C. TECKELNBURG.

Sugar Cutter.

No. 33,111. Patented Aug. 20, 1861.

Fig. 2.

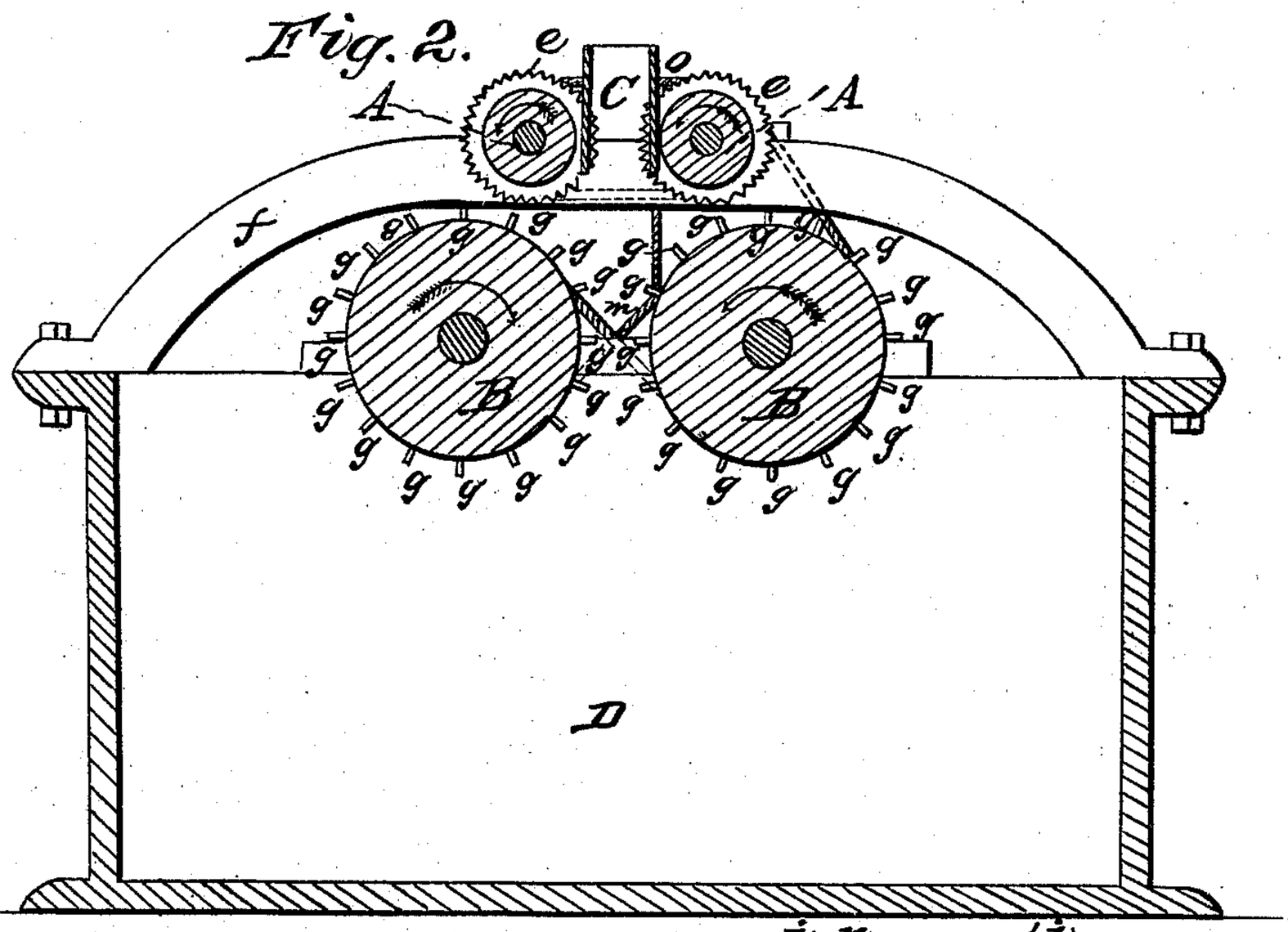
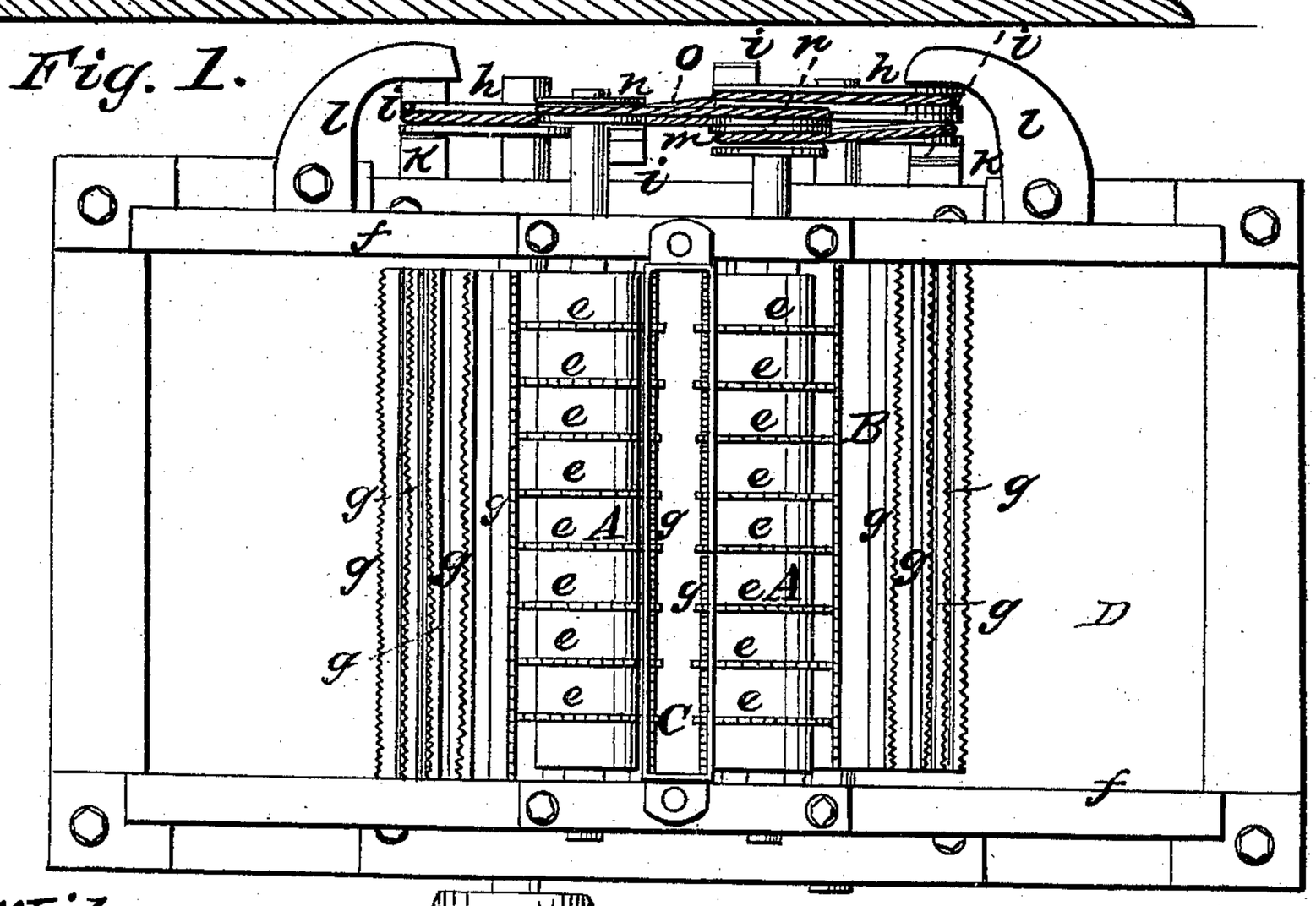


Fig. 1.



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UNITED STATES PATENT OFFICE.

CHARLES TECKELNBURG, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SUGAR-CUTTING MACHINES.

Specification forming part of Letters Patent No. **33,111**, dated August 20, 1861.

To all whom it may concern:

Be it known that I, CHARLES TECKELNBURG, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Loaf-Sugar-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a plan view, and Fig. 2 a vertical section, of a sugar-cutter having my improvement applied thereto, like letters indicating the same parts when in both figures.

My invention has for its object the division of loaf-sugar into small uniform blocks for family use; and it consists in a peculiar construction and arrangement of four sawing-cylinders to operate together in connection with a feed-trough, as hereinafter described, so that the usual disks of sugar, in passing between the said cylinders, shall be grooved in each side in such a manner that they will become perfectly divided, or broken apart into small uniform blocks, on falling into the receiving-box below, whereby the great deterioration and waste heretofore produced by sugar-cutters is entirely avoided.

In the drawings, A A and B B represent the upper and lower cylinders, respectively; C, the feed-trough, and D the receiving-box.

The upper cylinders, A A, are each provided with a series of circular saws, *e e*, secured adjustably at any regular distances apart across the cylinder, so that when the said cylinders are secured at a short distance apart, parallel to each other, upon the supporting-arches *f f* of the receiving-box D, their respective saws *e e* will be directly opposite to each other or in the same planes, substantially as seen in Fig. 1.

The lower cylinders, B B, are each provided with a series of longitudinally-arranged saws, *g g*, secured around their peripheries, so as to project radially therefrom at any regular distances apart, as seen in the drawings. These cylinders B B are made so as to have an inch (more or less) play longitudinally on their respective shafts; and the pulleys *h h*, by which they are driven, are provided with projections or cams *i i* on each side, so that when the cylinders are rotated the said cams alternately come in contact with projections *k k* on the receiving box or frame and the arms *l l* projecting therefrom, and thus are caused to oscillate longitudinally and in opposite directions, giving the required operative motions to the saws. The pulleys *h h* of the said cylinders B B are of like diameters and are connected by a cord, *m*, or otherwise, so as to rotate the cylinders in opposite directions, and at the same time keep them in such relation to each other that their respective saws *g g* shall successively come directly opposite to each other, as seen in Fig. 2.

The feed-trough C has a series of vertical slots in each side, through which the circular saws *e e*, respectively, project into the trough about a quarter inch, more or less, substantially as seen in the drawings.

The upper cylinders, A A, are driven by the pulleys *n n*, which are connected by means of a cord, *o*, or otherwise, so as to rotate in the same direction; and one of the said pulleys is also connected to one of the lower cylinders by means of the pulley *h* thereon, the driving-power being applied to the other lower cylinder B, by means of a band-wheel, *p*, or otherwise. The distance between the cylinders A A corresponds with that between the cylinders B B.

In the operation of this machine the cylinders rotating in the directions indicated by the arrows, and the usual disks of loaf-sugar being placed edgewise in the feed-trough *c*, the saws *e e* on the cylinders A A cut narrow vertical grooves in each side of the disks, directly opposite to each other, and the said disks, descending, are caught between the cylinders B B by the saws *g g*, which latter, being reciprocated rapidly in opposite directions by the oscillating motions of the cylinders, cut like narrow horizontal grooves in the said disks, which latter, thus grooved, and also accelerated in their motion downward by the rotary motions of the cylinders B B, break into uniform blocks as they fall into the receiving-box D, and thus the deterioration and waste, consequent upon the production of the innumerable small irregular pieces by the cutters heretofore used, are avoided.

Having thus fully described my improved machine and pointed out its utility, what I claim as new therein of my invention, and desire to secure by Letters Patent, is—

Providing the cylinders A A and B B with the saws *e e* and *g g*, respectively, as described, the said cylinders being arranged to operate together, in combination with the feed-trough C, substantially in the manner described, and for the purpose specified.

CHARLES TECKELNBURG.

Witnesses:

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