

(No Model.)

T. L. RANKIN.
Ice Making Apparatus.

No. 235,814.

Patented Dec. 21, 1880.

Fig. 1.

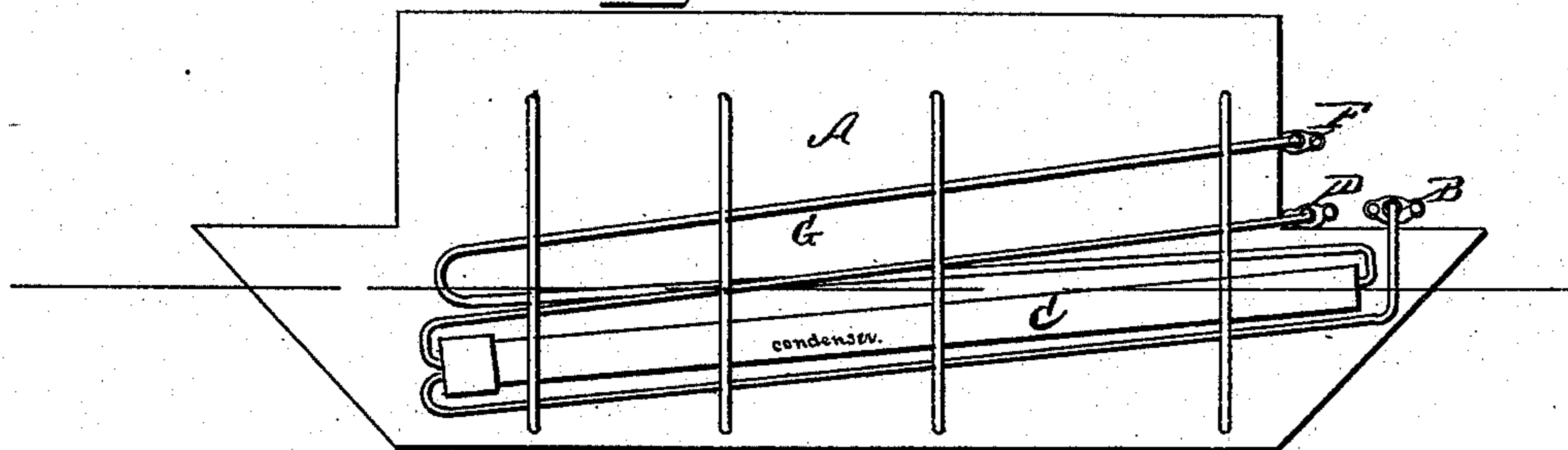


Fig. 2.

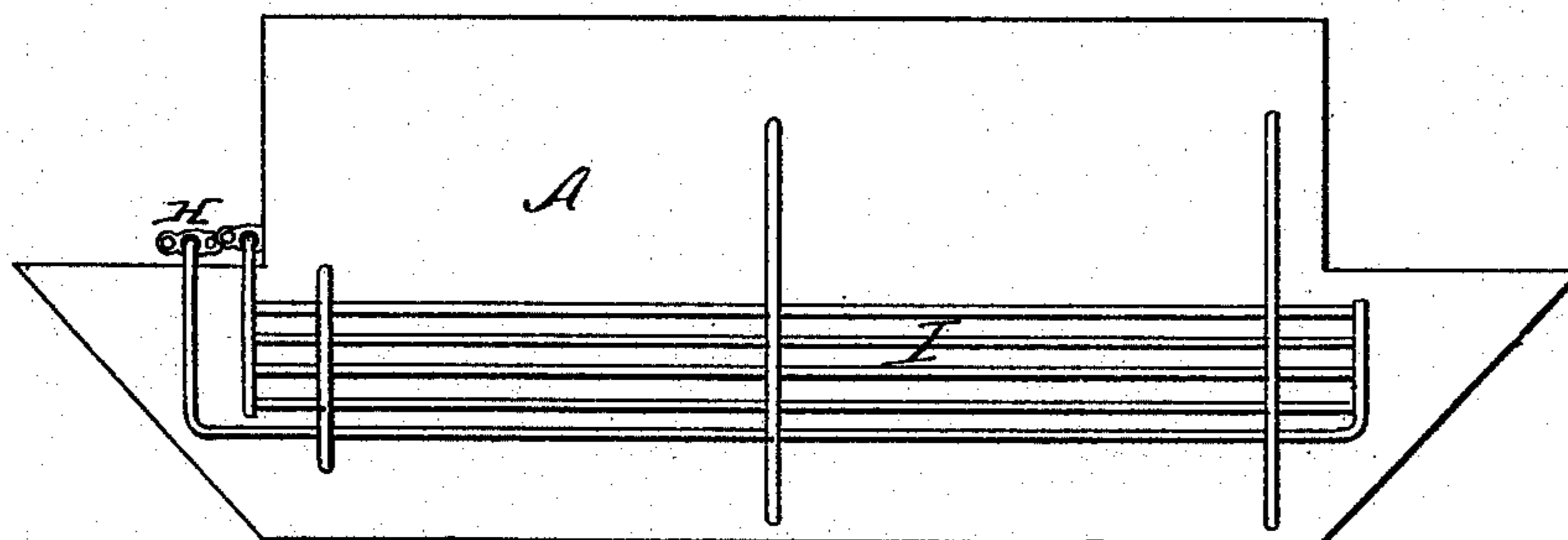
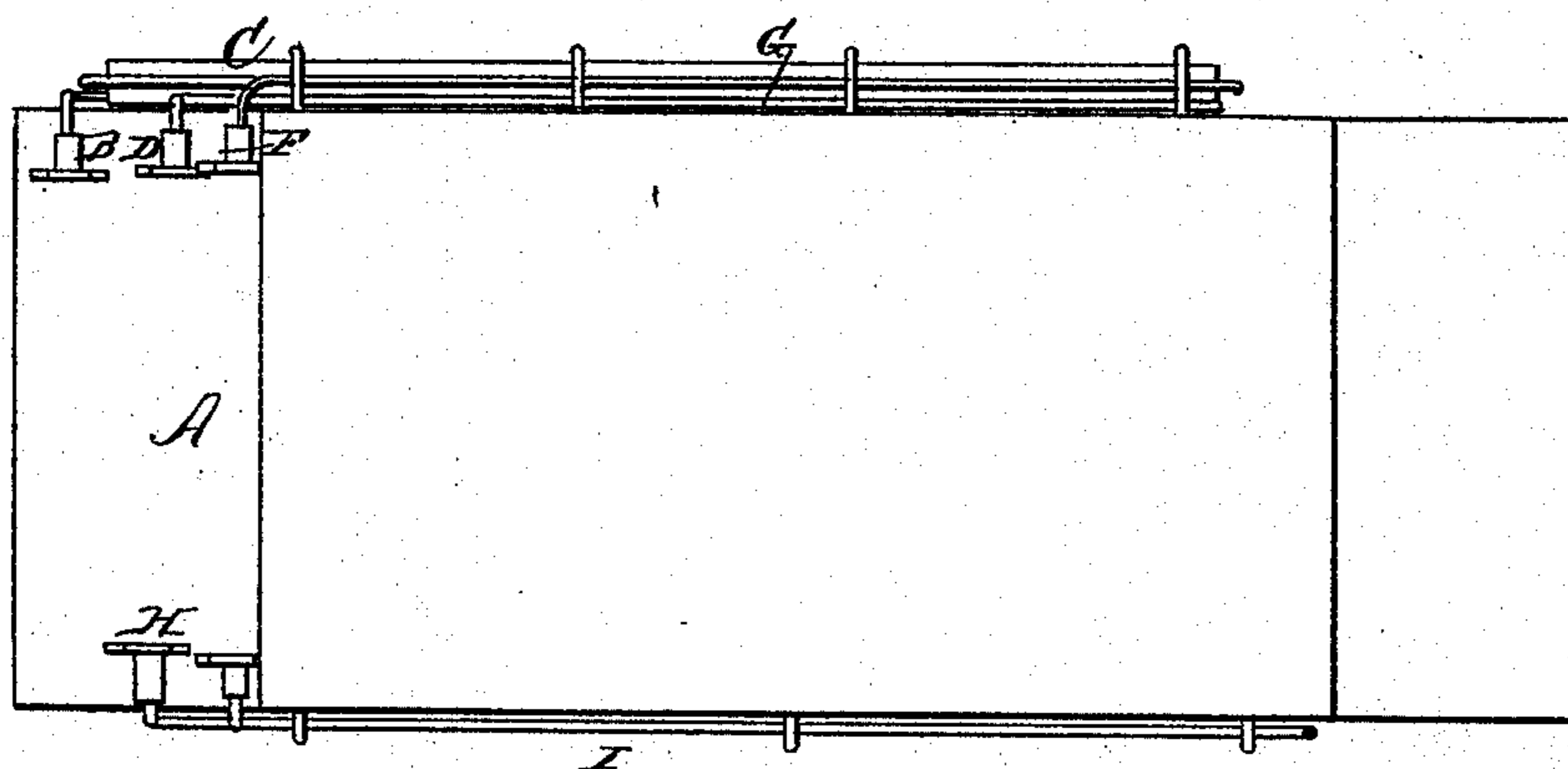


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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ICE-MAKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 235,814, dated December 21, 1880.

Application filed April 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. RANKIN, of New York, in the county and State of New York, have invented certain new and useful Improvements in Ice-Making Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in an ice-machine barge with an ice-manufacturing plant on board, the absorbers and condensers being hung upon the sides of the craft and in the water in which the barge floats, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, Fig. 2 an elevation of the reverse side, and Fig. 3 a plan view, of my invention.

A represents a barge or vessel of any desired size and construction, and containing within it a suitable ice-machine, embracing a furnace in which the ammonia still-pipes are placed, as well as tanks with freezing-coils.

B is the stuffing-box joint or joints to the outlet-pipe from the still in the boat, leading to the condenser C, submerged in the water and hung against the side of the boat. D is the return stuffing-box joint from the condenser C to the pipe leading to the valves in the freezing-tank. These joints are for the purpose of allowing the submerged condensers and absorbers to be swung upward or downward, as the boat may be heavily or lightly loaded.

F is the outlet from the valves in the freezing-tank, through a stuffing-box to the absorber G, which is hung upon an incline upon the side of the barge.

H is the stuffing-box outlet for weak water of ammonia from the bottom of the stills to a cooling coil or loop, I, also submerged, which cools the weak water and connects with the absorber at the upper end.

The process of manufacturing the ice it is not necessary to describe here, as it is substantially the same as in ordinary use.

The advantages of my barge arrangement are: The facilities for moving from place to place to supply cities where ice can be disposed of to the best advantage. The expense of land and buildings is nearly saved, and river barges will bring coal without expense of cartage. The water for cooling costs nothing.

A water-tank may be located directly over the freezing-tank for settling river-water, from which it can be drawn down into the freezing-tank from cocks located above the bottom, and thus I am enabled to use any river-water for ice-making.

A large item of expense in ice-making is in the great amount of absorbing-pipe required where it is immersed in a tank, and the amount of power required for pumping the water for cooling. This expense is very materially reduced in the barge system.

I am aware that the individual parts of the within-described apparatus are not new; and I am aware, also, of the fact that submerged steam-condensers have been used on the outside of a floating structure; hence my claim is not intended to embrace what I here acknowledge to be old.

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

The combination, with a floating structure furnished with ice-making machinery, of the inclined condenser C and absorber G, said condenser and absorber being suspended from the outside of the structure and connected to the tank still and coils by means of flexible joints, for the purpose of allowing an upward and downward motion to the condenser and absorber, substantially in the manner herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOS. L. RANKIN.

Witnesses:

J. G. COCKRILL,
GEO. W. GATES.