(No Model.)

# A. F. CRAMER.

## DEVICE FOR COOLING STORAGE CHAMBERS.

No. 346,807. Patented Aug. 3, 1886.

Fig. 1

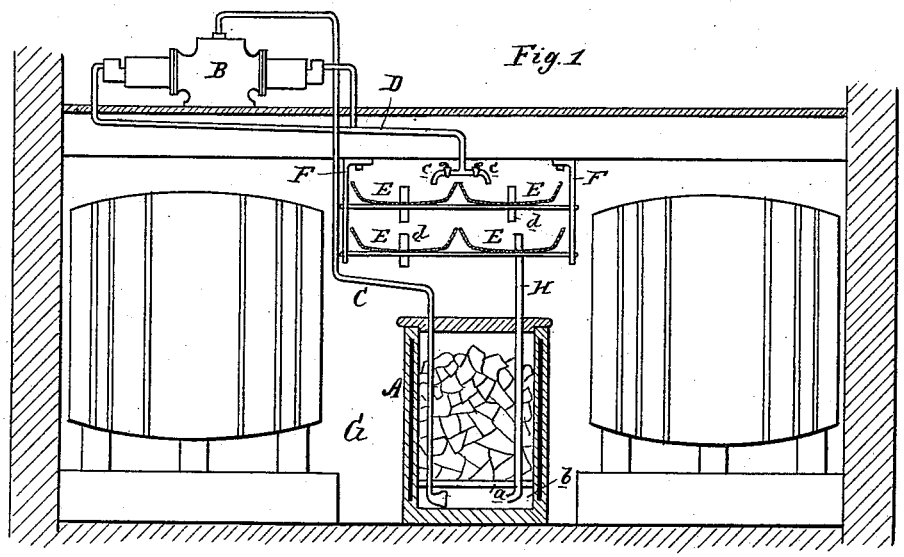
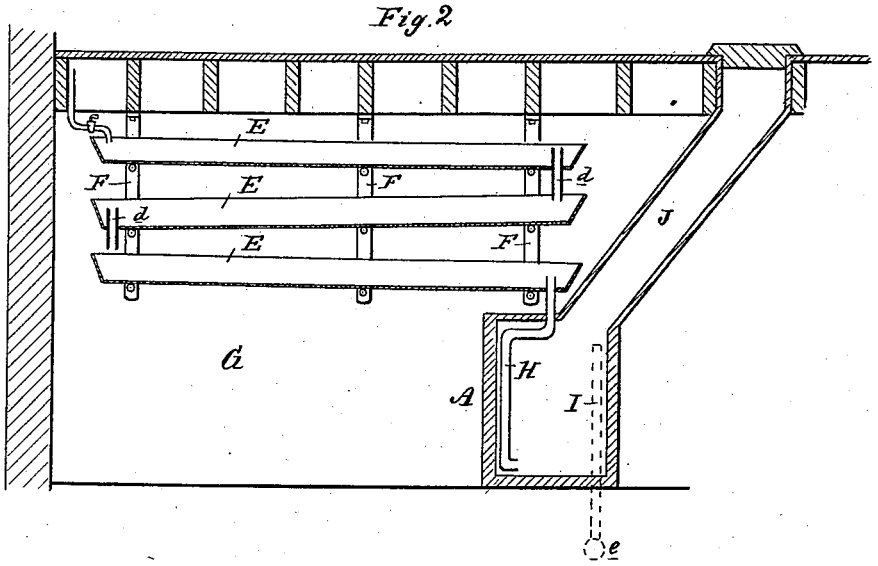



Fig. 2

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# UNITED STATES PATENT OFFICE.

ANTHONY F. CRAMER, OF DETROIT, MICHIGAN.

## DEVICE FOR COOLING STORAGE-CHAMBERS.

SPECIFICATION forming part of Letters Patent No. 346,807, dated August 3, 1886.

Application filed May 27, 1886. Serial No. 203,419. (No model.)

*To all whom it may concern:*

Be it known that I, ANTHONY F. CRAMER, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Devices for Cooling Storage-Chambers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in means for cooling beer-vaults and other rooms in which it is desired to preserve a low temperature. Hitherto this has been done in various ways, in which the cooling mixture has been carried through pipes, but this has been found to be objectionable, as the cooling mixture flowing through them corrodes the pipes, and is apt to clog them up by deposits, which can only be cleared out by taking down the pipes for the purpose.

The object of this invention is to provide means for reducing and securing a low temperature without the necessity of the employment of pipes; and the invention consists in the peculiar construction and combinations of the necessary parts, as more fully hereinafter described.

Figure 1 is a sectional elevation, showing my improvement as applied to keeping a low temperature in a beer-vault. Fig. 2 is a sectional cross-elevation of the same.

In the drawings, A represents a refrigerator or box, having a perforated false bottom, *a*, thereby forming a well, *b*, in the bottom of the box.

B is a pump, having a suction-pipe, C, communicating with such well, and an outlet-pipe, D, through which the pump discharges, and which is provided with one or more faucets, *c*.

E are shallow open pans supported by brackets F from the ceiling of the vault G, or in any other preferable or suitable manner. These pans are arranged above and below each other, and they are each provided with an overflow-pipe, *d*, so arranged as to allow the pans to remain nearly full, and overflow from the top one into those below it successively. The overflow of the lower pan connects with a pipe, H, leading into the well *b*.

I is an overflow-pipe leading from the refrigerating-box to a sewer, *e*, or to any other desired point.

J is a chute, through which the refrigerating material can be fed to the refrigerating-box from the floor above when required.

In practice the refrigerating-box is located on the floor of the chamber to be cooled and filled with ice and salt, the melting of which fills the well in the bottom, whence it is withdrawn by the action of the pump, and discharged into the upper pan, and thence it overflows into the pans below and finally into the well again, the current in the well being created by the suction preventing the salt in the mixture from settling in the well, when, if such settling is allowed, it would crystallize and form a solid mass.

I am aware of the Patents Nos. 194,414 and 341,906, and make no claim to the construction shown therein as forming part of my invention.

What I claim as my invention is—

The refrigerating structure described, consisting of the box A, having perforated false bottom, *a*, forming a well, *b*, below the same, pump *b*, suction-pipe C, passing through said box and communicating with said well, outlet-pipe D to said pump, open pans E above said box, one above the other, and provided with overflow-pipes *d*, and the pipe H passing through the box A, and connecting said well with the lowest of said pans, and the inclined chute J, for conducting the refrigerating material into the box A, all arranged for joint operation, as set forth.

ANTHONY F. CRAMER.

Witnesses:

H. S. SPRAGUE,

CHAS. THURMAN.