

No. 684,240.

Patented Oct. 8, 1901.

T. S. HILES.  
ICE BREAKER.

(Application filed Jan. 14, 1901.)

(No Model.)

FIG. 1

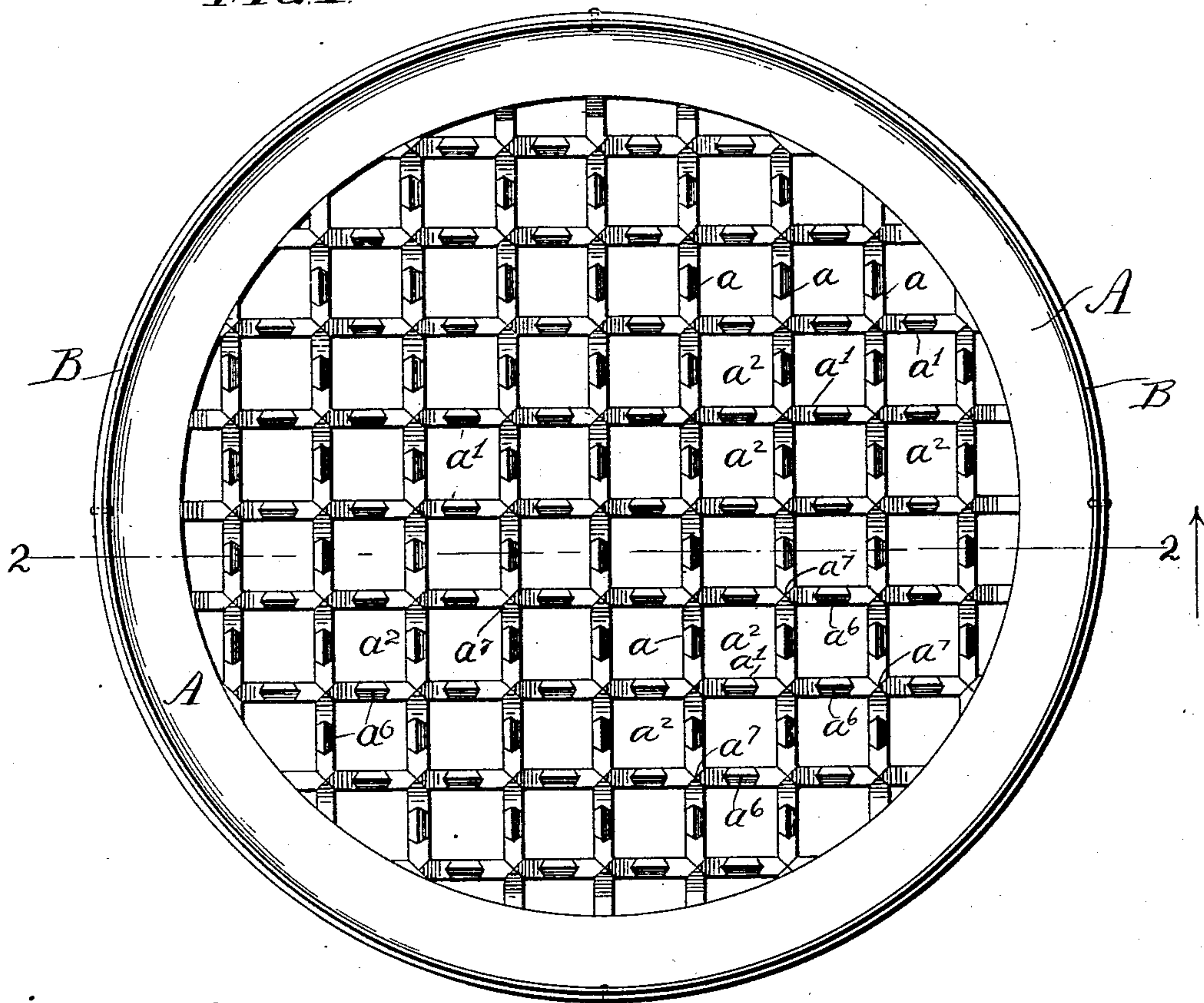


FIG. 2

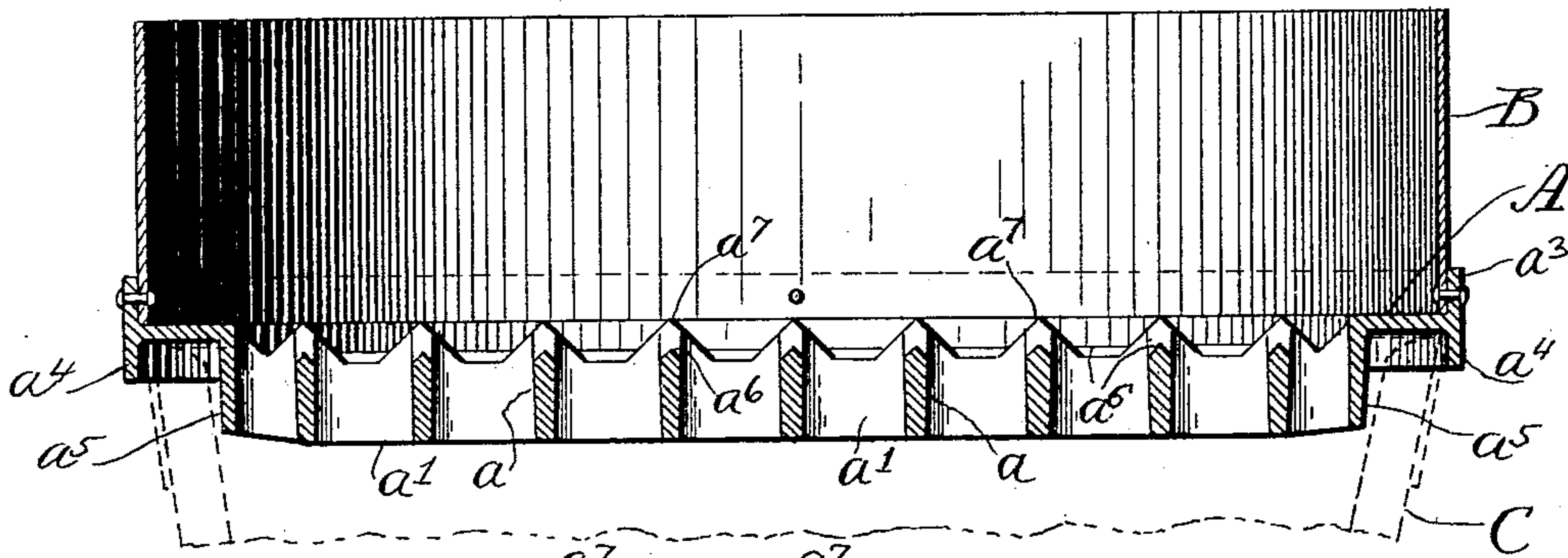
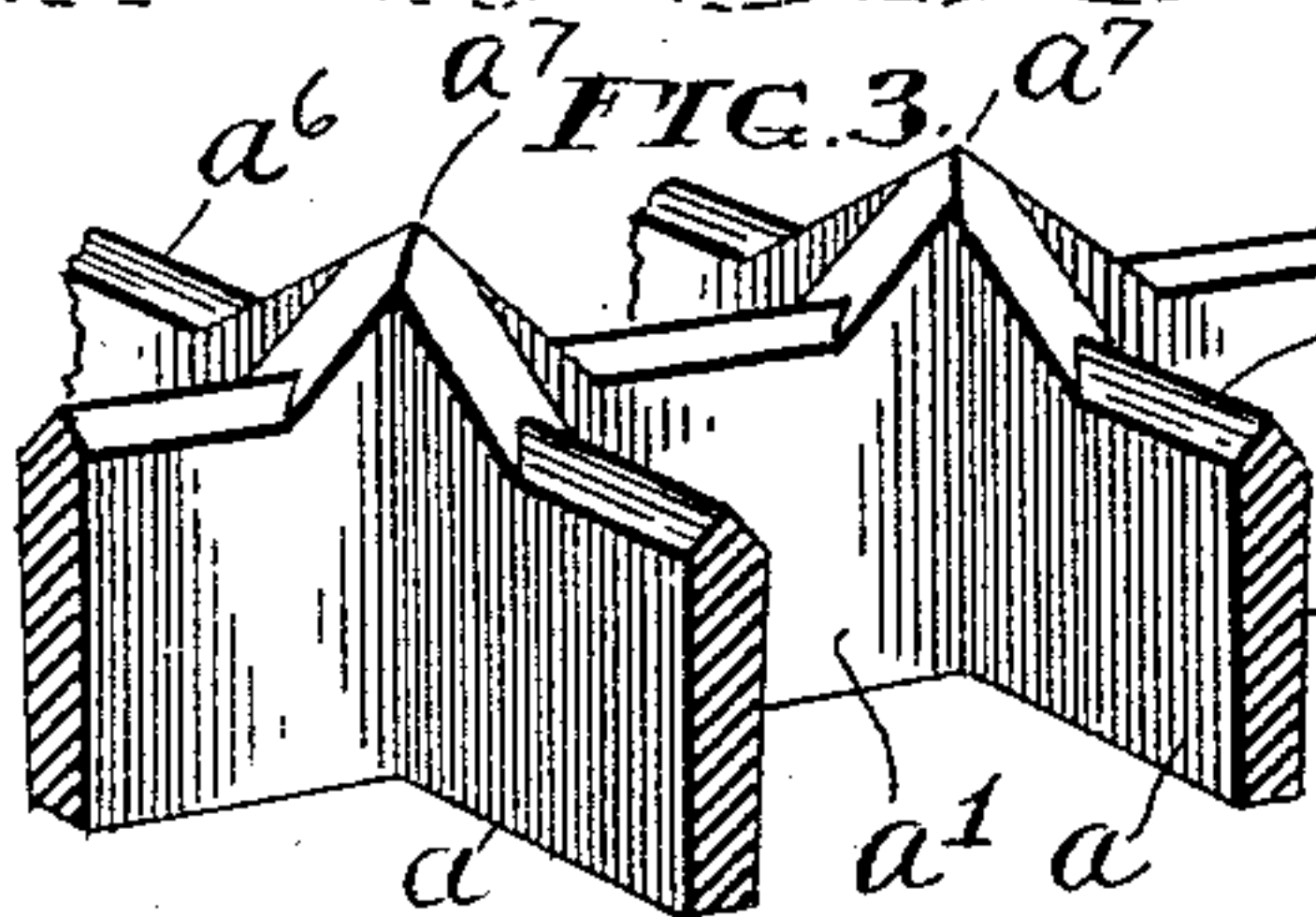


FIG. 3

Witnesses:  
Chas O Shurway  
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# UNITED STATES PATENT OFFICE.

THOMAS S. HILES, OF CHICAGO, ILLINOIS.

## ICE-BREAKER.

SPECIFICATION forming part of Letters Patent No. 684,240, dated October 8, 1901.

Application filed January 14, 1901. Serial No. 43,205. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS S. HILES, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ice-Breakers, of which the following is a specification.

My invention relates to certain improvements in ice-breakers designed for the purpose of producing a device upon which ice may be broken up to advantage and which may allow the pieces of the same to pass through as soon as they are sufficiently reduced in size to meet the requirements for which the breaker is constructed.

In the drawings, Figure 1 is a plan of the preferred form of my breaker. Fig. 2 is a vertical section in the plane 2 2 of Fig. 1; and Fig. 3 is a detail perspective upon a larger scale, showing a small portion of the screen upon which the ice is broken.

Referring to the drawings, A is a preferably annular plate, the middle portion of which is spanned by intersecting bridges  $a a'$ , leaving vertical rectangular openings  $a^2$ . The plate A is provided with an upright marginal flange  $a^3$ , to which is secured a cylindrical wall B of such height as may be desired. Below the annular plate A are depending flanges  $a^4 a^5$ , adapted to fit, respectively, over the outside

and inside of the top of an ordinary pail, which is represented in dotted lines at C. The bridges  $a a'$  are preferably sharpened on top, as seen at  $a^6$ , and provided at their points of intersection with upwardly-projecting points or spurs  $a^7$ , the object of which, as well as of the sharpened edges, being to cut or split the ice which is pounded down upon it.

In the use of the device the ice in pieces of proper size is placed upon the screen and pounded thereon with an ordinary hammer, mallet, or other suitable tool until it is broken up sufficiently fine to pass through the openings.

I claim as new and desire to secure by Letters Patent—

An ice-breaker consisting of a suitable vessel having side walls to retain the ice and a bottom containing a screen having intersecting bridges with sharp upper edges, and upwardly-projecting points at the intersections of the bridges; substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 1st day of December, A. D. 1900.

THOMAS S. HILES.

Witnesses:

CHAS. O. SHERVEY,  
S. BLISS.