

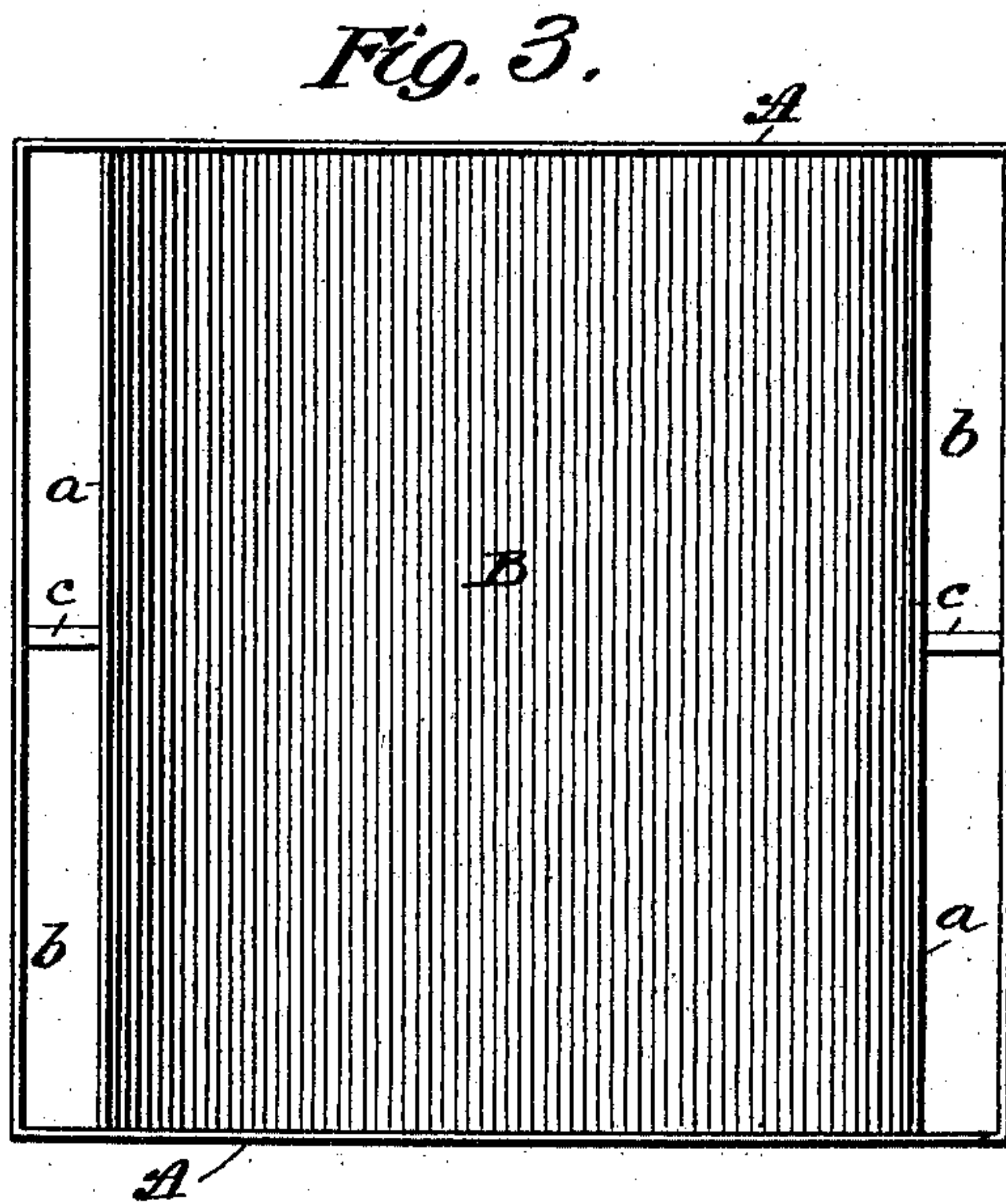
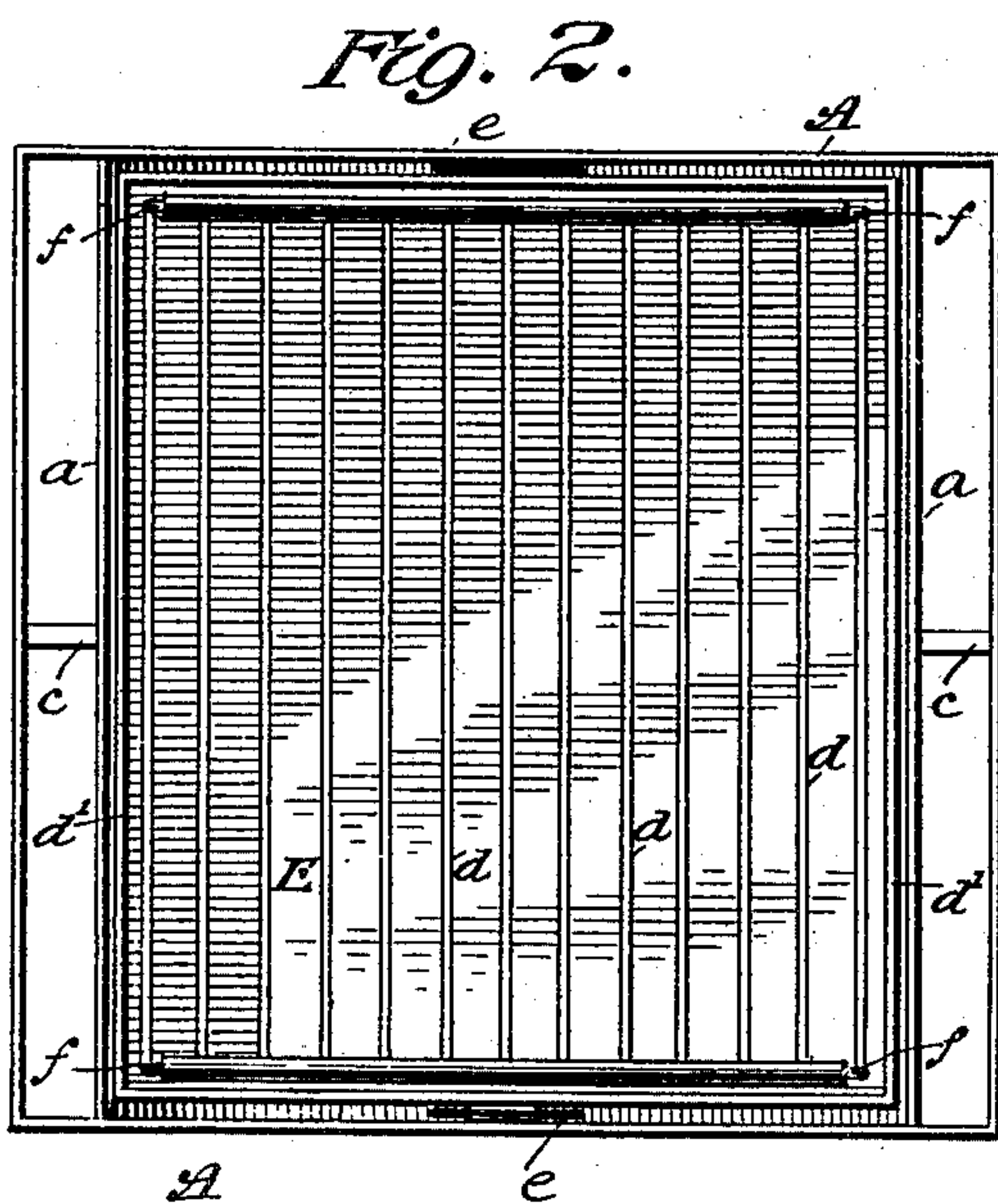
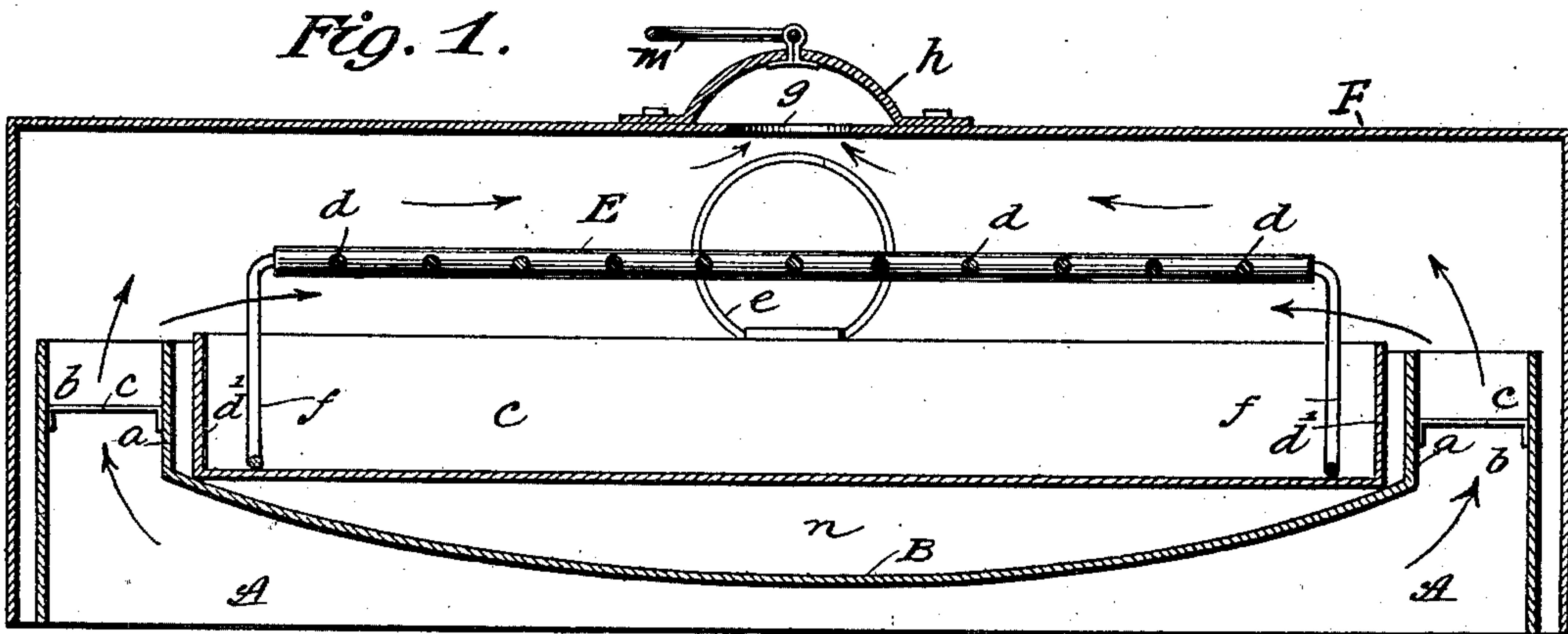
No. 693,725.

Patented Feb. 18, 1902.

E. A. LELAND.
BROILER.

(Application filed July 11, 1901.)

(No Model.)



WITNESSES:

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BROILER.

SPECIFICATION forming part of Letters Patent No. 693,725, dated February 18, 1902.

Application filed July 11, 1901. Serial No. 67,877. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. LELAND, a citizen of the United States, and a resident of Great Barrington, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Broilers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical transverse sectional view of a broiler made according to my invention. Fig. 2 is a plan view, on a smaller scale, showing the apparatus with its covering-shell removed. Fig. 3 is an inverted view, on a like scale to Fig. 2, of the apparatus.

This invention relates to that class of apparatuses which are used for broiling meats, &c. It is more especially intended for use in connection with gas and gasoline burners; but it may, when desired, be used with any other appropriate source of the requisite heat.

It comprises certain new and useful combinations of parts whereby the article to be broiled is subjected to the confined action of flame, hot air, and gases, as the case may be, upon both its upper and lower sides simultaneously, whereby the broiling operation is performed under the most advantageous conditions and with correspondingly-improved results.

A is a circumferential rim, which constitutes the wall of the apparatus and which I term a "confining-rim," for the reason that in the operation of the apparatus the flame, &c., with which the broiling is done are confined within it. Within this rim, at the upper part thereof, is a concave, convex, or dish-shaped plate B. The edge of this plate is turned upward to provide a flange *a*, as shown in Figs. 1 and 2, for which reason I term this an "upwardly-flanged" plate. This plate is of smaller dimensions than the rim A, so that a space *b* is provided between the flange *a* and the upper part of the rim A, this space extending around the whole or any desired portion of the circumference of the apparatus. As represented in the drawings, it is provided in two portions at opposite sides of the apparatus. The latter may be square, as shown in the drawings, or of any other

circumferential configuration which may be desired. The dish-shaped plate may be supported in position by narrow brackets *c*, provided to the inner surface of the rim, or by any suitable means. Placed within the flange *a* of the plate B and resting upon the peripheral portion thereof is a drip-pan C, the sides *d* of which fit loosely within the flange *a*, so that the drip-pan may be readily removed and replaced, as may be desired. For convenience of handling the drip-pan may be provided with lifting-rings *e*. With its feet *f* resting on the bottom of the drip-pan is a grill E, which may comprise a system of parallel bars *d*, as shown in Figs. 1 and 2, or may be of any other usual or suitable construction. This grill is situated higher than the level of the upper edge of the rim A and also of the flange *a* of the plate B and the sides of the drip-pan for a purpose herein presently set forth. Placed above and around the rim, the grill, &c., is a removable covering-shell F, which is most conveniently provided by moving its sides around the rim, as shown in Fig. 1. In the top of this shell is an outlet-opening *g*, over which there is preferably a cowl *h*. For convenience of manipulation this shell may have a lifting-ring *m*, as shown in Fig. 1.

In the use and operation of the apparatus the flame of a gas-burner, kerosene-burner, or other suitable means for heating is caused to play upon the convex bottom of the dish-shaped plate B. Within the limits circumscribed by the rim A the convex form of the bottom of said plate operates to more or less direct or disperse the flame from the middle part of said bottom outward toward the rim, so that a portion of the flame, with air strongly heated by the latter, and hot products of combustion shall pass upward through the space *b* between the rim A and the flange *a* of the plate B and being thence deflected toward the outlet-opening *g* pass both above and below the grill, as indicated by the arrows in Fig. 1.

The space *n*, provided below the drip-pan by the concave upper surface of the dish-shaped plate B, avoids undue heating of the bottom of the drip-pan, and therefore prevents the burning of drip therein. The passage of flame and hot air and gases both

above and below the grill causes the meat or other material to be broiled simultaneously on both sides, while the products of combustion after performing their office, as described, together with vapors from the broiling material, make a slow exit through the opening *g*. The rim *A* confines the hot air, gases, and flame against radial dispersion and directs them upward to the lower and upper sides of the grill, as set forth, while their confinement in the interior of the apparatus, except as they make their escape from the opening, insures their more persistent contact with the surfaces of the material to be broiled. It is of course to be understood that the hot products which act upon the under surface of said material make their way from below the grill to the opening *g* through whatever interstices there may be in the material or through such portions of the grill as are not occupied by said material.

What I claim as my invention is—

1. The combination with a confining-rim, an upwardly-flanged plate placed in said rim with a space between the flange of the plate and the upper part of the rim, and a grill placed above the plate and higher than the upper edges of the rim and the flange of the plate, of a drip-pan interposed between the plate and the grill, and a covering-shell which has an outlet for vapors and gaseous products of combustion, as described.

2. The combination with a confining-rim, an upwardly-flanged dish-shaped plate placed in said rim with a space between the flange of the plate and the upper part of the rim, a grill placed above the plate and higher than the upper edges of the rim and the flange of the plate, and a covering-shell which has an outlet for vapors and gaseous products of combustion, of a drip-pan interposed between the grill and the plate with an air-space between the bottom of the drip-pan and the concave surface of the plate for tempering the transmission of heat to the drip-pan, as described.

3. The combination with a confining-rim, a removable covering-shell having an outlet-opening and placed above and around the rim, and a dish-shaped upwardly-flanged plate placed in said rim with a space between the flange of the plate and the upper part of the rim, of a drip-pan supported by the dish-shaped plate with an air-space between its bottom and the concave upper surface of said plate, of a removable grill, constructed with means for supporting the grill above the drip-pan at a height greater than the upper edges of the rim, the flange of the dish-shaped plate, and the sides of the drip-pan, as described.

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