

(No Model.)

F. L. DOLBEARE & A. E. KEATING.
DISINFECTING DEVICE.

No. 525,450.

Patented Sept. 4, 1894.

Fig. 1.

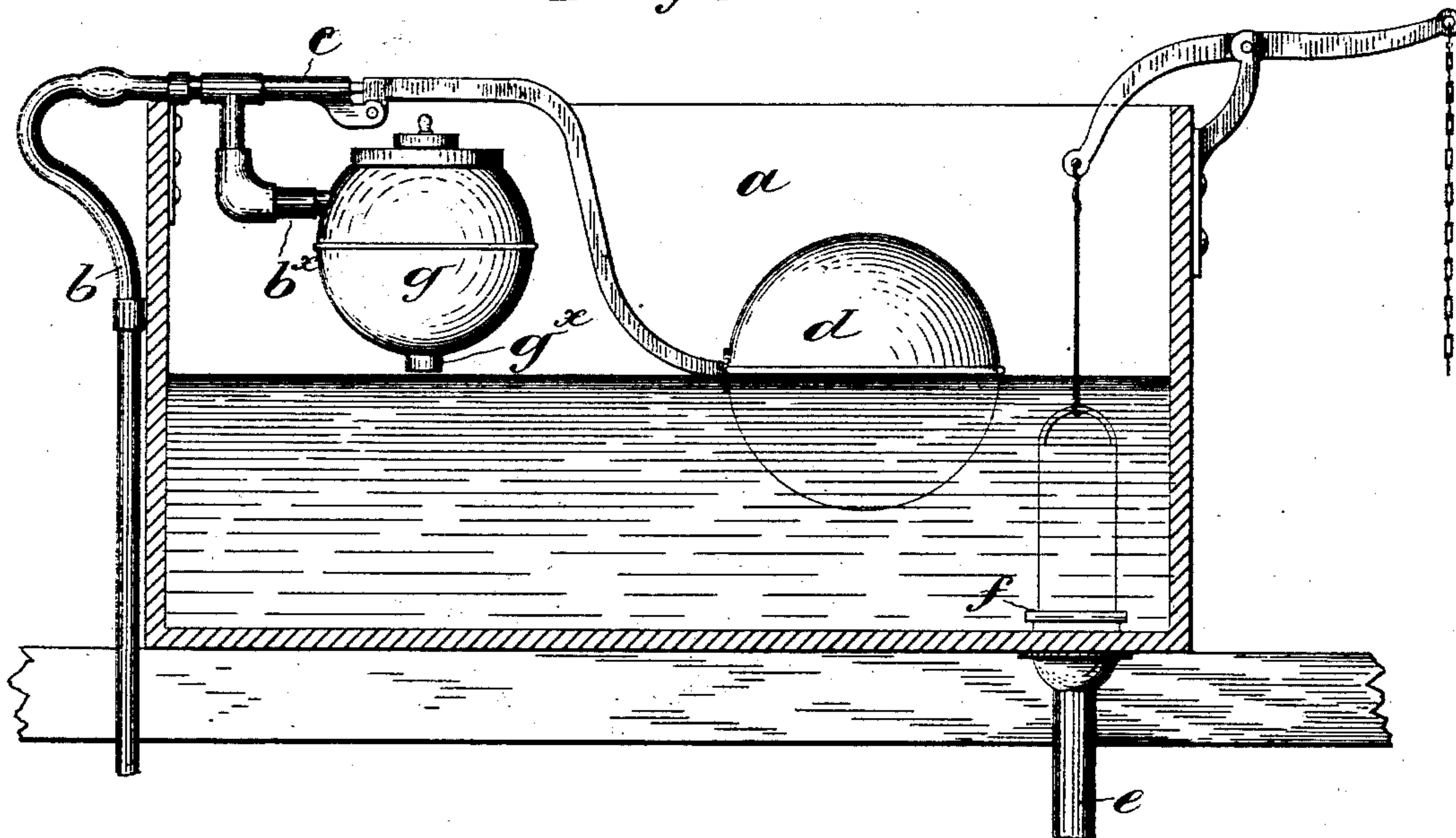
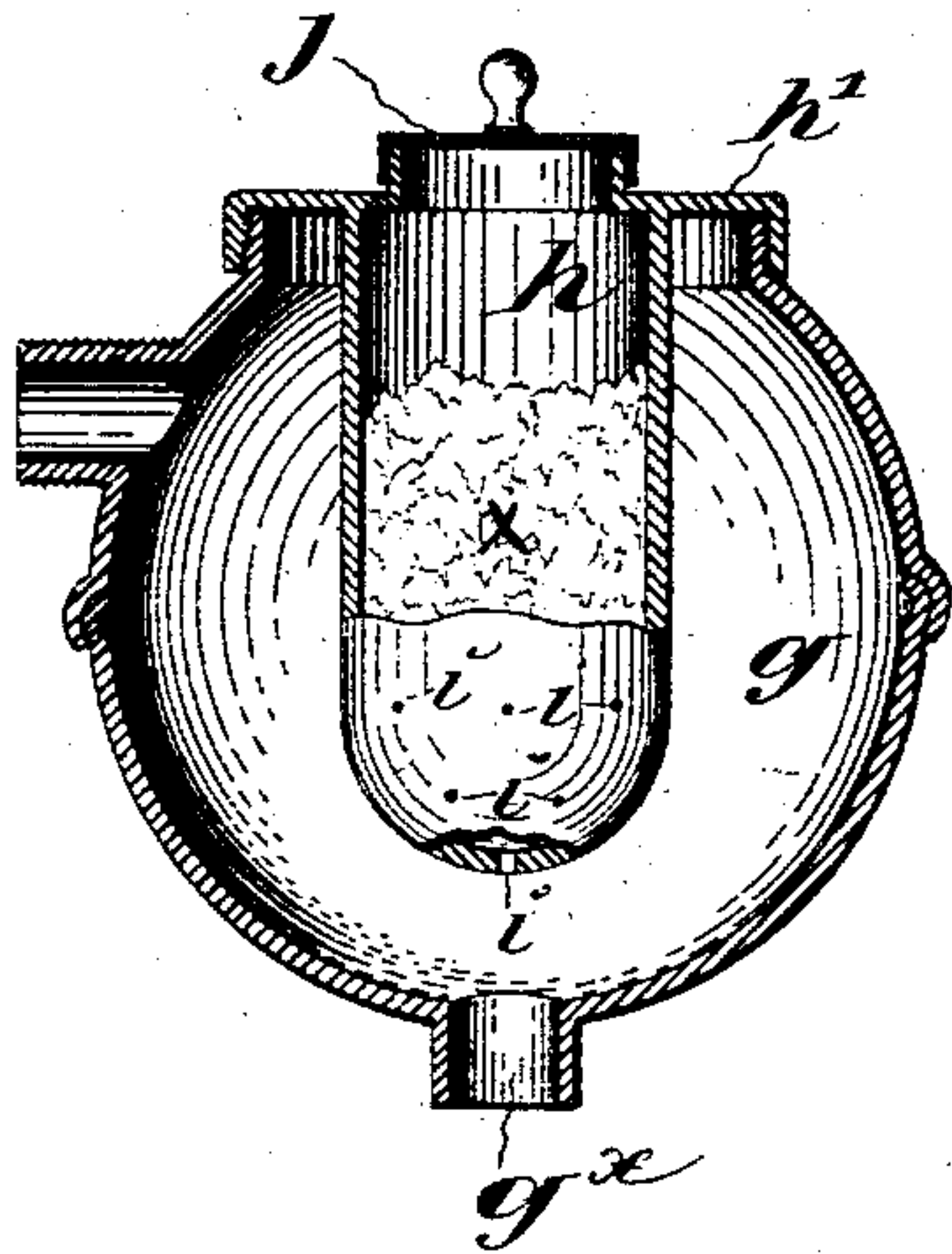


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERIC L. DOLBEARE AND ARTHUR E. KEATING, OF FORT HAMILTON,
NEW YORK.

DISINFECTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 525,450, dated September 4, 1894.

Application filed January 17, 1893. Serial No. 458,682. (No model.)

To all whom it may concern:

Be it known that we, FREDERIC L. DOLBEARE and ARTHUR E. KEATING, citizens of the United States, and residents of Fort Hamilton, in the county of Kings and State of New York, have invented certain Improvements in Disinfecting Devices, of which the following is a specification.

Our invention relates to the class of devices for dissolving disinfecting salts in the flush water of closets, urinals, &c., wherein the salt is contained in a receptacle above the highest level of the water held for use in the tank or cistern and is under the dissolving influence of the water for a brief period only; and the object of the invention is to provide a construction wherein the incoming jet of water, during the filling of the tank, washes over the foraminous disinfectant-holder on its way to the tank.

In carrying out our invention we provide the water-inlet to the flush-tank with a chamber or receiver for the incoming water, the said chamber having an outlet below through which the water flows into the tank or cistern. In this chamber we suspend a holder for the disinfectant substance, this holder having in it one or more perforations whereat water washing over it from the jet, may enter and dissolve out sufficient of said material to impregnate the flush water collected in the tank to the proper extent. The said chamber or receiver, and also the contained holder for the disinfectant, are above the highest level of the water in the tank, so that the disinfecting material will not be dissolved in too great quantity and thus wasted.

In the accompanying drawings illustrating one embodiment of our invention, Figure 1 is a vertical section of an ordinary flush-tank partly in elevation, provided with our improvements; and Fig. 2 is a detail sectional view on a larger scale.

a represents the tank or cistern, *b* is the service pipe which supplies the tank, *c* is the float-valve controlling the influx of water, *d* is the float, *e* is the flush-pipe leading down from the tank, and *f* is the flush-valve. All of these devices may be of the usual kind or pattern, and they may be different from those herein illustrated as there are various kinds

of such flushing devices well known to the trade and the public. It is only essential to our invention that there shall be a tank or cistern to receive and hold for use the water for the flush, and that there shall be a suitable inlet and outlet for the water.

Secured to the water inlet, *b*^x, from which the water flows into the tank when the valve *c* is opened, is a receiver, or chamber, *g*, here shown as somewhat spherical or globular in shape and furnished with an outlet, *g*^x, in its bottom from which the water flows down into the tank. This outlet is of the same size as the inlet, or substantially so, so that the water may flow through the receiver *g* freely. This receiver, which will be situated above the water level in the tank, has an opening in its top at which is inserted the holder, *h*, for a disinfecting salt, substance, or compound *x*. As clearly shown in Fig. 2 the holder *h* is of a cup-form and is provided with a flange *h'*, which screws on to the receiver *g*, the holder depending within the receiver. In the bottom or lower part of the holder, seen in elevation in Fig. 2, are small apertures or perforations, *i*, whereat the water may enter from the jet to dissolve out a little of the disinfectant. The latter is put into the holder at its open upper end, which may be covered by a removable cap *j*, although this cap is not deemed essential.

In the operation of the device the water flows into the receiver *g*, when the valve *c* is opened and impinges directly upon the holder *h*, washing over and about it inside of the confining receiver, and then flows out at the bottom of the receiver. A small quantity of the disinfectant will thus be dissolved and washed from the holder and this will pass down into the tank: The receptacle *g* forms in substance, only an enlarged part of the water passage, being closed at the top by the screw flange *h'* on the holder *h*; and when the water ceases to flow into the tank this receiver will be entirely empty and above the water level. This arrangement is deemed essential in order to prevent undue dissolution and waste of the salt owing to water getting to the salt through capillarity and from vapors and dampness when the receptacle is in contact with the water in the tank. The

disinfectant substance may be supplied, of course, as it wastes away, without the necessity of demantling the apparatus. Any soluble disinfecting substance, or any soluble germicide, may be used. Many of these are well known and we do not limit ourselves in this respect.

Having thus described our invention, we claim—

10 In a disinfecting device, the combination with a closet-cistern or the like, provided with an inlet and an outlet, of a globular receiver, having an open top and bottom and provided with a horizontal inlet tube connected with
15 the inlet of the cistern, said receiver being

also provided with external screw-threads surrounding the opening in its top, and a perforated disinfectant holder having an interiorly screw-threaded flange about its upper portion, said flange being adapted to screw 20 down over the screw-threaded portion of the receiver, substantially as set forth.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

FREDERIC L. DOLBEARE.
ARTHUR E. KEATING.

Witnesses:

THOMAS DOODY,
CHARLES R. DEMPE.