELLSWORTH BURR, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Sanitary Drinking-Fountains, of which the following is a specification.

My invention relates to improvements in sanitary drinking fountains, and the object of my improvements is simplicity and economy in construction and convenience and efficiency in use, and to produce a device that is sanitary and suitable for public use. In the accompanying drawing—Figure 1 is a side elevation of my improved drinking fountain. Fig. 2 is a plan view of the same. Fig. 3 is a sectional view on the line *x x* of Fig. 2. Fig. 4 is a plan view on an enlarged scale of a part of the bottom baffle plate. Fig. 5 is a similar view of the top baffle plate.

My drinking fountain A comprises a globular shaped structure having a lower body portion B serving as an inlet member, and an upper body portion C serving as an outlet member and joined along an axial plane in any convenient manner, as by a screw thread connection 10 as shown, so as to permit of a flush exterior body wall at the junction 11 of the said two members.

The middle body portion 12 of the structure A is cylindrical both interiorly and exteriorly for an appreciable distance and below the said middle body portion 12 the interior walls 13 of the inlet member B curve inwardly to meet the nipple portion 35 having the bore 14. The said bore 14 is screw threaded to provide means for connection with the supply fixture tip or pipe I. The bore 34 of the supply pipe I constitutes the inlet proper.

Above the middle body portion 12 the interior walls 16 of the outlet member converge, being of oblate spheroidal form, to the outlet passage 17. The extreme upper portion of the outlet member C in line with the outlet passage 17 is extended upwardly in the form of a neck 36 the exterior wall 18 of the said outlet member having the ogee shape, whereby an appreciable length will be provided for the said outlet passage 17 and which is cylindrical in formation, and the outlet proper at the upper end will be raised above the adjacent body portion and at the same time a smooth unbroken forma-

tion will be provided for the exterior wall surface.

The entire structure A is symmetrical and the inlet 34 and outlet 17 are positioned at the axis, and the smooth unbroken surface for the exterior wall is continued from the neck 36 of the outlet member C downward past the junction 11 and over the exterior of the inlet member B to the nipple 35, the middle body portion 12 being enlarged relatively to the inlet and outlet end portions. The outlet 17 is as shown appreciably greater than the inlet proper 34.

The interior space 19 of the body portion 12 as described is cylindrical and the lateral walls thereof are a fit for and suitable to receive and house a baffle member D, which has a cylindrical lateral wall 20 and the lower end of the inclosing wall may terminate in a shoulder 21 as shown suitable for serving as a seat for supporting the said baffle member D.

The baffle member D comprises the cylindrical lateral wall 20 mentioned, which is formed from a suitable length of tubing, and has the lower end bridged by the lower baffle plate E, which is formed of perforated sheet material and which is preferably rigidly secured to the said lower end as by solder. The upper end of the said lateral wall 20 is bridged by the upper baffle plate F which is also made of perforated sheet material, and which is preferably supported loosely on the said upper end so that the same may be readily removed therefrom.

A layer of filtering material G may be housed in the space between the lower and upper baffle plates E and F.

I prefer to have the lateral wall 20 of the baffle member D extend above the inner junction 22 of the inlet and outlet members B and C so that when the outlet member C is removed the upper baffle plate F is accessible and may be readily removed and replaced as desired and also at the same time the upper portion 23 of the lateral wall 20 is exposed and serviceable as a handle for removing and replacing the baffle member D, either with or without the upper baffle plate F.

The inner wall of the outlet member C is provided with an inwardly projecting rim forming a shoulder 40 that is positioned just above the upper baffle plate F suitably to retain the baffle member D engaged with the seat 21.

A ball H of appreciable size rests on the upper baffle plate F and immediately below the outlet 17, which serves as a spreader and the upper hemisphere of which coöperates with the dome-shaped upper interior wall 16 of the outlet member C to give direction to the flow of the stream from the interior body space 19 to the outlet 17.

The baffle plates E and F as stated are made of perforated sheet material, the body portions of the sheet material between the holes being appreciably in excess of the area of the holes. The holes 24 of the upper baffle plate F are smaller than the holes 25 in the lower baffle plate E and are proportionately more numerous and differently spaced, the bridging material 26 between adjacent holes 24 being of less area than the bridging material 27 between the adjacent holes 25, of the lower baffle plate E. Furthermore, the total area of the holes 25 of the lower baffle plate E is greater than the area of the passage of the inlet passage 34 and the area of the outlet passage 17 is in excess of the total area of the holes 24 of the upper baffle plate F.

In use, water fed into the inlet 34 spreads out in its passage through the lower nipple portion 35 of the inlet member B and is diffused through the holes 25 in the lower baffle plate E, the said holes constituting an appreciably larger vent than the said inlet 34 of the inlet pipe, and then passes upward through the body space 19. The result is that the stream that enters the inlet 34 as a relatively compact and unitary mass is subdivided into a plurality of diminutive streams in the passage through the lower baffle plate E and spread over a relatively large area. As the flow continues upward the interior body space 19 is filled with water and any tendency to form a central direct stream upwardly from the lower baffle plate E is vitiated by the fact that for the most part the bridges 26 of the upper baffle plate F are in alinement with the holes 25 of the lower baffle plate E because of the fact that the holes 24 thereof are out of registration with the holes 25 of the lower baffle plate E and furthermore the holes 24 of the upper baffle plate F are smaller than those of the lower baffle plate but much more numerous to give less restriction to the water flow. Above the upper baffle plate F the water spreads and fills the upper body space 39 and passes outward therefrom by way of the outlet 17. The changes in the area and direction of the water passage described produce eddies which coöperate to reduce any tendency to form a definite stream in the center. In the upper body space 39 the ball H serves as a spreader, diverting the stream from the axial line to the lateral walls and as the outlet 17 is reduced relatively to the adjacent body portion from which it

emerges, and as the pressure and direction of flow immediately below the said outlet is essentially toward the axis, the result is that the efflux is axial in a compact mass, the water emerging as a ball of appreciable size, and from the ball body rolls downward uniformly on all sides of the outer wall and because of the smooth, unbroken formation of the said outer wall as described, as the flow descends it adheres to the sides for the entire length of structure and avoids all splashing, and also insures a cleanliness and sanitary condition of the exterior surface. In fact, from beginning to the end of the flow there is avoidance of any commingling of air with the body of the water and consequently the water maintains a solid stream, which however, may vary in thickness or depth at the different stages. The formation of the ball of water at the outlet 17 and a solid sheet of water at the walls adjacent thereto permits of drinking therefrom while in essentially normal position and in a natural and normal manner, with a drawing in or suction as in ordinary drinking.

While the best results are obtained with the elements arranged as described, I find that good results can be obtained by dispensing with one or more of the elements, such as the ball H or one of the baffle plates. For instance, as described the inlet pipe I is virtually a part of the device as used and the size of the inlet hole 34 therein has an important bearing on the final result, and it is evident that the inlet hole proper 34 may be provided in the body portion of my device. I find it convenient however from a practical standpoint to adapt my device to use with standard plumbing fixtures.

In some cases it may be desirable to make the side walls 20 and one of the baffle plates of the baffle member D integral.

The inlet and outlet members B and C may be made of sheet material. In such case the seat 21 on the inlet member B and the shoulders 40 on the outlet member C may be formed by a plurality of lateral indentations in the side wall and other changes in details may be made without departing from the spirit and scope of my invention.

It is evident that my device as described may be made of different sizes and in this connection it may be noted that the same may be adapted for use for human beings and also for horses.

As described my device constitutes a sanitary drinking fountain that at all times when in use will be completely covered and washed with running water, and is so constructed that all of the waste will flow back over the expansion or drinking cup to act as a covering or wash and to flow down into the waste basin without splashing, and no extra catch cup or guide device

being necessary to carry the waste to the outlet, and that will maintain a steadiness of flow under the varying pressure from a city water main, without a squirt or jet when the pressure is suddenly increased, and that will emit the water in a form to be sipped or drunk naturally, instead of squirting the water irregularly into or about the mouth.

Features shown but not claimed in the present application are reserved for other applications for Letters Patent that are to be filed.

I claim as my invention:—

1. A drinking fountain comprising a globular structure having an inlet and an outlet and a body portion intermediate thereto, the said body portion being appreciably enlarged relatively to the said inlet and outlet, mechanism housed in the said body portion operative to produce eddies in the water flow and to deliver the water from the said outlet in the form of a compact ball of large mass and uniform flow.

2. In a drinking fountain comprising a globular structure having an inlet and an outlet and an intermediate enlarged body portion, a perforated baffle plate positioned in the said body portion, a ball positioned between the said baffle plate and outlet, the said baffle plate being appreciably greater in area than the diametral section of the said ball and the said baffle plate being provided with a plurality of perforations substantially uniformly spaced one from the other throughout the extent of the said baffle plate whereby some perforations will be positioned underneath a portion of the said ball and others will be positioned laterally thereof.

3. A drinking fountain comprising a globular structure having an inlet and an outlet and a body portion intermediate thereto, the said body portion being appreciably enlarged relatively to the said inlet and outlet, mechanism housed in the said body

portion operative to produce eddies in the water flow and to deliver the water from the said outlet in the form of a compact ball of large mass and uniform flow, and the said mechanism comprising a pair of baffle plates of perforated sheet metal separated by a water space and a ball positioned on the uppermost of the said baffle plates.

4. In a drinking fountain comprising a globular structure having an inlet and an outlet and an enlarged body portion intermediate thereto, a pair of perforated baffle plates positioned in the said body portion and separated by a water space, and a ball positioned between the uppermost of the said baffle plates and the said outlet the said baffle plates being appreciably larger than the diametral section of the said ball and provided with perforations positioned outward laterally from the horizontal diametral section thereof.

5. In a drinking fountain comprising a globular structure having an inlet and an outlet and an enlarged body portion intermediate thereto and a pair of baffle plates of perforated sheet metal positioned in the said enlarged body portion and separated by an appreciable space, the said baffle plates having different spacings and different dimensions of holes one from another.

6. In a drinking fountain comprising a globular structure having an inlet and an outlet and an enlarged body portion intermediate thereto and a pair of baffle plates of perforated sheet metal positioned in the said enlarged body portion, and separated by an appreciable space, the said baffle plates having different spacings and different dimensions of holes one from another, and a layer of filtering material positioned between the said baffle plates.

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Witnesses:

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