No. 709,887. Patented Sept. 30, 1902.

W. J. DOSSEY.

APPARATUS FOR COOLING WATER.

(Application filed May 20, 1901.)

(No Model.)

Fig. 1

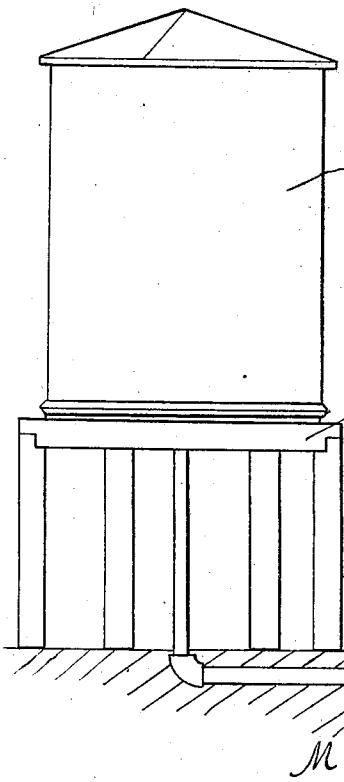
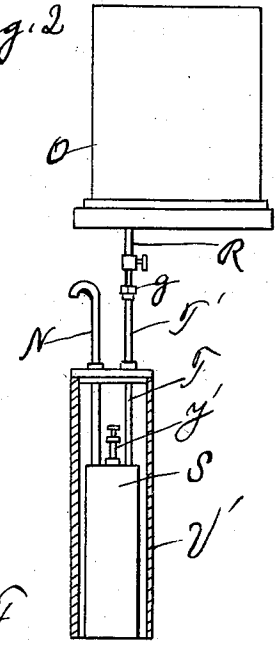


Fig. 2



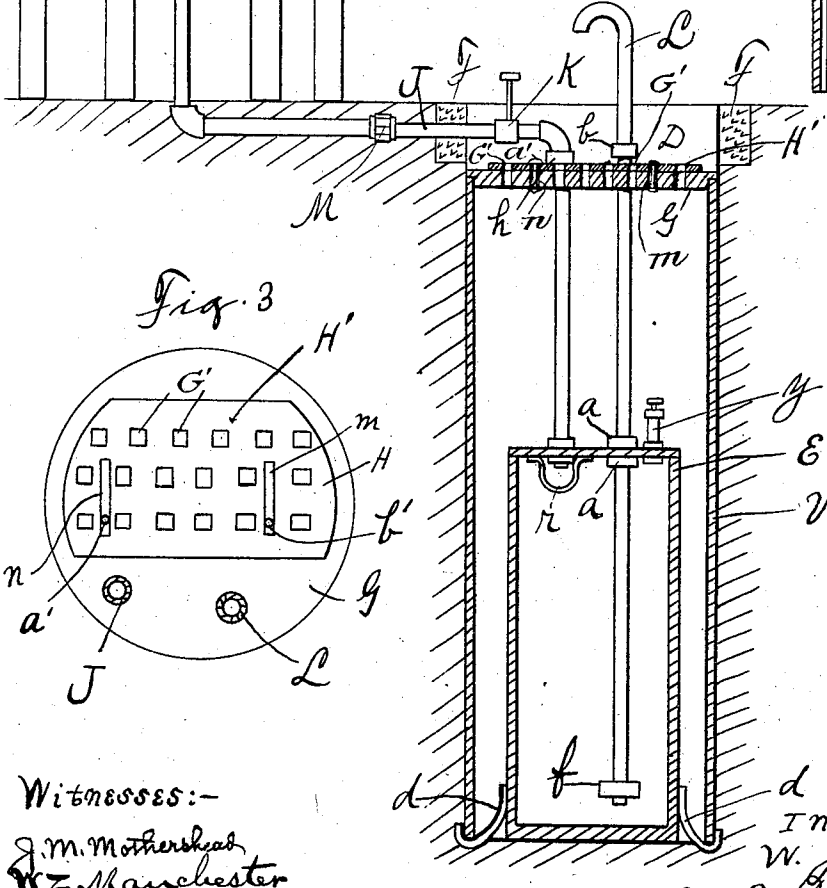


Fig. 3

Witnesses:-
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By A. L. Jackson,
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM J. DOSSEY, OF RHOME, TEXAS.

APPARATUS FOR COOLING WATER.

SPECIFICATION forming part of Letters Patent No. 709,887, dated September 30, 1902.

Application filed May 20, 1901. Serial No. 61,005. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. DOSSEY, a citizen of the United States, residing at Rhome, in the county of Wise and State of Texas, have invented certain new and useful Improvements in Apparatus for Cooling Water, of which the following is a specification.

This invention relates to apparatus for cooling water in cisterns located in subterranean cavities; and the object is to construct inexpensive apparatus for cooling and keeping on hand a supply of cool water and by which the supply of water will remain constant or the same in quantity, because the cool water can be forced out of the cistern only as the warm water is let in the cistern.

In many localities, particularly in the Western States, water must be kept in cisterns on account of the scarcity of water, and it is better to keep the water stored in overground cisterns, because water stored in underground cisterns is not wholesome.

One of the objects of this invention is to prepare a subsidiary cistern for containing a comparatively small quantity of water to be kept cool.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claim.

Reference is had to the accompanying drawings, which form a part of this application and specification.

Figure 1 is a side elevation of a tank and vertical sections of the underground cistern and a section through the cavity in the ground for the cistern. Fig. 2 is a side elevation of a tank or barrel and a vertical section of surrounding cistern in the cavity in the ground, showing a variation in the means for regulating the flow of water. Fig. 3 is a plan view of the cistern-cover.

Similar characters of reference are used to indicate the same parts throughout the several views.

A tank A is mounted on a suitable support B. A cavity D is made in the ground for the cistern. A facing-wall V of galvanized sheet metal is provided for lining the wall of the cavity in the ground. This facing-wall serves as means for maintaining the cavity in correct shape and also for protecting the underground cistern, allowing ventilation around and about this cistern. A rim F of suitable masonry is placed about the mouth of the cavity. A perforated cover or cap G closes the cavity. This cover is provided with a slide H, which has perforations H′, adapted to register with the perforations G′ in the cover G. The perforations in the cover can be opened or closed at pleasure by the slide H. This slide is provided with two slots *m* and *n* for the pins *a′* and *b′*, which are inserted in the cover G. The pins prevent the displacement of the slide, which may be moved back and forth to close and open the perforations in the cover G. The cistern E is placed in the cavity and is provided with hooks *d*, which catch under the bottom edge of the facing-wall V. The use of these hooks will be understood when other parts are explained. The cistern E is made water-tight and is for containing the cool water and for cooling the water. A pipe J delivers water from the cistern A or from any other suitable supply source to the cistern E. Pipe J is provided with a cock K, which regulates the supply of water and is used to turn on the water whenever water is to be used. A nut *h* is screwed on the pipe J, by which the cover G is held in place. The water in passing from the cistern A falls on a small trough *r*, which is attached to the under side of the top of cistern E. This trough breaks the force of water and prevents the warm water from going to the bottom of the cistern E. Consequently the cool water remains at the bottom of the cistern E. When water is turned in the cistern by cock K, the cool water is forced out of the cistern through the pipe L. The pipe L is fastened to the cistern E by means of nuts *a*, and a nut *b* is screwed on the pipe L, by which the cover G is pressed down on the facing-wall V, the nuts *a* preventing the pipe from rising and the hooks *d* preventing the cistern E from rising. The pipe reaches near the bottom of the cistern E, so that only the cool water can pass out this pipe. The pipe may be held in place by a cleat or collar *f*, which is attached to the side of the cistern E. A cock *y* is provided for letting the air out of cistern E. The pipe J is provided with a union M, which serves as a means for

connecting or disconnecting to any suitable water-supply source. This union might connect the pipe J with a hydrant which is connected with a system of waterworks.

One object of the cover G may be implied from the above description, and that is for holding the pipes in place. This cover may be used to prevent objects from falling into the cavity in the ground; but the principal object of this cover is to allow ventilation. Waste water will fall from the pipe L and pass through the perforations in the cover G and on and about the cistern E and in evaporating will cool the cistern, the perforated cover permitting evaporation.

The variation shown in Fig. 2 is in all respects similar to the cistern and mechanism already described, except that the pipe T, which is for delivering water from the cistern or barrel O to the cistern S, is provided with a flexible portion T′, which may be released from the pipe by means of the union *g*. This is for the purpose of cleaning the cistern O when there may be matter in said cistern which should not go to the cistern S. The cistern S is provided with an air-outlet *y*′ and with a service-pipe N. The cistern S is placed in the cavity and protected by the facing-wall V′.

Water is secured from the underground cistern by letting water from the supply source into the underground cistern. The means for locking the facing-wall and the underground cistern together makes a convenient package for shipping the apparatus. The facing-wall makes it possible to remove the underground cistern for cleansing or repairs or for other purposes.

Other variations may be made without departing from my invention.

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

A water-cooling apparatus comprising a subterranean cistern, a pipe connected with a water-supply source and projecting in said cistern, a discharge-pipe projecting in said cistern, a cavity for said cistern, a facing-wall for said cavity, a cover for said cavity, and means for locking said facing-wall and said cover and said cistern together consisting of nuts for attaching said pipes rigidly to said cistern, hooks attached to said cistern and engaging the bottom edge of said facing-wall, and nuts on said pipes for pressing said cover on said facing-wall.

In testimony whereof I set my hand, in the presence of two witnesses, this 15th day of May, 1901.

WILLIAM J. DOSSEY.

Witnesses:
A. L. JACKSON,
JAMES GILFORD BROWNING.