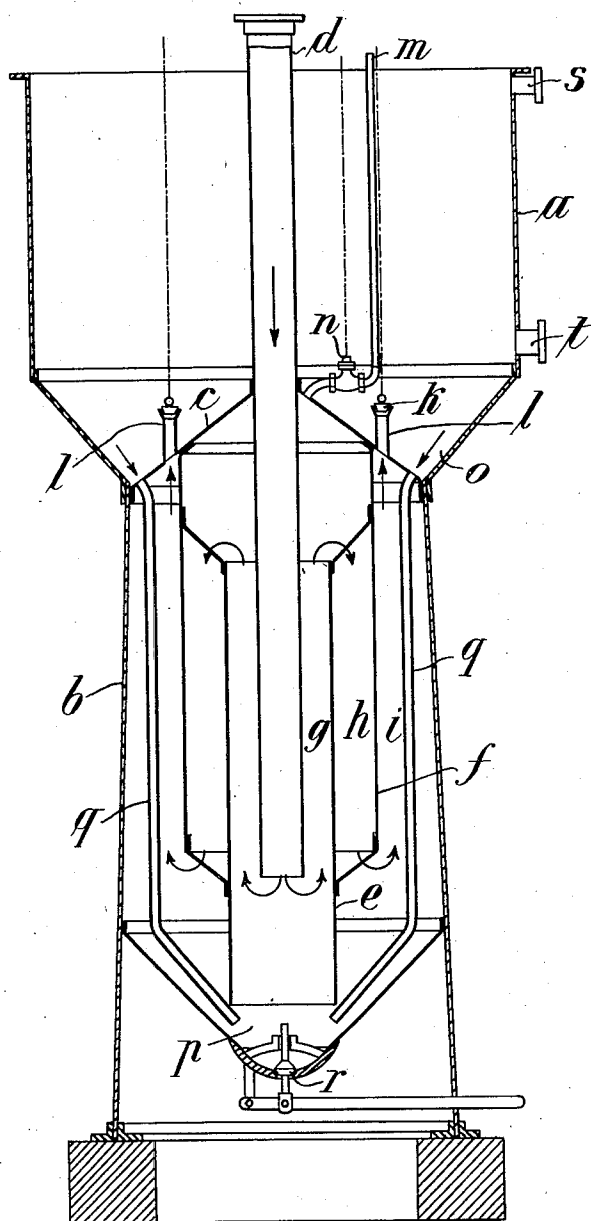


No. 883,903.

PATENTED APR. 7, 1908.

W. J. NUSS.
WATER CISTERN WITH PURIFIER.
APPLICATION FILED NOV. 5, 1907.



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UNITED STATES PATENT OFFICE.

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WATER-CISTERN WITH PURIFIER.

No. 883,903.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed November 5, 1907. Serial No. 400,886.

To all whom it may concern:

Be it known that I, WILHELM JACOB NUSS, a subject of the Emperor of Germany, residing at Cologne-Lindenthal, Germany, have invented a certain new and useful Improved Water-Cistern with Purifier, of which the following is a specification.

This invention relates to a water tank or cistern with a supporting pedestal formed as a purifier and in which the tank or cistern is provided with a mud collector and rests on the purifier. The water space of the cistern is connected with the water space of the purifier by means of pipes which can be closed so that the clearing of the water in the purifier and the cistern can be effected separately. The mud collector of the cistern is also connected with the mud collector of the purifier by means of pipes, so that after the opening of the mud valve of the purifier and shutting off the connecting pipes, the mud in the cistern can also be let off, without letting the water away from the purifier.

In order that my said invention may be properly understood I have hereunto appended an explanatory sheet of drawings, whereon the arrangement is shown in vertical section.

The cistern *a* rests on the supporting pedestal *b* which is formed in a known manner as a purifier. Through the conical bottom *c* of the cistern is carried the admission pipe *d* for the water to be cleaned. Round the pipe *d* are formed by means of the cylinders *e*, *f*, three annular spaces *g*, *h*, and *i*. The space *i* is connected with the cistern *a*, by means of the pipes *l* which can be shut off by means of the valves *k*. On the highest part of the bottom *c* is fixed the air outlet pipe *m*, which can be closed by means of the valve *n*. The ring shaped bottom space *o* of the cistern *a* is in connection with the inverted cone shaped lower part *p* of the purifier, by means of the pipes *q*. The purifier can be closed by means of a valve *r* which is placed on the inverted cone shaped bottom. The cistern *a* is also provided with an overflow connection *s* and a discharge connection *t* for running off the clear water.

The method of working the arrangement is as follows: The water to be clarified being mixed with some precipitating means for the separation of the impurities passes through the pipe *d* into the tank *b*, filling it and clearing itself, and flows into the cistern *a* through

pipes *l*, *l*. During the working of the arrangement the valves *k* are open. The valve *n* is also open at the beginning to allow the escape of the air, but requires to be closed after the filling of the purifier.

The discharge of the mud is carried out in the following manner:—After shutting off the water connection through pipe *d* and closing the valves *k* the valve *r* will be opened. The mud which has settled in the cistern flows away through the pipes *q*, *q*, along with the mud collected in the inverted cone *p* of the purifier. During this process a vacuum will be formed above the water in the purifier, and this vacuum prevents the emptying of the purifier under the influence of the air pressure.

Having now fully described my invention what I claim and desire to secure by Letters Patent is:—

1. The combination with a water cistern, of a purifier which is located below the cistern and forms a support therefor, an admission pipe extending through the cistern into the purifier and of means for permitting communication between the cistern and the purifier, said means being capable of closure.

2. The combination with a water cistern, of a purifier which is located below the cistern and forms a support therefor, the top of the purifier extending into and forming a portion of the bottom of the cistern and pipes arranged in the bottom of the cistern so as to communicate with the upper part of the purifier said pipes being provided with valves and means for operating said valves.

3. In combination, a cistern, a purifier located below the cistern and forming a support therefor a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged concentrically outside said pipe and means capable of being closed for permitting communication between the purifier and the cistern.

4. In combination a cistern, a purifier located below the cistern and forming a support therefor, a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged concentrically outside said pipe, a second cylinder arranged concentrically outside the first cylinder pipes arranged in the bottom of the cistern and communicating with the purifier, means for closing said pipes and

means for draining the mud and sediment from the cistern into the bottom of the purifier.

5 5. In combination a cistern, a purifier located below the cistern and forming a support therefor, a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a cylinder arranged concentrically outside said pipe,
10 means for establishing communication between the cistern and the purifier, valves for closing said means, pipes extending from the bottom of the cistern down to the bottom of the purifier and a valve at the bottom of
15 said purifier.

6. In combination, a cistern, a purifier located below the cistern and forming a support therefor, a water inlet pipe arranged in the bottom of the cistern and extending downwards into the purifier, a conical top for the purifier, a conical bottom for the purifier, openings in the conical top, means for closing said openings, a valve at the bottom of the purifier, means for closing said valve and

means for draining mud and sediment from the cistern into the bottom of the purifier. 25

7. In combination, a cistern with conical bottom thereon, a purifier supporting said cistern and having a cylindrical casing, a conical top on the purifier and which extends up into the cistern, a conical bottom for the purifier, a water inlet pipe arranged centrally of the cistern and extending down from the top of the purifier, cylinders arranged concentrically around said inlet pipe, openings in the top of the purifier and communicating with said cistern, valves, an air escape pipe for the purifier, a valve on said pipe, means for operating said valve, pipes extending from the cistern down to near the bottom of the purifier, a valve at the bottom of the purifier and means for operating said valve. 30 35 40

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

WILHELM JACOB NUSS.

Witnesses:

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