R. Y. BOYER & J. P. CALDWELL.

WATER COOLING DEVICE.

APPLICATION FILED MAR. 25, 1911.

998,460.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

Fig. 1

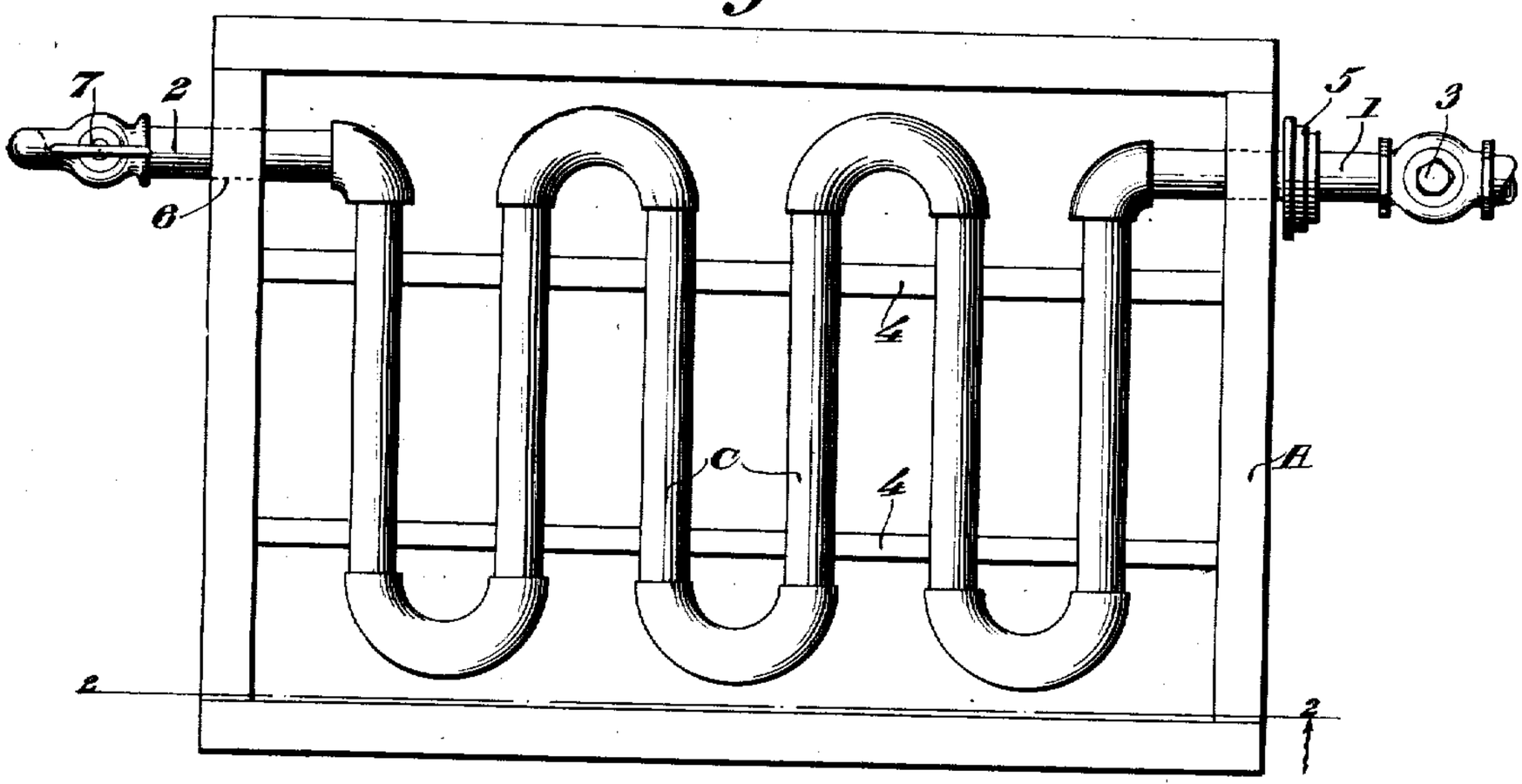

Fig. 2

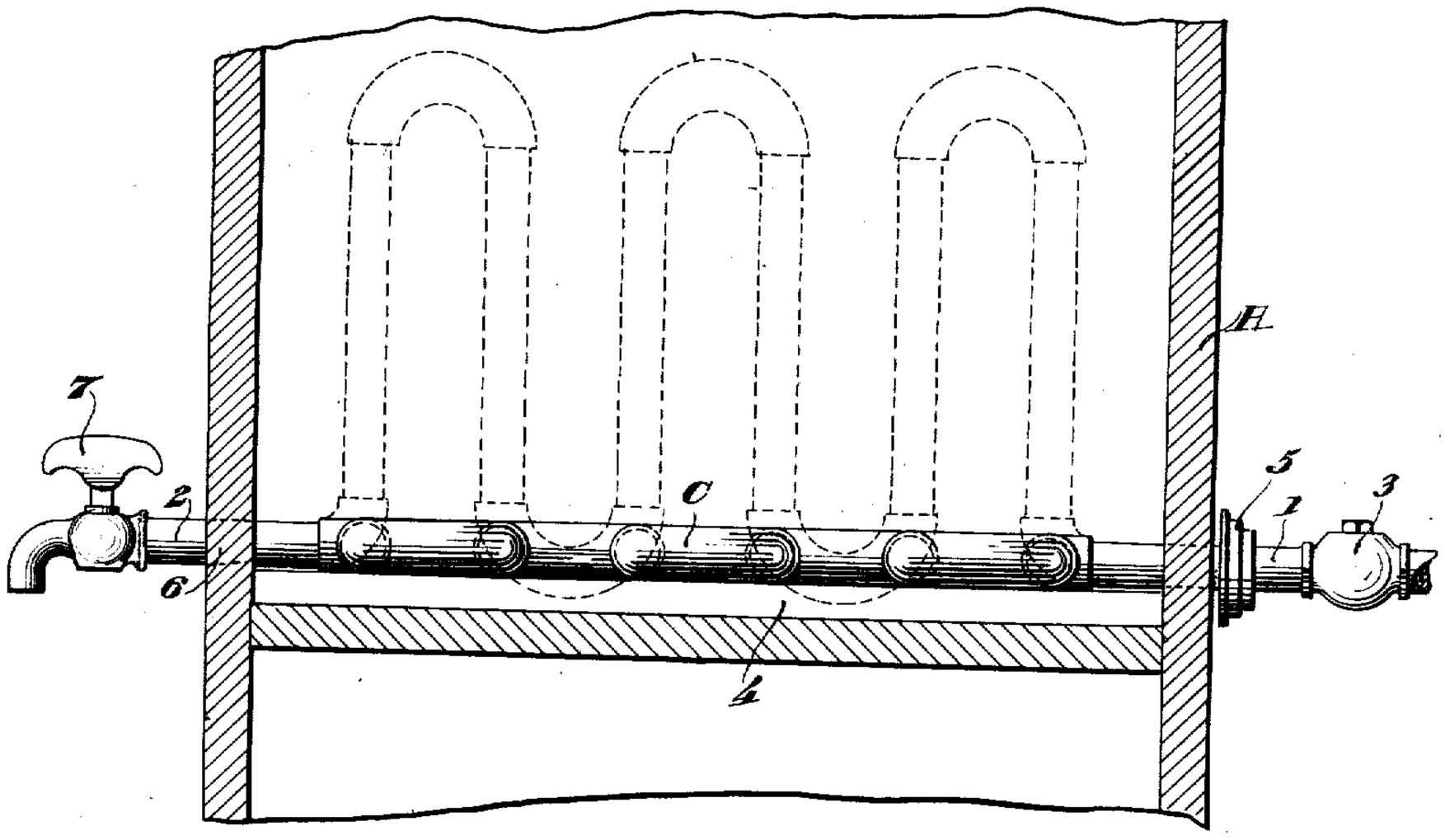

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Fig. 3

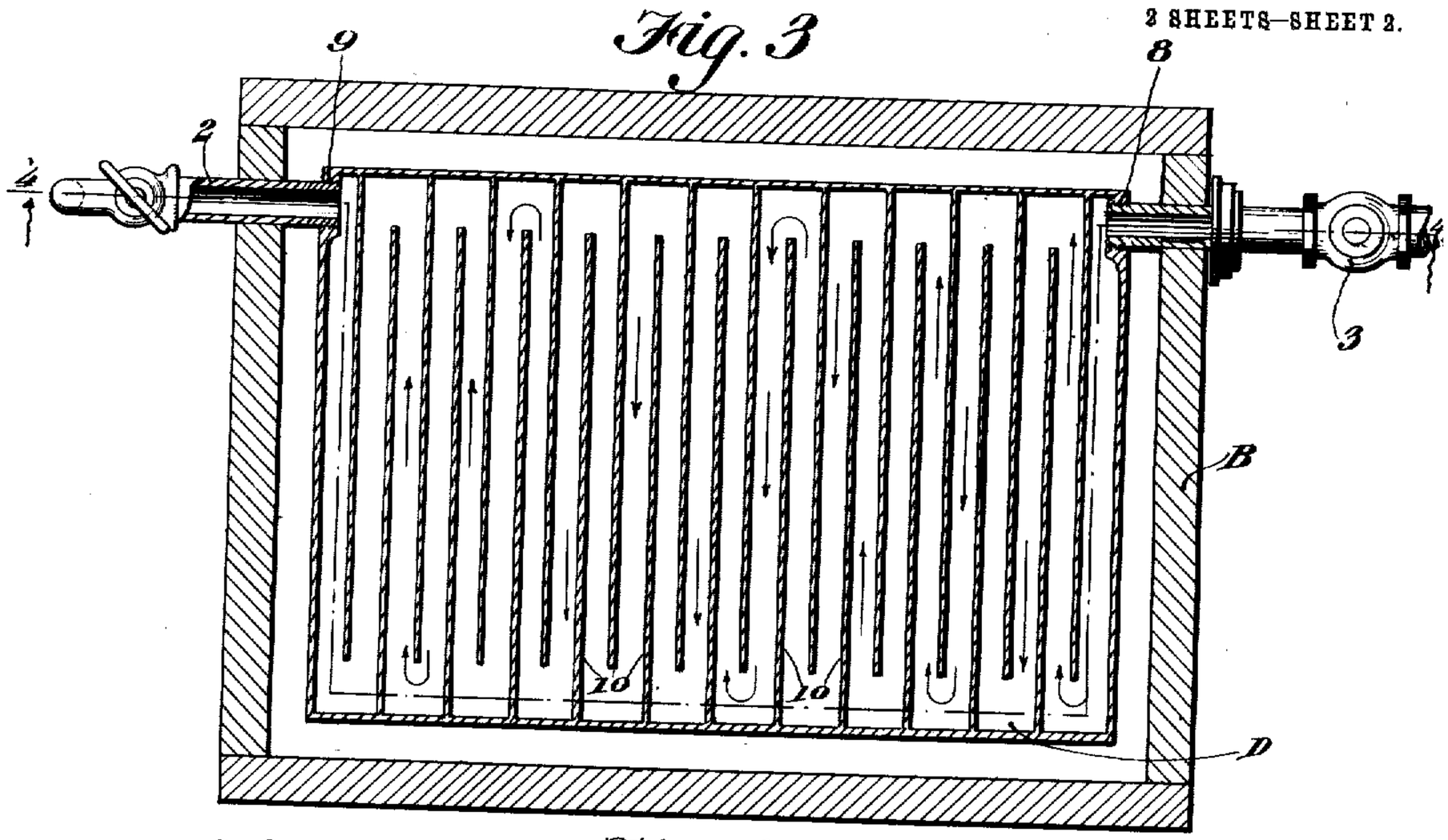


Fig 4

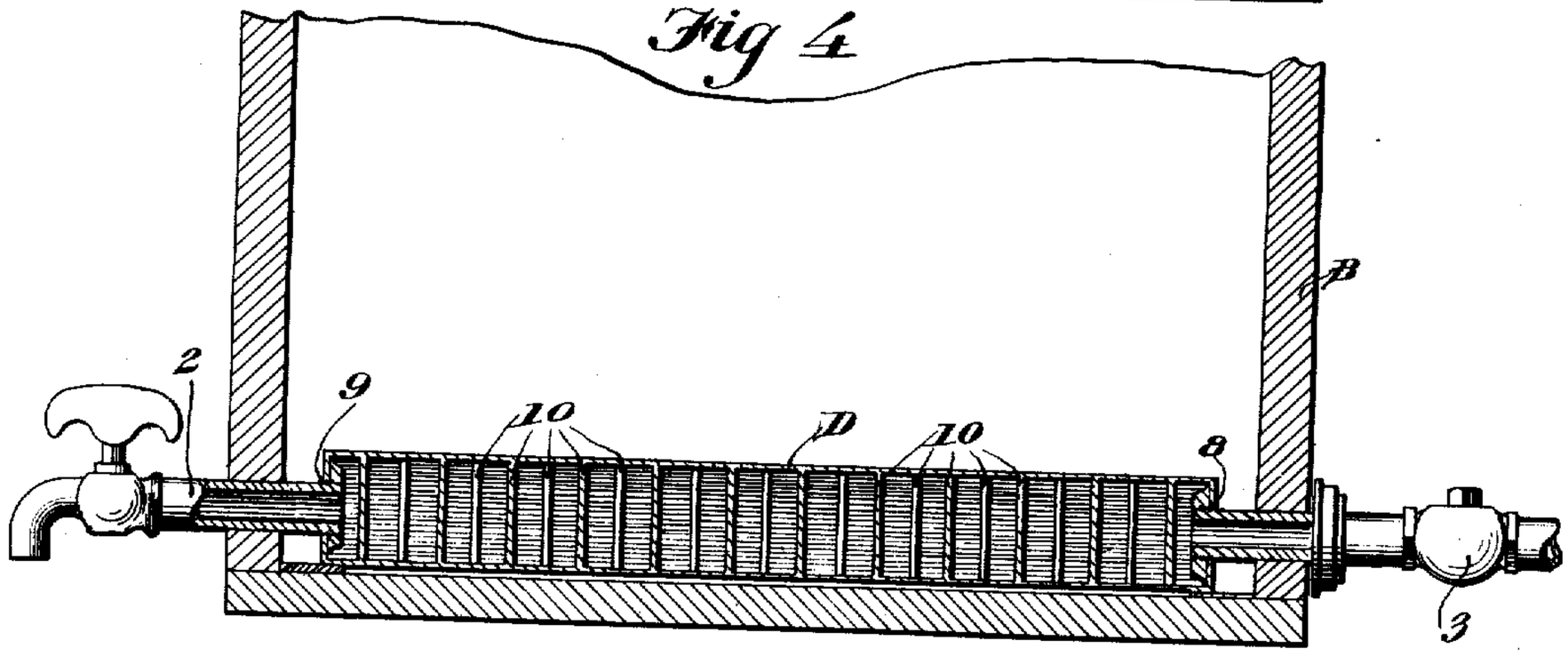
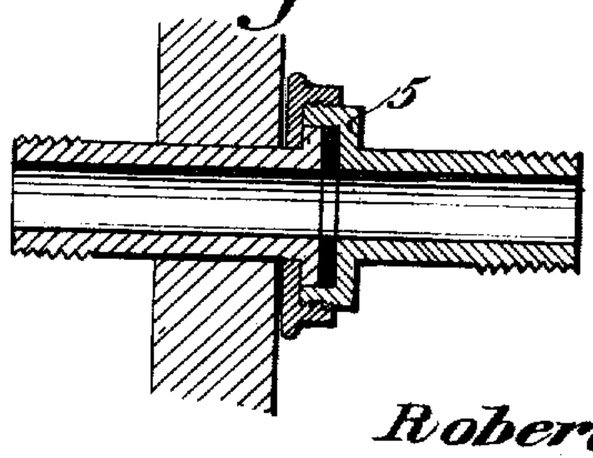


Fig. 5



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UNITED STATES PATENT OFFICE.

ROBERT Y. BOYER AND JAMES P. CALDWELL, OF SAN MARCOS, TEXAS.

WATER-COOLING DEVICE.

998,460. Specification of Letters Patent. Patented July 18, 1911.

Application filed March 25, 1911. Serial No. 616,843.

To all whom it may concern:

Be it known that we, ROBERT Y. BOYER and JAMES P. CALDWELL, citizens of the United States of America, residing at San Marcos, in the county of Hays and State of Texas, have invented new and useful Improvements in Water-Cooling Devices, of which the following is a specification.

This invention relates to water cooling devices and it has for its object to provide a simple and efficient device which may be readily applied to and used in connection with a refrigerator or an ice box of ordinary construction for the purpose of cooling water for drinking purposes without subjecting the same to danger of contamination by direct contact with the ice.

A further object of the invention is to produce a device of the class described which may be readily manipulated in such a manner as to enable the ice compartment in which it is located to be conveniently and thoroughly cleaned whenever needed.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claim may be resorted to when desired.

In the drawings,—Figure 1 is a top plan view showing a simple and preferred construction of the invention as applied in connection with a refrigerator. Fig. 2 is a vertical sectional view of the same, taken on the line 2—2 in Fig. 1, the cooling coil being shown in dotted lines lifted to the position which it assumes when the ice compartment is to be cleansed. Fig. 3 is a horizontal sectional view illustrating a modified construction of the device which is particularly adapted to be used in connection with an ice box. Fig. 4 is a vertical sectional view taken on the line 4—4 in Fig. 3. Fig. 5 is a sectional detail view of one of the unions used in connection with the invention.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved device in its several forms includes a feed pipe 1 and a discharge pipe 2 which are disposed in true longitudinal axial alinement with each other, said device being extended through opposite side walls of the ice compartment of a refrigerator, as shown at A in Figs. 1 and 2, or of an ice box, as shown at B in Figs. 3 and 4. The feed pipe 1 is to be connected with a source of supply, such as a city water system. Said pipe is equipped with a check valve conventionally indicated at 3 and which will obstruct the return flow of water in the direction of the source of supply.

Referring to Figs. 1 and 2, C designates a pipe coil which is located within the ice compartment, the bottom of which may be provided with blocks or cleats 4 to support said pipe coil. The latter is terminally connected with the inlet pipe 1 and with the outlet pipe 2. The inlet pipe 1 is equipped with a coupling or union 5 of ordinary construction, as seen in Fig. 5, whereby the part of said pipe which is connected with the pipe coil C is capable of rotating axially with reference to that part of said inlet pipe 1 which is equipped with the check valve 3 and which is connected with the source of supply. The outlet pipe, which extends through an aperture 6 in the wall of the ice compartment, is capable of rotating in said aperture, and said outlet pipe carries a discharge faucet 7.

It will be readily understood that in practice when a block of ice is supported upon the coil C it will cool the contents of said coil, thus affording a constant supply of cool water for drinking purposes which may be drawn off the faucet 7. The check valve 3 prevents the cool water from returning and mingling with the comparatively warm water in the system which constitutes the source of supply. When it is desired to clean the ice compartment, this may be readily effected by swinging the pipe coil to the position indicated in dotted lines in Fig. 2, the union being first slightly loosened, if necessary.

In Figs. 3 and 4 of the drawings has been illustrated a modified form of the invention, whereby the same is rendered particularly applicable to ice boxes. Under this modified form there is substituted for the pipe coil C a box D provided adjacent to two of its corners with openings 8 and 9 for the reception of the inlet pipe 1 and the outlet

pipe 2, respectively. The box D is provided with interiorly disposed baffles 10, whereby the water passing therethrough is guided in a circuitous course, being thus subjected to the cooling influence of the ice supported upon said box. The latter, as is the case with the pipe coil, may be raised by swinging it about the axes of the pipes 1, 2 to permit the compartment in which it is located to be thoroughly cleansed when desired.

As will be seen from the foregoing description, this device is extremely simple in construction and, therefore, capable of being manufactured and applied at a very moderate expense. It has also been found to be thoroughly efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed as new, is:—

In a water cooling device, the combination with a box constituting an ice compartment, of an inlet and an outlet pipe extending through opposite walls of said compartment, said inlet pipe being provided with a pivotal union and said inlet pipe being connected with a source of supply, a discharge faucet connected with the outlet pipe, and an ice supporting element terminally connected with the inlet and outlet pipes and supported upon the bottom of the ice compartment, said element constituting a circuitous water passage which may be raised to an unobstructing position with reference to the bottom of the ice compartment.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT Y. BOYER.
JAMES P. CALDWELL.

Witnesses:
J. S. DAVIS,
WILLIE MUELLER.