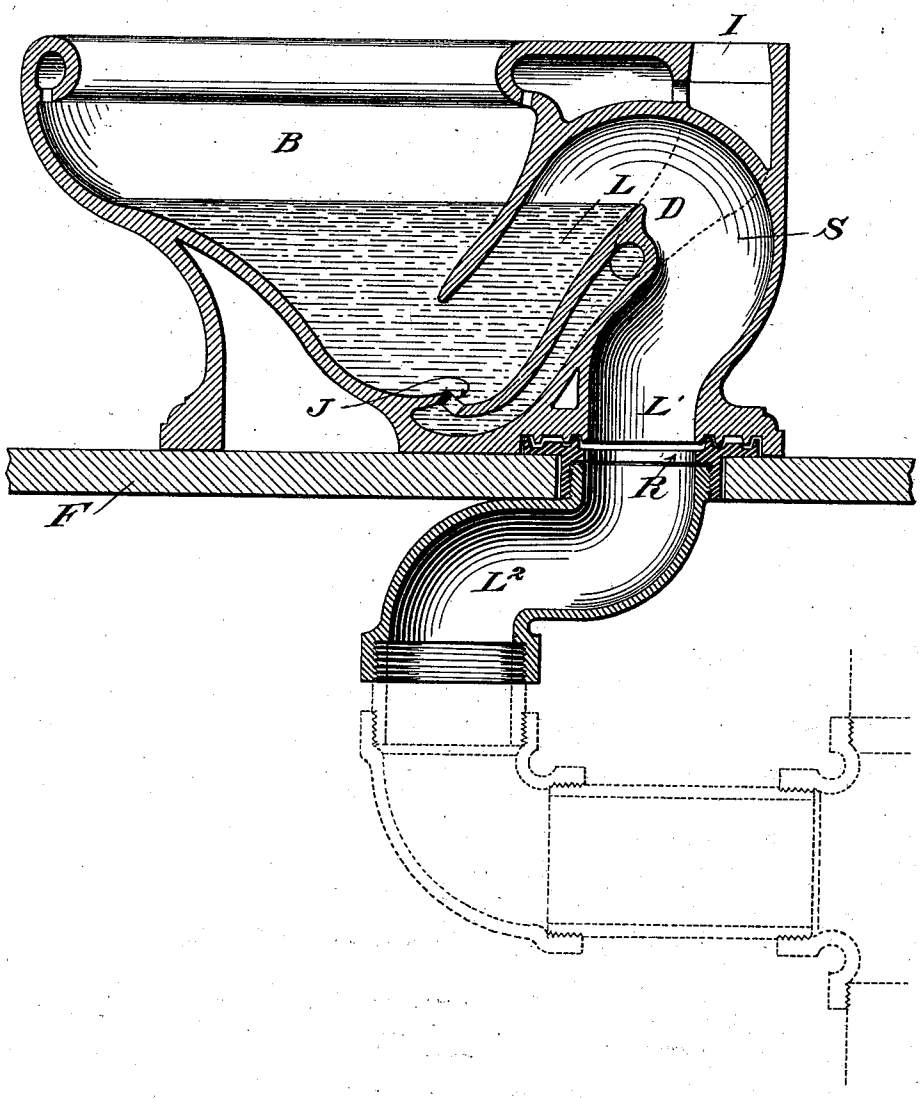
No. 670,588. Patented Mar. 26, 1901.

W. E. HINSDALE.

SIPHON WATER CLOSET.

(Application filed Sept. 1, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WINFIELD E. HINSDALE, OF NEW YORK, N. Y.

SIPHON WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 670,588, dated March 26, 1901.

Application filed September 1, 1900. Serial No. 28,819. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD E. HINSDALE, a citizen of the United States, residing at New York, borough of Manhattan, county and State of New York, have made a new and useful Invention in Siphon Water-Closets, of which the following is a specification.

My invention is directed particularly to an improvement in that type of siphon water-closets in which the siphon effect is produced by giving to the siphon part of the closet a number of angular curves or offsets sufficient to offer to the outflowing flushing-water an obstruction of such a nature as to enable it (the siphon) to thoroughly drain and flush the basin with the limited amount of water which is usually admitted therein at each operation; and it has for its object to devise a water-closet of this type designed especially for use by children or persons of abnormally short stature.

The invention will be fully understood by referring to the accompanying drawing, which is a sectional view of my improved water-closet and attached parts, illustrating also in sectional view the floor to which the closet and parts are secured.

In the construction of siphon water-closets which utilize one trap or water seal and are more or less dependent in their operation upon the force of a jet controlled either upon the ejector or injector principle in the usual way by forcing the contents of the closet-bowl into the up-leg of the siphon and outflow passage over the overflow-dam, it is necessary to provide in the down-leg of the siphon and outlet passage several curves or offsets in order to produce the necessary retarding effect on the falling water and in order to allow the comparatively small volume of water used in flushing the closet-bowl to in effect fill the down-leg of the siphon and outlet passage, so as to thereby cause the usual result of a long-leg siphon. These curves or offsets in the down-leg of the siphon and outlet passage cause the falling water to pass with numerous angular deflections from side to side or from one curve or offset to another and to assume in each instance a sheet-like form in the outlet-passage, thereby preventing the ingress of air from below to the crown or top of the siphon-passage and effecting a perfect vacuum at each operation. In existing forms of siphon water-closets therefore it is customary to construct the bowl, the entire siphon, and the outlet with these curves or offsets of one integral piece of earthenware, and inasmuch as the diameter of the siphon and outlet is necessarily not less than three and one-half inches it has not been found possible to make a structure with a height of less than fifteen and one-half or sixteen inches, thus making it practically impossible to utilize this type of closet for the use of children or persons of abnormally short stature.

My improvement contemplates the construction of a siphon water-closet of the type described in two parts and so arranged that the closet-bowl and upper part of the siphon proper are of earthenware and integral and adapted to rest directly upon the floor, while the outlet embodying the necessary additional curves or offsets to the down-leg of the siphon is secured beneath the floor and connected directly to the necessary outlet-pipes running to the sewer.

Referring now to the drawing in detail for a full and clear understanding of the invention, such as will enable others skilled in the art to construct and use the same, B represents an earthenware closet-bowl having the usual inlet I for the flushing-water, an ejector J, and a siphon S of the required curvature and diameter provided with an up-leg L and down-leg L′, D being the overflow-dam between said legs. In the lower end of this structure is cast the proper seat, adapted to make a union with a metal flange-ring R, secured in an opening directly in the floor F, said metal flange-ring and the seat being substantially like that disclosed in a prior patent, No. 628,004, granted to me by the United States Patent Office on the 4th day of July, 1899.

L^2 is a separable or independent outlet constituting a continuation of the down-leg L′ of the siphon S and having double curves or offsets similar in all respects to the corresponding double curves or offsets of existing types of siphon-closets. This outlet L^2 is preferably of metal and is secured by screw-threads at its upper end directly to the internally-screw-threaded flange-ring R and is reversely curved, as shown, with relation to the down-leg L′, its

lower end being located directly underneath the closet-bowl and provided with internal screw-threads for securing it to the drainage-pipes illustrated in the drawing in dotted lines, the arrangement being such that the angular deflection of the outflowing water as it flows from curve to curve effects a perfect vacuum without the aid of other devices.

I do not limit my improvement to the especial details of construction described in the specification and illustrated in the accompanying drawing, as I believe I am broadly entitled to claim a siphon water-closet adapted for use by children or persons of abnormally short stature, in which closet the curvilinear or offset siphon effect is obtained by a two-part structure, the lower part of which is located below the floor upon which the bowl of the closet is seated and so curved relatively to the down-leg of the siphon that at each operation the bowl is drained without the aid of additional vacuum devices, traps, or other means, and my claims are generic as to this feature.

I am aware that a water-closet has heretofore been devised in which the earthenware bowl is seated directly on the floor and to which is secured beneath the floor a trap, the down-leg of the siphon of the bowl being operatively connected with the supply-pipe for flushing the closet, the arrangement being such that a vacuum is produced at each operation by the agency of the connection between the down-leg of the siphon and the supply-pipe, as disclosed in United States patent to Bunting, No. 331,610, dated December 1, 1885; also, that it is old in the art to discharge the contents of the bowl of a water-closet by the action of a valveless siphon having a seal or dip of greater diameter than the siphon and constituting a weir-chamber or false trap, as disclosed in patent to Waring, No. 266,404, dated October 24, 1882, and I make no claim hereinafter broad enough to include such structures, my claims being distinctly limited to a structure in which the drainage of the bowl is effected without the aid of extraneous means, as hereinbefore described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A siphon water-closet consisting of a bowl and a siphon outlet-passage constructed in two parts, the bowl part being adapted to rest directly upon the floor and the curvilinear or offset of the down-leg of the siphon being located below the floor and so curved relatively to the siphon that the angular deflection of the outflowing water drains the bowl, substantially as described.

2. An earthenware siphon water-closet having a bowl and a siphon outlet-passage, said bowl being adapted to rest directly upon the floor; in combination with a separable or independent outlet constituting a continuation of the down-leg secured below the floor, said outlet having double curves or offsets so arranged relatively to the siphon outlet-passage that the angular deflection of the outflowing water drains the bowl, substantially as described.

3. A siphon water-closet consisting of a bowl and a siphon outlet-passage constructed in two parts, so curved relatively to each other that the outflowing water drains the bowl without the aid of other means, the bowl part being adapted to rest directly upon the floor and the curvilinear or offset of the down-leg of the siphon being located below the floor; in combination with a flange-ring adapted to secure said parts together, substantially as described.

4. An earthenware siphon water-closet having a bowl and a siphon outlet-passage, said bowl being adapted to rest directly upon the floor; in combination with a separable or independent outlet constituting a continuation of the down-leg secured below the floor, said outlet having double curves or offsets so arranged relatively to each other and the down-leg of the siphon that the angular deflection of the outflowing water drains the bowl, together with a flange-ring adapted to secure said parts together, substantially as described.

5. A water-closet having a siphon constructed in two parts, one part only of said siphon being integral with the bowl of the closet with the bottom of the bowl resting directly upon the floor and the other part secured thereto but located beneath the floor upon which the bowl is sustained both of said parts being so curved relatively to each other that the angular deflection of the water as it passes therethrough drains the bowl without the aid of other means, substantially as described.

6. An earthenware water-closet embodying a bowl and one part only of the siphon in one integral piece, the bottom of the bowl being adapted to rest directly upon the floor; the second part of said siphon being constructed of metal, but located beneath the floor and secured directly below the first part, the two parts of said siphon being so curved relatively to each other that the angular deflection of the outflowing water drains the bowl, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WINFIELD E. HINSDALE.

Witnesses:
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M. F. KEATING.