

(No Model.)

T. C. A. CARRÉ.

APPARATUS FOR THE MANUFACTURE OF SUGAR IN BLOCKS.

No. 361,396.

Patented Apr. 19, 1887.

Fig. 1.

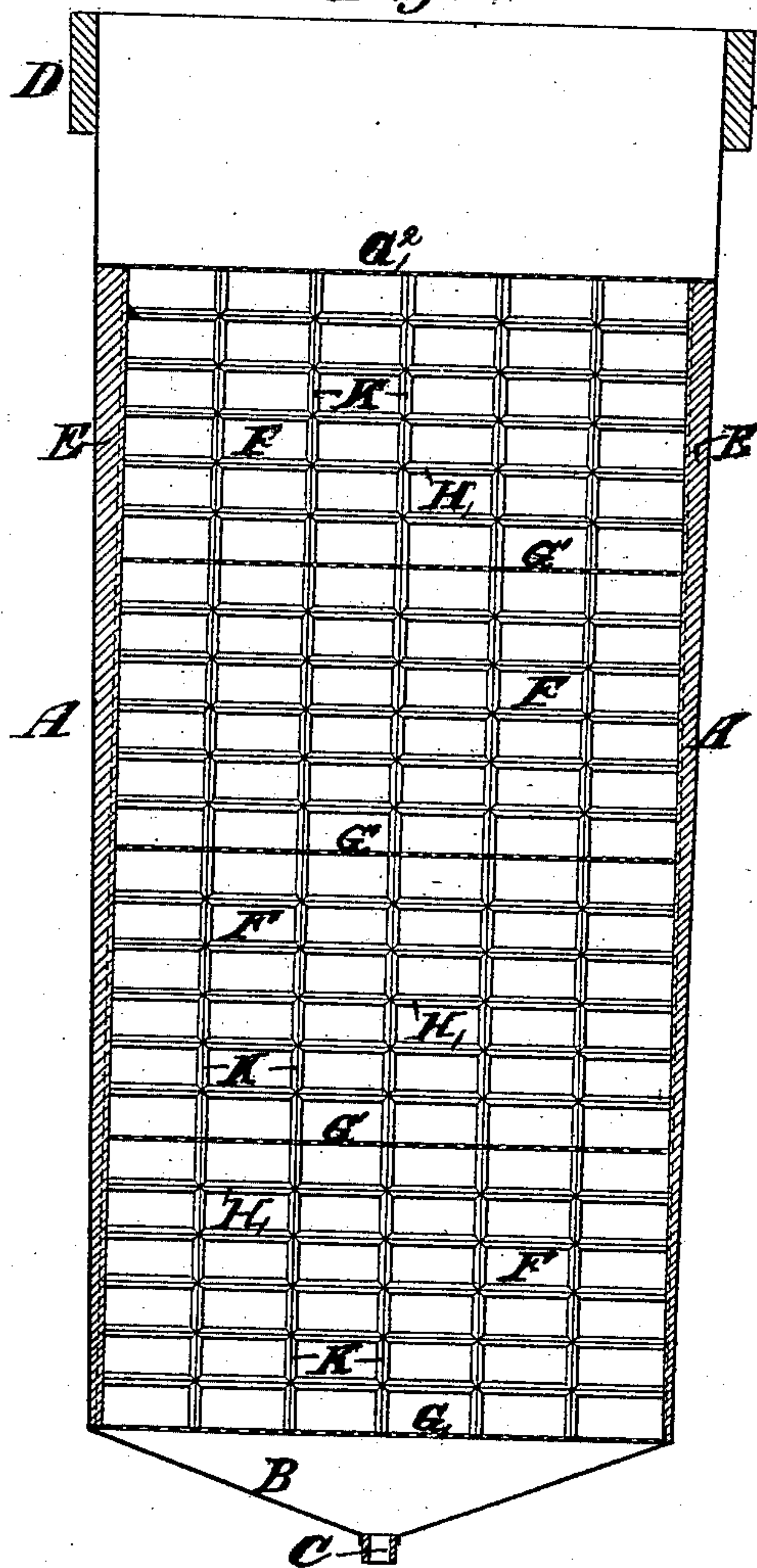


Fig. 2.

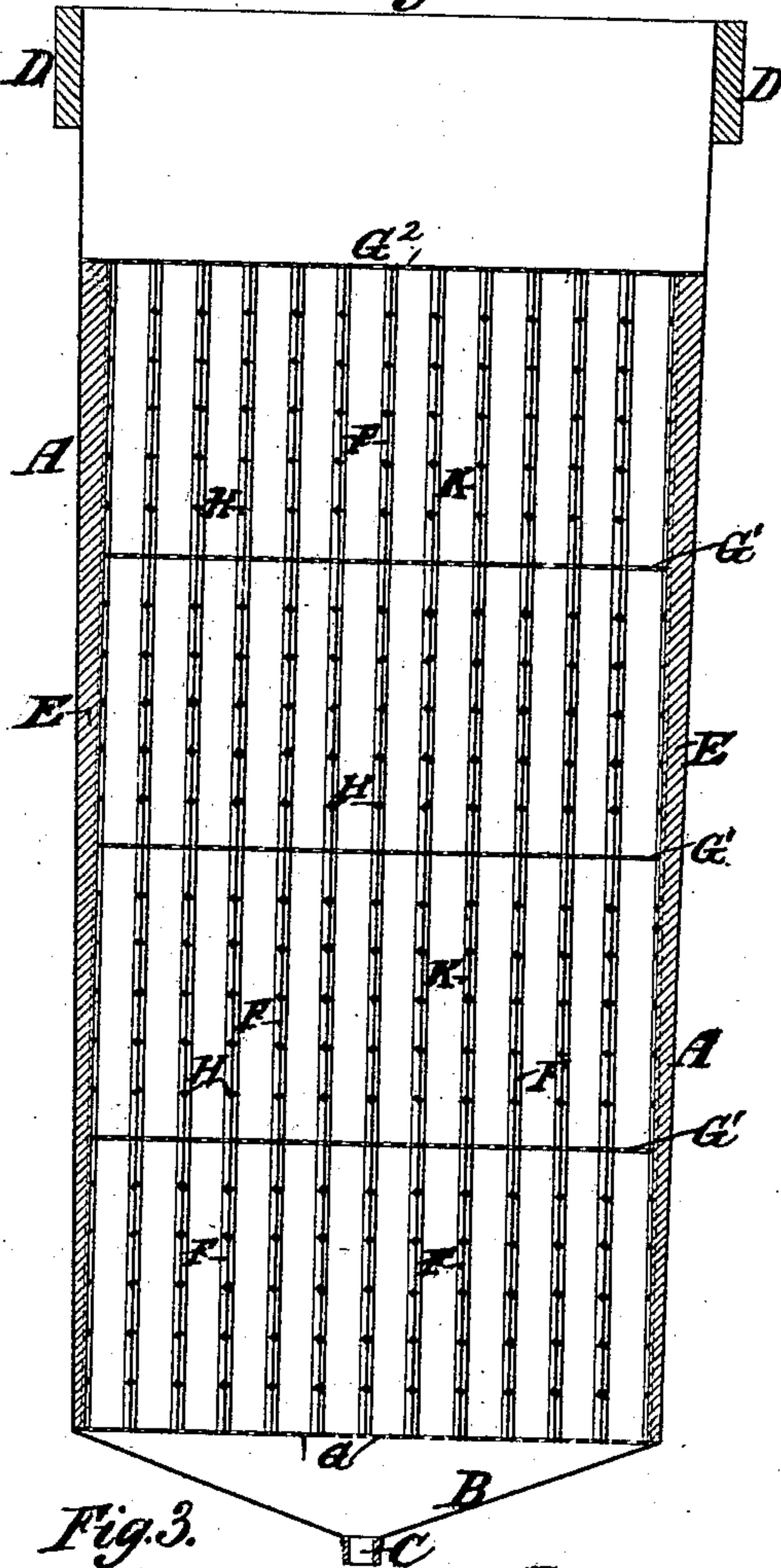
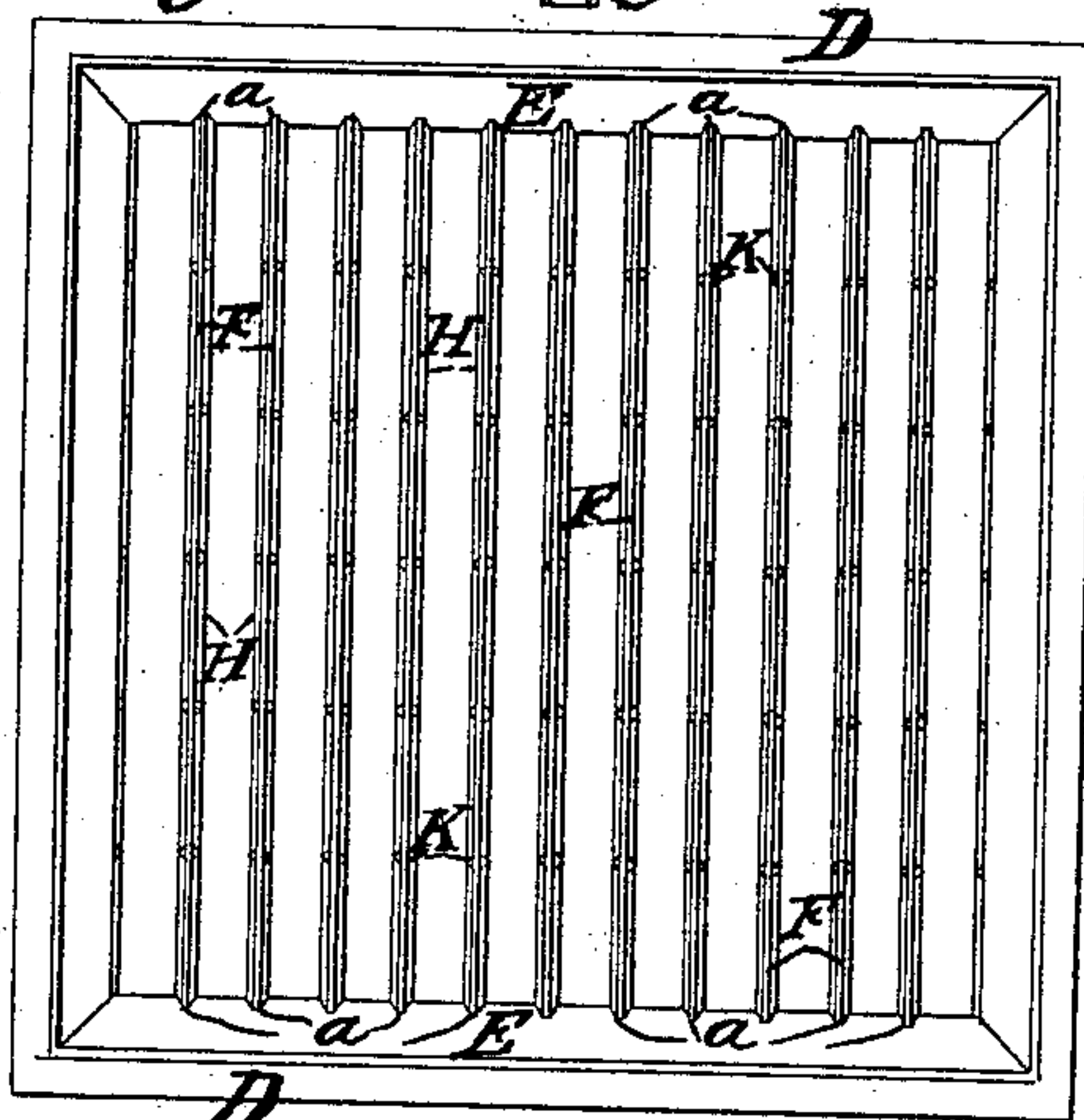


Fig. 3.



Witnesses.

Emil Hertel

O. Sundgren

Inventor.

Théodore Charles Antoine Carré
by his attorney Prount & Hall

UNITED STATES PATENT OFFICE.

THEODORE CHARLES ANTOINE CARRÉ, OF NANTES, FRANCE.

APPARATUS FOR THE MANUFACTURE OF SUGAR IN BLOCKS.

SPECIFICATION forming part of Letters Patent No. 361,396, dated April 19, 1887.

Application filed October 11, 1886. Serial No. 215,823. (No model.)

To all whom it may concern:

Be it known that I, THEODORE CHARLES ANTOINE CARRÉ, a citizen of the Republic of France, residing at Nantes, in said Republic, have invented a new and useful Improvement in Apparatus for the Manufacture of Sugar in Blocks or Tablets, of which the following is a specification.

The object of my invention is to obtain by the process commonly employed in the manufacture of loaf sugar, and in molds of a kind commonly employed, slabs of sugar which can be easily broken into blocks or tablets of any determined size suitable for table or other use.

The invention consists in the combination, with a sugar-mold of truncated pyramidal form, of taper plates fitted to opposite sides thereof to make the internal cavity of the mold of prismatic form, and two opposite ones of which are longitudinally grooved, and parallel partition-plates having longitudinal and transverse ribs on their faces and fitted to the grooves in said taper plates, the said ribbed plates serving to divide into slabs the sugar poured into the molds and the ribs on said plates serving to produce in said slabs longitudinal and transverse notches or grooves in which the slabs can be easily broken to form blocks of cubical or other form.

The invention further consists in certain combinations and details of construction, hereinafter described and claimed.

Figures 1 and 2 of the accompanying drawings represent vertical sections, at right angles to each other, of a sugar-mold furnished with partition-plates according to my invention. Fig. 3 represents a plan of the same.

Similar letters of reference designate corresponding parts in the several figures.

A B C D designate the mold proper, which is of well-known construction, having the sides square and slightly pyramidal in form, having the bottom B contracted and fitted with a nozzle, C, and surrounded at its upper part by a band, D. To the sides of this mold are fitted plates E, which taper slightly, being thicker at the top than at the bottom, and which, when in the mold, form a lining thereto, within which is a space of a regular prismatic form. Of these plates two opposite ones contain equidistant vertical grooves *a*, for the reception

of the movable partition-plates F, which will be hereinafter fully described. These grooves are placed at a distance from each other according to the thickness of the blocks or tablets of sugar to be obtained.

Above the contracted bottom of the mold there is supported a perforated metal plate, serving to support the first tier of partition-plates F, and also to separate from these plates the excess of sugar contained in the bottom of the mold. On this perforated plate G are placed the partition-plates F, of which the spacing is maintained by the grooves *a* in the side plates, E, as hereinabove mentioned. These plates should preferably be of sheet-iron, tin-plate, zinc, or other metal which permits of their being flexible, to facilitate their withdrawal from the mold. On each side of each of these plates, except the outer ones, (shown in Fig. 2,) are provided transverse longitudinal ribs K H, which divide the plates into squares or rectangular spaces having the superficial dimensions of the sides of the blocks or tablets of sugar to be produced; but the two outermost plates have such ribs only on one face. These ribbed plates may be made in various ways; but I prefer to make each of two thicknesses of sheet metal having ribs raised on one face of each, placed together back to back, so that the ribs are presented outward and soldered or riveted together.

The plates F may be in one, two, or more tiers. In the example represented there are three tiers, placed one above another and supported by perforated plates G', like the bottom plate, G, hereinbefore described, and the upper tier is covered by a similar plate, G², above which there is left sufficient space within the mold for the filling of the mold and its draining, as for the manufacture of ordinary loaf sugar.

The projection of the ribs from the faces of the plates F need not exceed, say, one-sixth of the space between the plates.

The plates F and G having been placed in the mold, the mold is filled with sugar in the manner commonly practiced in the manufacture of loaf sugar. After cooling, the work of straining and clarifying is performed exactly as for the manufacture of loaf sugar. All the sugar contained in the mold beyond the excess

below the lower plate, G, and above the upper plate, G', is in the form of longitudinal and transversely grooved slabs, which, after the mass is removed from the mold in the usual way, are separated by taking out the partition-plates F and perforated plates G' from between them. These slabs may be dried in heated apartments in the usual way, after which they may be packed in the slab form or may be made into blocks or tablets to be packed in that form by simply breaking the slabs in the grooves which have been formed therein by the ridges of the partition-plates. This breakage may easily be effected by the pressure of the fingers, and the blocks or tablets are thus formed without any waste. The tablets thus obtained are translucent and sonorous. By this method of manufacturing block or tablet sugar great economy is effected in labor; the use of saws and cutting apparatus being dispensed with, and greater regularity in the size of the blocks or tablets is obtained. The manu-

facture is even less costly than that of sugar in ordinary loaves, because the work is simplified. The work of trimming the loaf is dispensed with and the drying is facilitated.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with a sugar-mold of truncated pyramidal form, of taper lining-plates, the opposite ones of which are grooved lengthwise, and parallel partition-plates which are ribbed longitudinally and transversely and fitted to the grooves in the said opposite lining-plates, substantially as herein described, and for the purpose herein set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THEODORE CHARLES ANTOINE CARRÉ.

Witnesses:

OCTAVE NAUDIN,

ALAINE ORESAN.