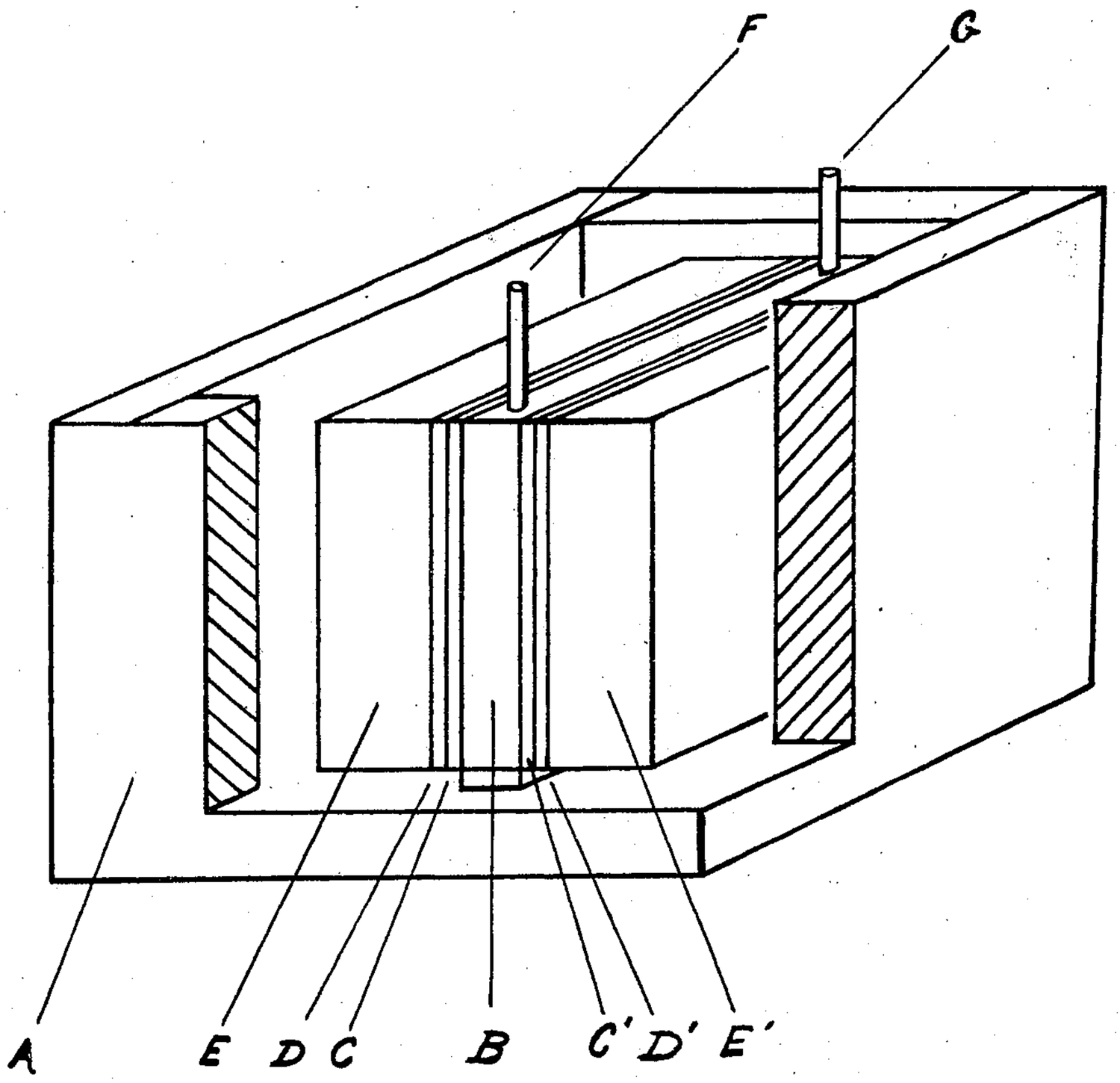
No. 682,659. Patented Sept. 17, 1901.

W. J. WOODCOCK.

ICE FREEZING PLATE.

(Application filed Jan. 24, 1901.)

(No Model.)



Willard J. Woodcock

INVENTOR

WITNESSES:

Allan A. Cook

Edward L. Nicoll

UNITED STATES PATENT OFFICE.

WILLARD J. WOODCOCK, OF BROOKLYN, NEW YORK.

ICE-FREEZING PLATE.

SPECIFICATION forming part of Letters Patent No. 682,659, dated September 17, 1901.

Application filed January 24, 1901. Serial No. 44,602. (No model.)

To all whom it may concern:

Be it known that I, WILLARD J. WOODCOCK, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Ice-Freezing Plates, of which the following is a specification.

This invention relates to the manufacture of plate-ice, and has for its object the producing of the same in a much shorter time.

The present method of manufacturing plate-ice is to set a freezing-plate made of iron on its edge in a tank of water and circulating cold brine or expand liquid anhydrous ammonia through it, causing the ice to form on both its sides. This arrangement is very satisfactory with a freezing temperature above zero Fahrenheit, except that it takes about nine days to make ice twelve inches thick. To shorten the time, a lower temperature must be employed. In fact, to make twelve-inch ice in forty-eight hours the temperatures range to even $-60°$ Fahrenheit, and as iron contracts as it gets cold and ice expands to a greater extent while forming at low temperatures the ice forming on an iron plate will crack and be unsalable.

The novelty of this invention is to sheathe the sides of the iron freezing-plate with a substance which will allow for this expansion and contraction of the iron freezing-plate and the ice forming thereon. The substance I choose to employ at present is rubber over several layers of canvas. The canvas being next to the iron plate forms a backing for the rubber, and the ice forms on the rubber. This I find to be very practical and effective. Possibly other substances might also be effective. Another advantage of sheathing the iron freezing-plate is that the ice forming on it is perfectly clear, which is not always the case on iron freezing-plates when the freezing temperatures are below zero Fahrenheit.

Reference being made to the accompanying drawings, which clearly illustrate the application of my invention, A is a suitable tank of water with the freezing-plate B, usually made of iron, standing on its edge in it, with the inlet and outlet pipes F and G for the refrigerating connections.

C and C′ represent the canvas backing for the rubber sheets D and D′, upon which the plates of ice E and E′ form. This surface of rubber allows for the contraction of the iron and expansion of ice forming, especially when very low temperatures are employed to produce ice rapidly.

What I claim as new is—

A stable freezing-plate having a yielding surface to compensate for the expansion and contraction of ice forming thereon.

Signed at Brooklyn, in the county of Kings and State of New York, this 18th day of January, A. D. 1901.

WILLARD J. WOODCOCK.

Witnesses:
H. W. BEUSMANN,
LOUIS H. LINS.