

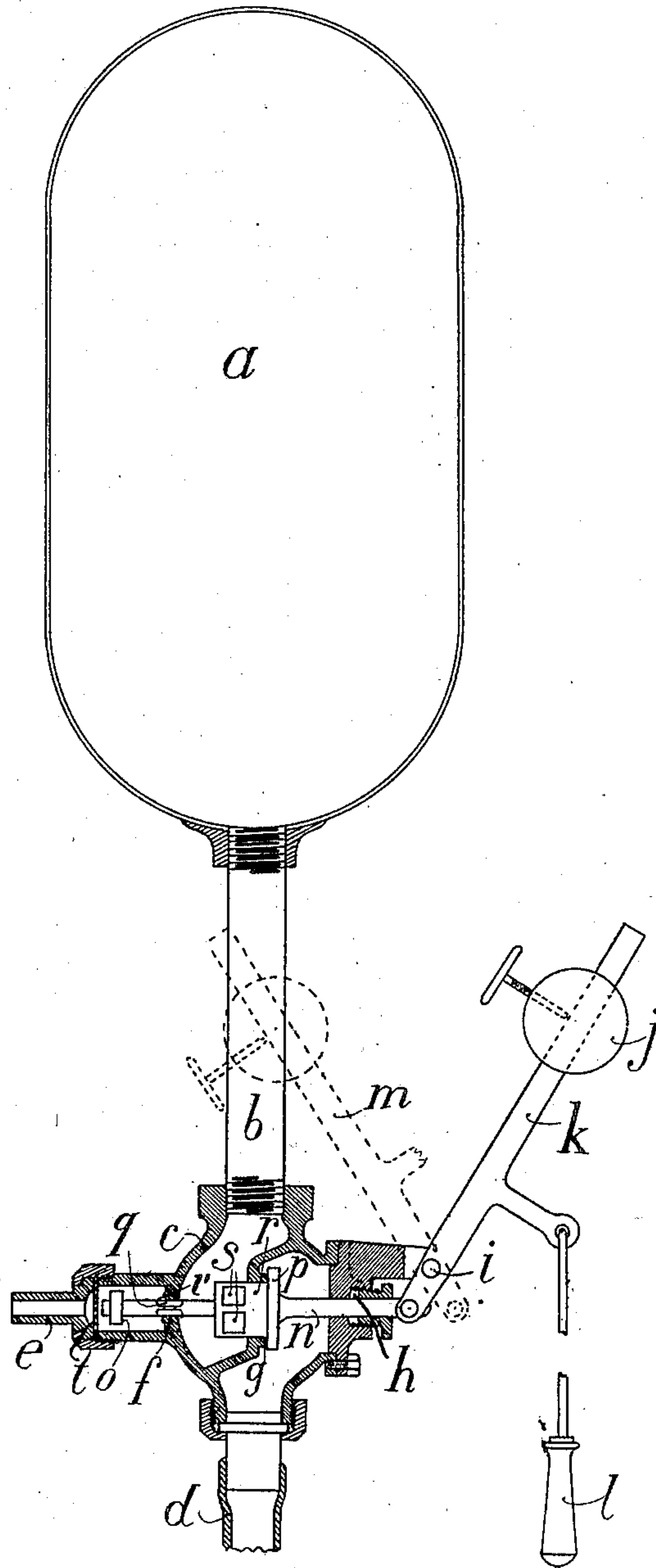
No. 755,477.

PATENTED MAR. 22, 1904.

C. F. V. FLINT.  
WASH APPARATUS.

APPLICATION FILED JUNE 9, 1903.

NO MODEL.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## WASH APPARATUS.

SPECIFICATION forming part of Letters Patent No. 755,477, dated March 22, 1904.

Application filed June 9, 1903. Serial No. 160,758. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES FREDERIK VILHELM FLINT, a citizen of the Kingdom of Denmark, have invented certain new and useful  
 5 Improvements in Wash Apparatus, of which the following is a specification.

The present invention is an improved wash apparatus for water-closets, lavatories, &c., characterized by requiring no pressure by ele-  
 10 vation, so that it may be put up in level with or even below the level of the receiver in which the rinsing has to be done. This is often of importance where the room employed has only a small height.

15 The principle of the improvement is that the water in an air-chamber is kept under pressure and the movement of the water is caused by expansion of the air confined over the water and not by the effect of the gravity,  
 20 which will only in a small degree come into play when the wash apparatus is placed above the level of the receiver to be washed out. If this is not the case, the gravity will be without influence.

25 A way of executing the apparatus is shown in the accompanying drawing.

A closed tank *a* is, with a pipe *b*, connected with the valve-casing *c*, which again by the pipe *d* is connected with the closet or other  
 30 place that is going to be washed out.

The pressure-water piping is closed at *e*.

The valve-casing has two partitions *f* and *g* and a stuffing-box *h*.

The lever *k*, which is connected with a handle *l*, turns on the bolt *i*. The lever *k* carries a sliding weight *j* and is connected with the valve-spindle *n*, which is sliding in its longitudinal direction. The valve-spindle carries two obturators *o* and *p*, which correspond  
 40 with and fit into the partitions *f* and *g*. The spindle is also supplied with grooves *q*. From the obturator *p* goes a cylindric-turned pipe *r*, which at first for some length is unbroken and then supplied with small holes *s*. A wire  
 45 net *t* serves as a sieve for the water.

The manner in which the wash apparatus works is as follows: When the apparatus is at rest, the lever *k* will stand in the dotted position *m*. The obturator *o* will close the  
 50 opening in the partition *f*. When the handle

is pulled, the lever *k* will move into the position shown by the lines fully inked in, the water flows through the cuttings *q*, while the obturator *p* closes the opening in the partition *g*. The water mounts into the air-chamber *a* 55 and compresses the air. When the pressure has reached a certain height, the spindle *n* will move toward the right, as the pressure works on a plane like the traverse section of the pipe *r*. The lever *k* is turned and gets into 60 the position *m*, by which the apertures *s* go through the hole at *g*. The water now runs from the air-chamber *a* through the pipe *b*, up through the inside of the pipe *r* and the apertures *s* and reaches, through the pipe *d*, 65 the place to be washed out. In the meantime the conduit *v* is barred at *f*. Through alterations in the proportions of the various parts (size of the air-chamber *a*, the traverse section of the pipe *r*, the length of the arms of 70 the lever *k*, the heaviness of the weight *j*, &c.) it is possible to obtain any pressure or any body of water required. It is of importance that the grooves *q* in the valve-spindle should be placed in such a manner as to allow of a grad- 75 ual shutting off of the water in order to avoid jars in the conduit. The apertures *s* must only go through the hole at *g* when the weight *j* has passed the top position, while otherwise it might happen that only a par- 80 tial opening would take place through the weight *j* not getting over the top position.

As may be seen, the tank *a* is empty when not in use, which is of great importance by the fact that the water through sufficient iso- 85 lation of the conduit *e* and the valve-casing *c* is prevented from freezing in the wash apparatus. Through the height of the pressure by which the water is made to flow out (in practice is used about 0.5 atmospheres) it is 90 possible to attain a very strong wash with a comparatively small quantity of water. A further advantage by the described wash apparatus is that a float-cock which might get out of order is not needed and it is always 95 possible to get the same quantity of water into the air-chamber through the displacement of the weight *j* by which the pressure in the conduit is regulated. An overflow of the water is also out of the question and 100



the apparatus works with hardly any noise. Instead of moving the lever *k* with a handle this may also be affixed to a movable closet-seat in such a manner that the lever is pulled  
5 when the seat rises after the use of the closet.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a flushing device for water-closets, an air-tight tank, pipe connections for plac-  
10 ing said tank in communication with a source of supply of water under pressure and also the part to be flushed, valve devices for closing the communication with the part to be flushed and placing the reservoir in communi-  
15 cation with the source of water-supply, said valve devices including means whereby when a certain amount of pressure is secured in the reservoir the valve devices are automatically reversed to cut off the water-supply and dis-  
20 charge the reservoir into the part to be flushed substantially as described.

2. In combination, a valve-casing having

three branches, a pipe for supplying water under pressure connected to one branch, an air-tight reservoir connected to another  
25 branch, a pipe for leading to the part to be flushed from the third, a partition in said valve-casing having a large opening or valve-seat therein, a valve-rod having a piston-valve fitting said opening and serving to open and  
30 close the same and having a second valve controlling the entrance of water to the reservoir, an operating-lever connected to said valve-rod, and a weight on said lever arranged to be overbalanced by the pressure of water  
35 on the piston-valve, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES FREDERIK VILHELM FLINT.

Witnesses:

GIPPIE BLOOM,  
L. STUB.