

(No Model.)

T. W. LANIER.

SUGAR BOILER.

No. 259,321.

Patented June 13, 1882.

Fig 1

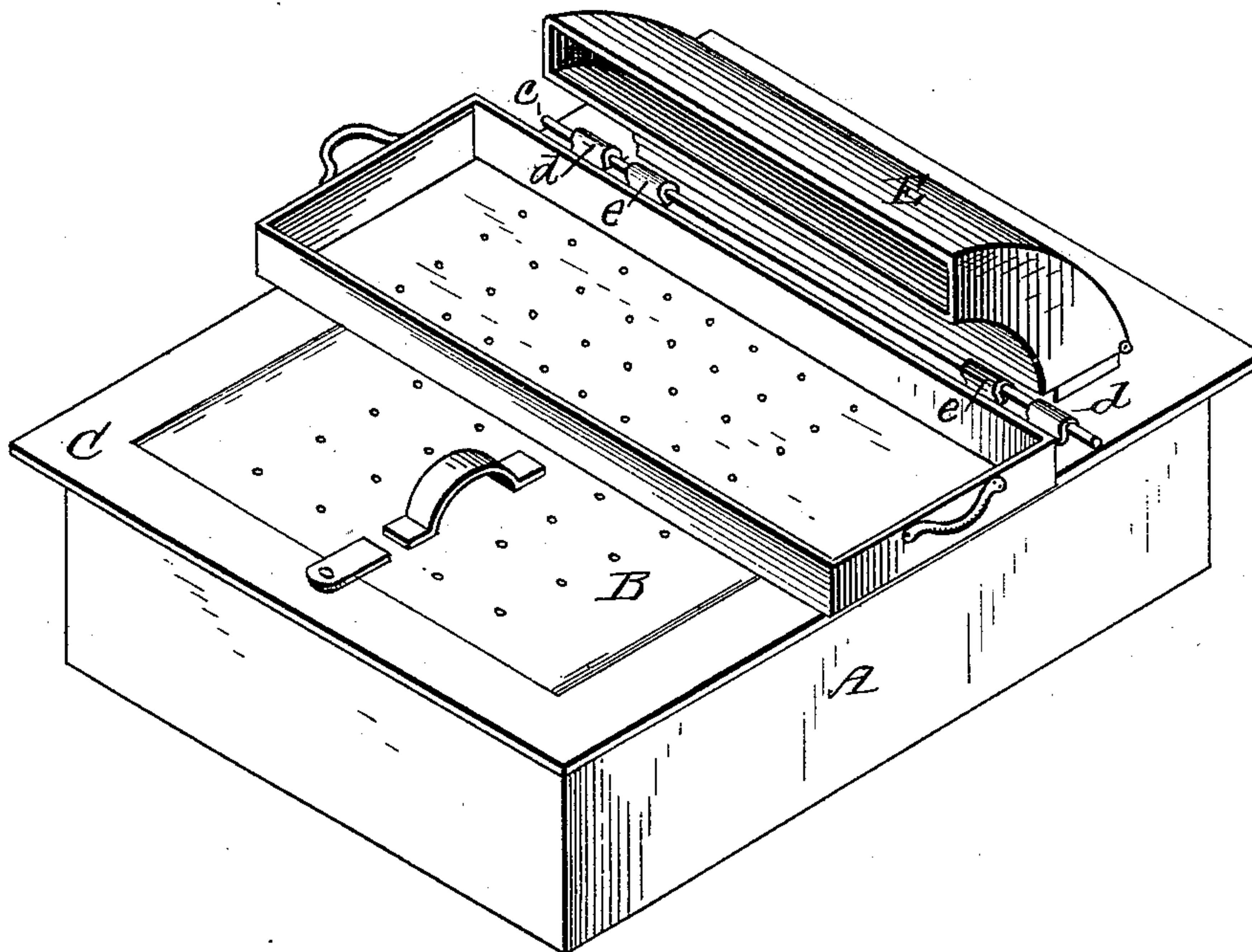


Fig 2

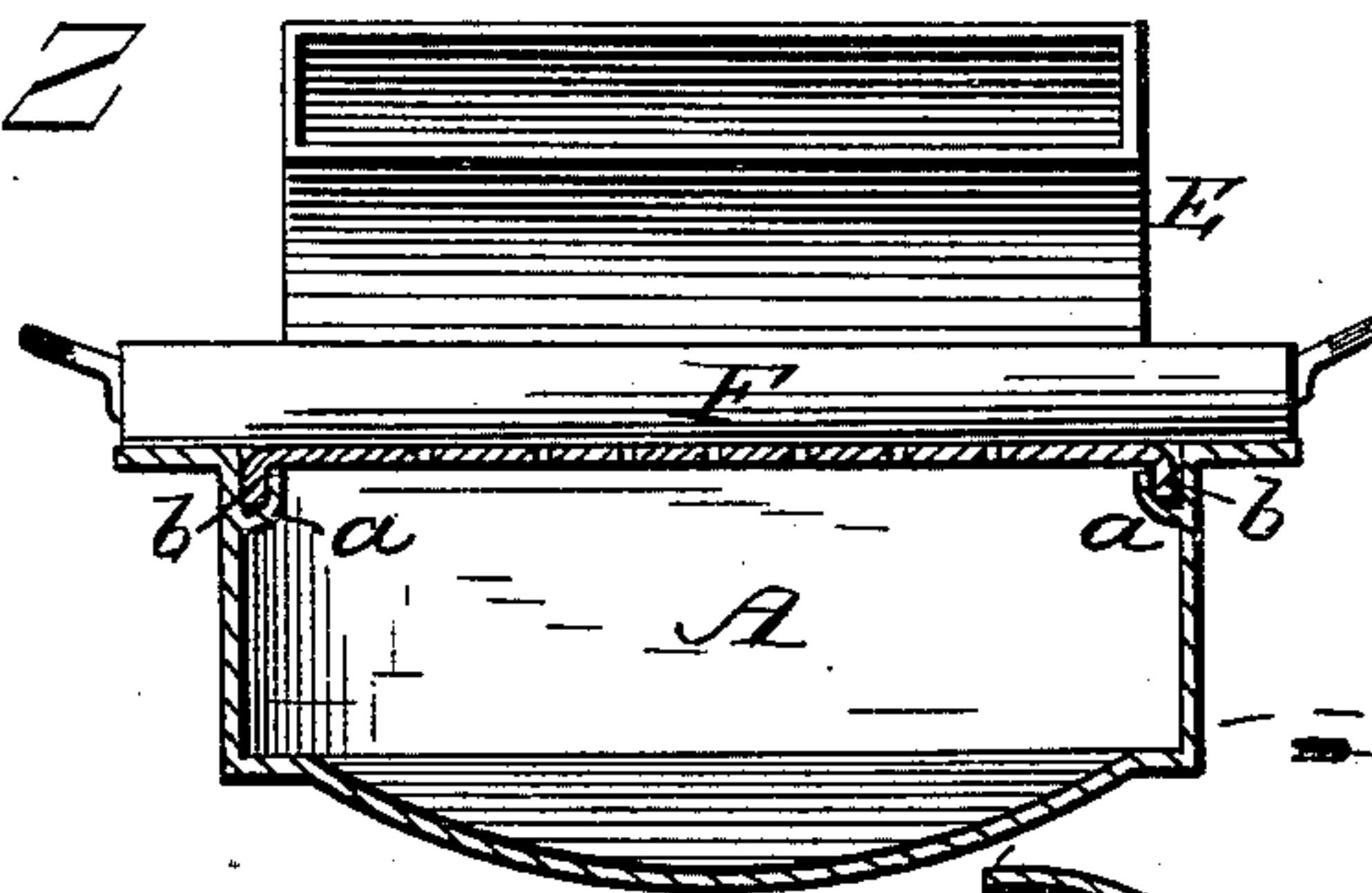
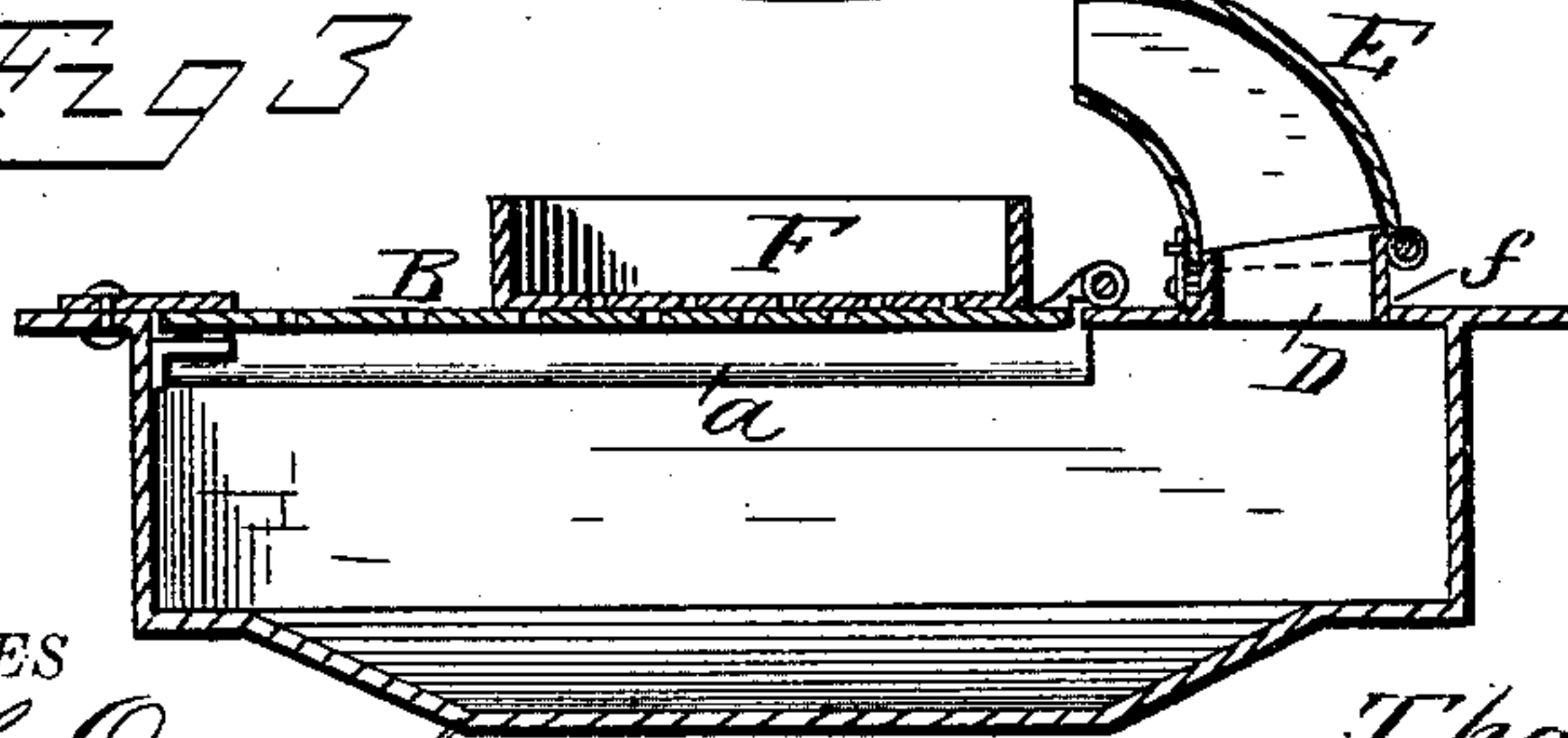


Fig 3



WITNESSES

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THOMAS W. LANIER, OF OLIVER, GEORGIA.

SUGAR-BOILER.

SPECIFICATION forming part of Letters Patent No. 259,321, dated June 13, 1882.

Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. LANIER, citizen of the United States, residing at Oliver, in the county of Scriven and State of Georgia, have invented certain new and useful Improvements in Sugar-Boilers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my invention; Fig. 2, a cross-section, and Fig. 3 a longitudinal vertical section, of the same.

This invention relates to that class of devices known as "sugar boilers" or "evaporators;" and the object thereof is to improve the construction and render such devices more effective in their operation, as will be hereinafter more fully described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents the boiler, constructed of any suitable material, having a flat or nearly flat bottom, by means of which a greater heating-surface is obtained, thus allowing the sirup to cook faster with the use of less fuel. At the top of this boiler, upon its interior sides, are provided seats *a*, in which rest flanges *b*, supporting a perforated sheet-metal or wire-gauze cover, B, held in place and prevented from being forced up by the pressure of the steam by means of a suitable fastening. By having the flanges of the cover fit and rest in the seats, as described, the said cover is prevented from sagging, and is always flush with the top of the boiler. The cover is connected to the top of boiler by means of a rod, *c*, running through straps *d* upon the projecting rim C and similar straps, *e*, upon the said cover, these straps and rod forming a hinge, by means of which the cover is swung up from the boiler; and said cover may be readily removed by simply withdrawing the rod from the straps. The rear portion of the boiler is provided with a rectangular opening, D, formed with an upright projecting collar, *f*, to which is hinged a segmental spout, E, which fits over the said collar, and is capable of being swung back in the direction of the arrow. This segmental spout is intended to be provided with a suitable packing where it fits the collar, so as to secure a tight joint, and is held down upon the collar with a

suitable fastening to prevent its being thrown back by the pressure of the steam arising from the cooking sirup. This segmental spout, being equal to or nearly the width of the boiler, will allow of a larger quantity of scum to pass through, and thereby greatly facilitate the cleansing of the sirup.

In the process of cooking sirup or sugar the boiler A is filled with the saccharine matter to a sufficient depth, and as the matter becomes heated the scum will accumulate upon the top, and when the juice is brought to a boil the scum, being very light, will rise and find an outlet through the segmental spout E, and fall into a pan, F, placed across the top of the boiler. This pan, which is perforated or otherwise provided with a straining or filtering device in the bottom, will retain the scum, while the juice will strain down through its bottom and through the perforations or their equivalents in the cover B into the boiler, thereby causing the juice to become cleansed of the scum and other impurities, and at the same time allow of its being cooled. The saccharine matter, being constantly agitated in the manner described, requires no stirring or skimming with ladles, skimmers, or other like utensils. When the sirup is sufficiently cooled the segmental spout E is thrown back on its hinge, and, the scum-pan F having been removed, the cover B is thrown up and the sirup ladled or dipped out of the boiler.

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

1. The combination, with the boiler A, provided with spout E, and having seats *a* upon its interior sides, of the removably-hinged cover B, provided with flanges *b*, resting in the said seats, to support the cover, substantially as and for the purpose set forth.

2. The boiler A, of the form substantially as shown, having the rectangular opening extending across its end, and surrounded by an upright collar, *f*, in combination with the removable cover B and hinged spout E, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS WASHINGTON LANIER.

Witnesses:

A. L. LANIER,
E. J. SHIPPARD.