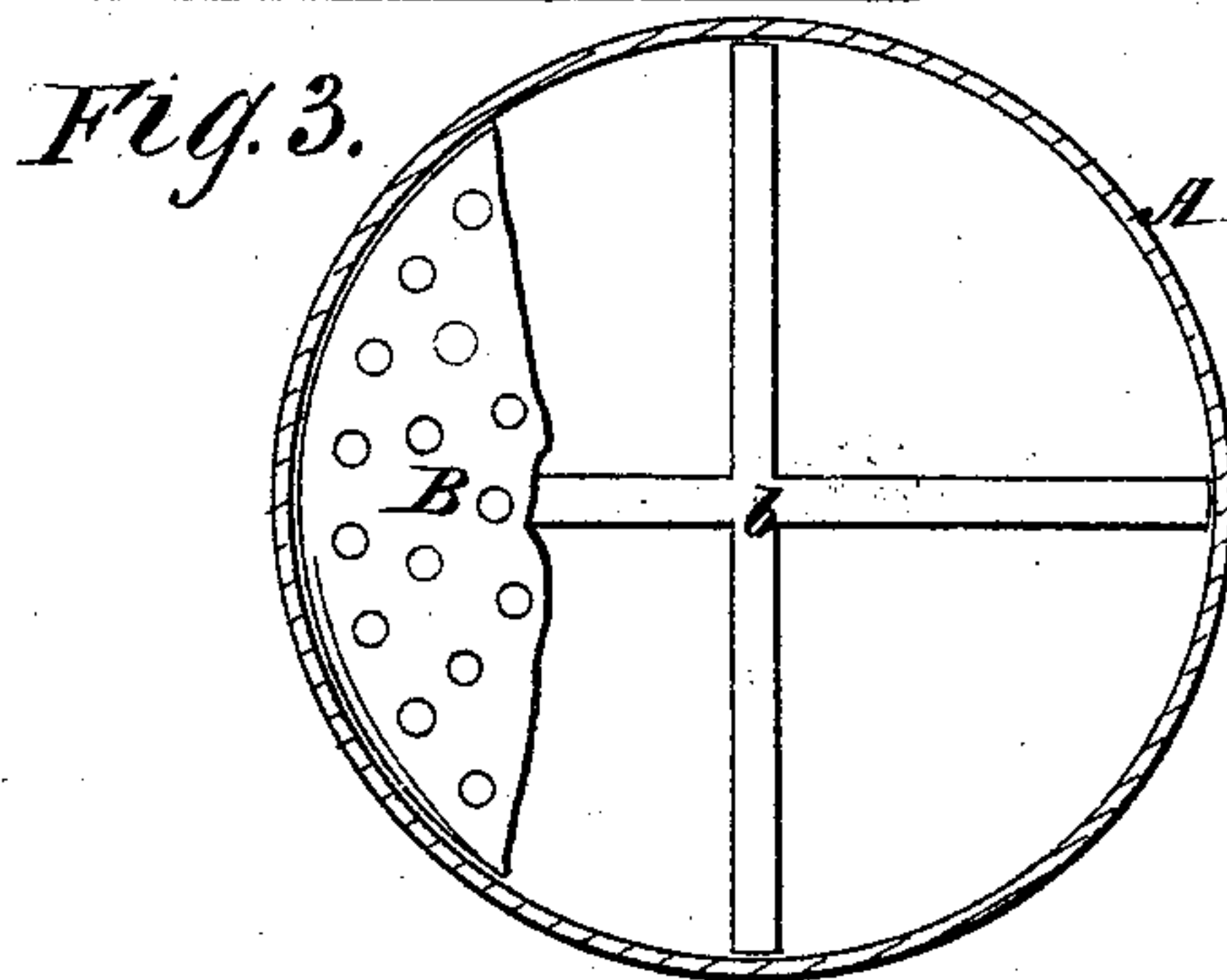
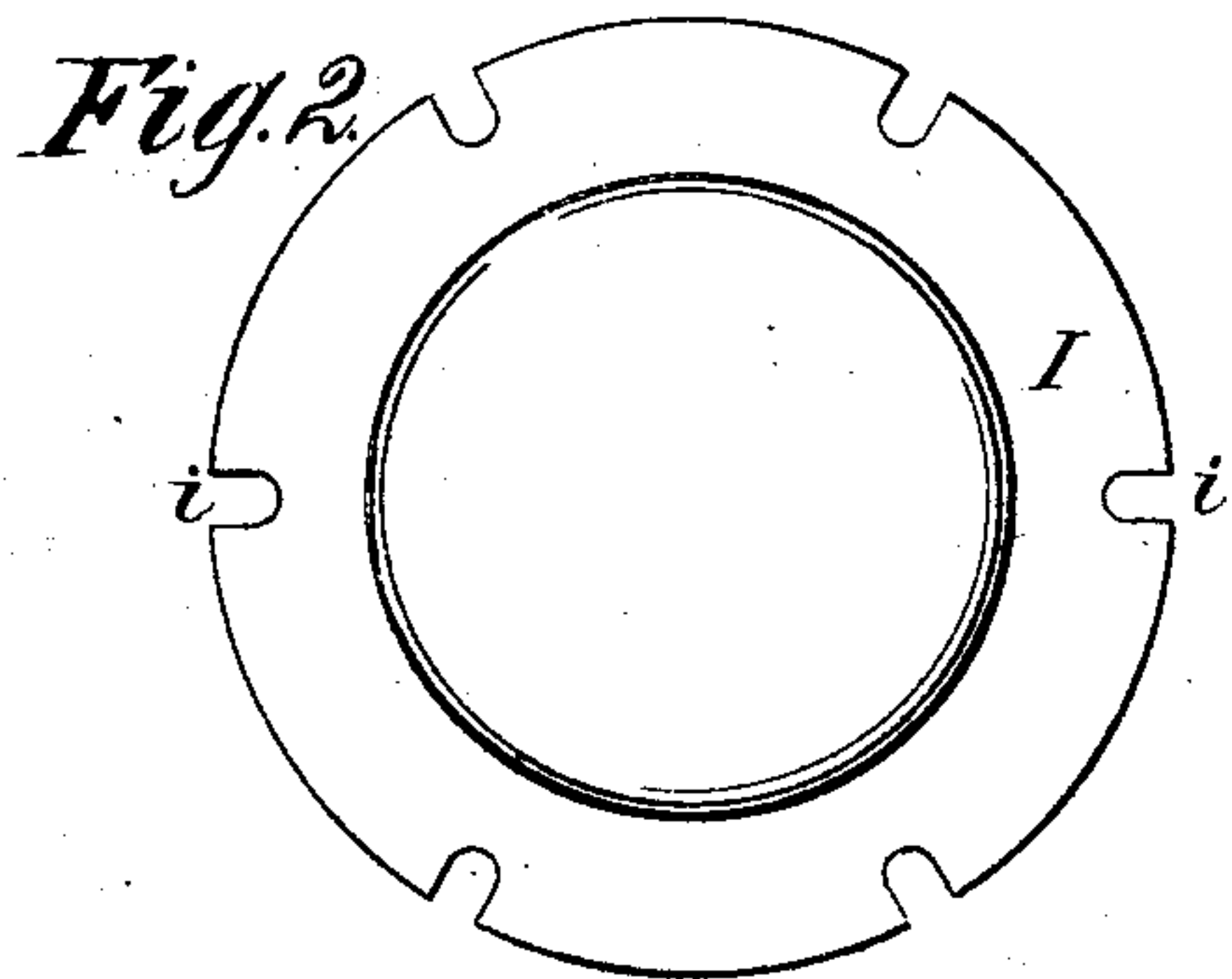
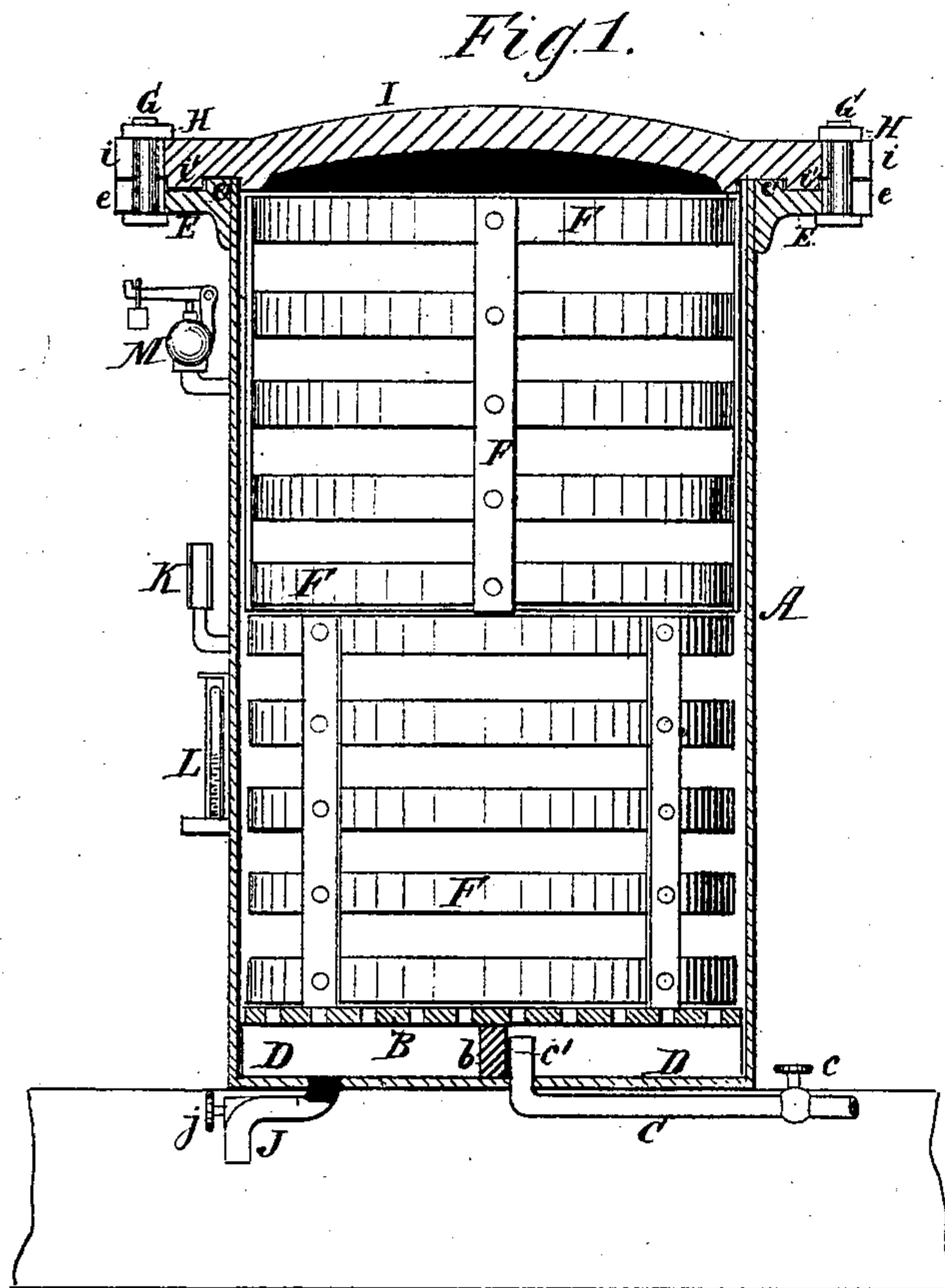


A. K. SHRIVER.
Apparatus for Preserving Oysters and other
Articles in Sealed Cans.

No. 149,256.

Patented March 31, 1874.



Witnesses:
G. Matthews.
Solon O. Kemont

Inventor:
Andrew K. Shriver
Per *[Signature]*

Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW K. SHRIVER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN APPARATUS FOR PRESERVING OYSTERS AND OTHER ARTICLES IN SEALED CANS.

Specification forming part of Letters Patent No. **149,256**, dated March 31, 1874; application filed February 17, 1874.

To all whom it may concern:

Be it known that I, ANDREW K. SHRIVER, of Baltimore, Maryland, have invented a new and Improved Apparatus for Preserving Hermetically-Sealed Cans of Fruit, Vegetables, Meats, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

The invention relates to the application of heat, whereby the tendency of meat, vegetables, fruit, and fish to ferment may be removed, and the article thereby preserved in hermetically-sealed cans in a fresh and healthy state. The present invention consists in the novel process hereinafter described and claimed.

Heretofore the can, after being filled, has been boiled in ordinary water, or placed in a bath of salt-water, in which a temperature of 230° is attainable, or in chloride of calcium, whereby about 245° may be secured.

It is a great object to allow the tin can to remain as short a time as possible under the action of heat, and this is obtainable by the use of salt-water and chloride of calcium to a considerable extent; but these agents are themselves prejudicial to the metal of the can and kettle, causing it to rust and wear rapidly; also, by the use of the maximum of heat secured by the chloride process, the cans often burst, and not only destroy the can, but become very dangerous to the operator.

I will now illustrate the process which constitutes my invention, by describing mechanical means by which it may be cheaply and easily applied.

Figure 1 of drawing is a vertical section; Figs. 2 and 3, detail horizontal views.

A represents a cylindrical or other form of preserving-vessel, having the perforated false bottom B raised on cleats *b* above the true bottom. C is a steam-supply pipe, connected with a steam-generator, and having the cock *c*, to regulate the quantity of steam or cut it off altogether. The end *c'* passes up through the true bottom, and discharges the steam beneath the false bottom B. The steam then becomes diffused in the subjacent space D, and passes up through the perforations of bottom B into the chamber occupied by baskets or can-holders F, that may be handled by rods or otherwise. I is a cover, which fits steam-tight on or over the top of vessel A. J is an

outlet-pipe for the water of condensation, having cock *j*. The filled cans are lowered in baskets or holders F, the top of cylinder closed steam-tight, and the steam admitted from pipe C. K is a gage, by which it may be seen at once when the desired degree of pressure is reached; L, a thermometer to signify the temperature, and M a safety-valve, which will allow the escape of steam after a certain pressure is attained. By this process we can use a very high degree of temperature, because the cylinder A being steam-tight, the heat expansion and outward pressure on the inside of the can is counterbalanced by the inward pressure of the steam in the cylinder.

Thus we avoid the corroding effect of the chloride of calcium and salt upon the tin of the can and metal of the kettle, remove all liability to burst, and at the same time shorten the space of time during which the can is under the influence of heat, securing a more regular and uniform temperature.

E is a flange-ring, having the open slots *e* on its periphery and the groove *e'*, the former of which corresponds to the open slots *i*, and the latter to the projection *i'* of cover. G H are, respectively, bolts and nuts, the former being inserted in the slots *e i*, and the latter clamping the cover to the flange-ring E or its packing.

I am aware that the idea of subjecting the sealed cans and their contents to steam heat above 212° Fahrenheit is not new, and I therefore do not claim such invention; but,

Having fully described my invention, what I do claim is—

1. The combination of steam-cylinder A, having steam-inlet pipe C, thermometer L, and pressure-gage K, with can-baskets F, placed therein, and resting upon a raised and perforated bottom, as and for the purpose specified.

2. The combination of cover I, having groove *i'* and open slots *i*, and the ring-flange E, having groove *e'* and open slots *e*, with the bolts and nuts G H, as and for the purpose set forth.

The above specification of my invention signed this 10th day of February, 1874.

ANDREW K. SHRIVER.

Witnesses:

SOLON C. KEMON,
CHAS. A. PETTIT.