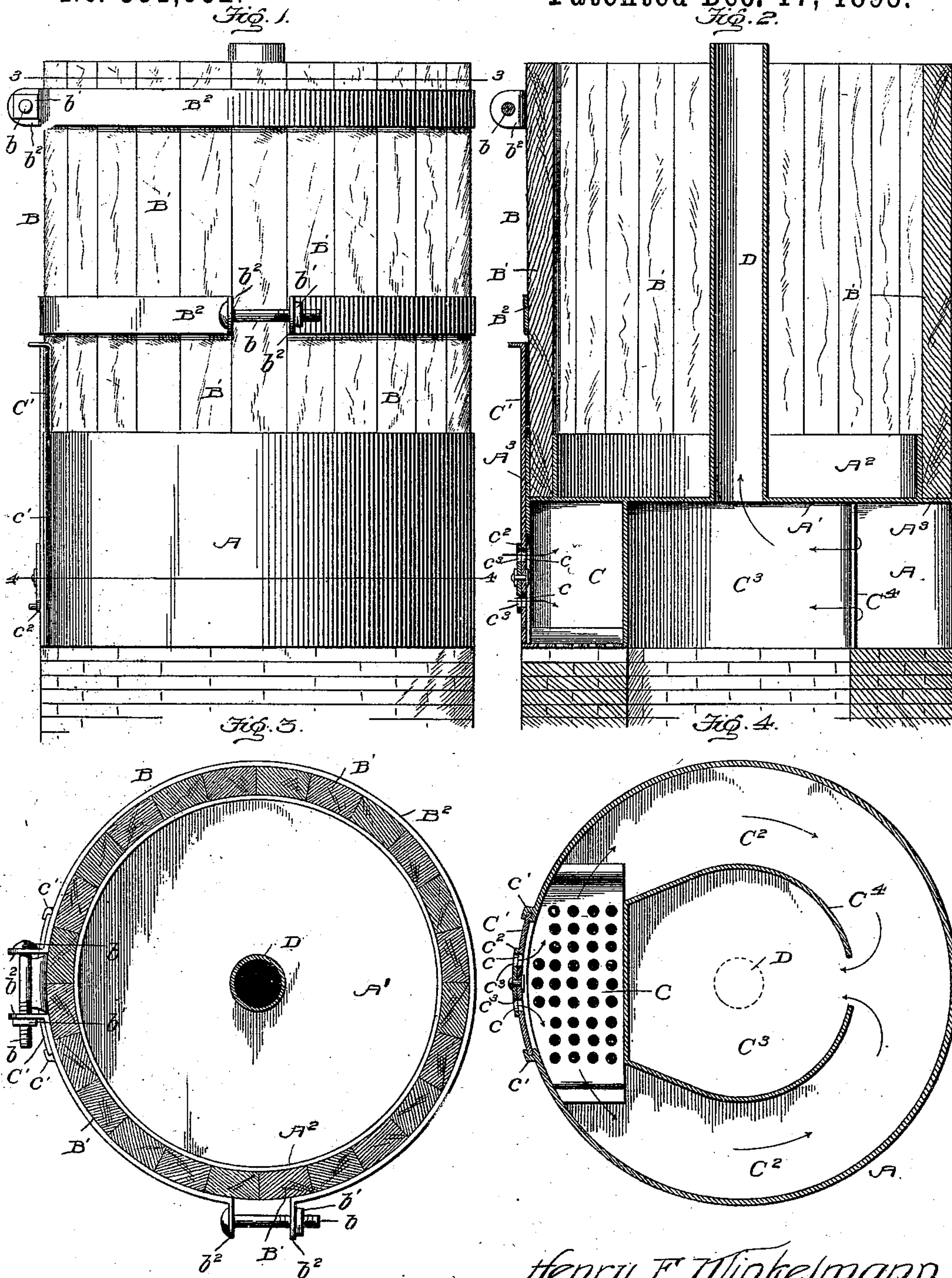


(No Model.)

H. F. WINKELMANN.  
ANTIFREEZING WATER TANK.

No. 551,662.

Patented Dec. 17, 1895.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HENRY F. WINKELMANN, OF JOHNSON, NEBRASKA.

## ANTIFREEZING WATER-TANK.

SPECIFICATION forming part of Letters Patent No. 551,662, dated December 17, 1895.

Application filed June 3, 1895. Serial No. 551,530. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY F. WINKELMANN, a citizen of the United States, residing at Johnson, county of Nehama, and State of Nebraska, have invented certain new and useful Improvements in Antifreezing Water-Tanks, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the tank. Fig. 2 is a longitudinal central vertical section. Fig. 3 is a horizontal section on line 3 3, Fig. 1; and Fig. 4 is a similar view on line 4 4, Fig. 1.

The invention relates to that class of tanks used for storage of water in exposed places, such as barn and factory yards and along railroads, &c.

The object of the invention is to provide such a tank with a means of heating it, so as to prevent freezing of the water in severe weather; also to provide means for tightening the tank-staves in case of shrinkage.

The invention will first be described and then specifically pointed out in the claim.

A represents the cylindrical base of the tank, which is formed of metal and provided between its ends with a horizontal partition A', which forms the bottom of the tank.

A<sup>2</sup> is a flange secured to the upper side of the bottom concentric with the upper end of the base A, so that an annular channel or stave-receiver A<sup>3</sup> is formed between the two.

B is the tank proper, which is formed of the ordinary wooden staves B', which rest at their lower ends in the annular channel A<sup>3</sup>, while thereabove said staves are bound with hoops B<sup>2</sup>. These hoops are provided with outwardly-bent apertured ears b<sup>2</sup> at their ends, and through said apertures in each pair of ears projects a single-headed bolt b on the threaded end of which is secured a nut b' by which the hoops or bands may be tightened or loosened, as may be found necessary. Within the base is placed a heater for heating the tank in very cold weather and preventing freezing. This heater comprises a fire-box C, the door C' of which slides vertically in guides c' c' at one side of the base, said door being

provided with small draft-apertures c c and a pivoted closure c<sup>2</sup>, also having apertures c<sup>3</sup> to register with the apertures c c. The sides of the fire-box C open into passages C<sup>2</sup> C<sup>2</sup>, which lead to the rear of the base or a point opposite the door-opening, and there they communicate with a central chamber C<sup>3</sup>, from which the outlet-flue D extends up through the center of the tank to heat the contents thereof. The back of the fire-box and the passages C<sup>2</sup> and chamber C<sup>3</sup> are formed by means of the flange C<sup>4</sup>, which depends from the metallic bottom A' of the tank, is spaced away from the base A and has its ends spaced apart.

It will be seen that the heat and products of combustion will pass from the fire-box along the bottom of the tank in opposite directions to the central compartment and thence up through the outlet flue or pipe D, thus heating the water with but a small expenditure of fuel.

The base of the tank may rest on a masonry bed, if desired. The various metallic parts may be secured together by riveting, seaming or other suitable manner.

The many advantages arising from this construction will be apparent to any one familiar with the difficulties attending the use of outdoor water-tanks in cold climates.

The upper end of the tank is provided with an overflow E.

Each farmer or stockman can be his own cooper, repairing at will any defective stave, and as they are all of a uniform size leakage is impossible.

The metal base is practically indestructible, and can be refilled when staves are worn out.

What I claim is—

A water tank, consisting in the cylindrical metallic base A having a horizontal partition A', an annular marginal channel A<sup>3</sup> on the upper side thereof, a central offtake-flue or pipe D projecting up from said partition, the central flange C<sup>4</sup> depending from said partition within and extending down to the lower edge of the base and having an opening in its rear side and a flattened forward side, a

door at the forward side of the base opposite  
said flattened portion of the flange, a grate  
extending from the lower edge of the door  
opening to said flattened portion whereby  
the fire box C is formed opening at its ends  
into the channels C<sup>2</sup>, and the series of wooden  
staves resting at their lower ends in the chan-

nel A<sup>3</sup> and secured together to form the body  
of the tank, substantially as set forth.

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Witnesses:

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