

(No Model.)

S. DODSON.
DISINTEGRATING MACHINE.

No. 274,574.

Patented Mar. 27, 1883.

Fig. 1.

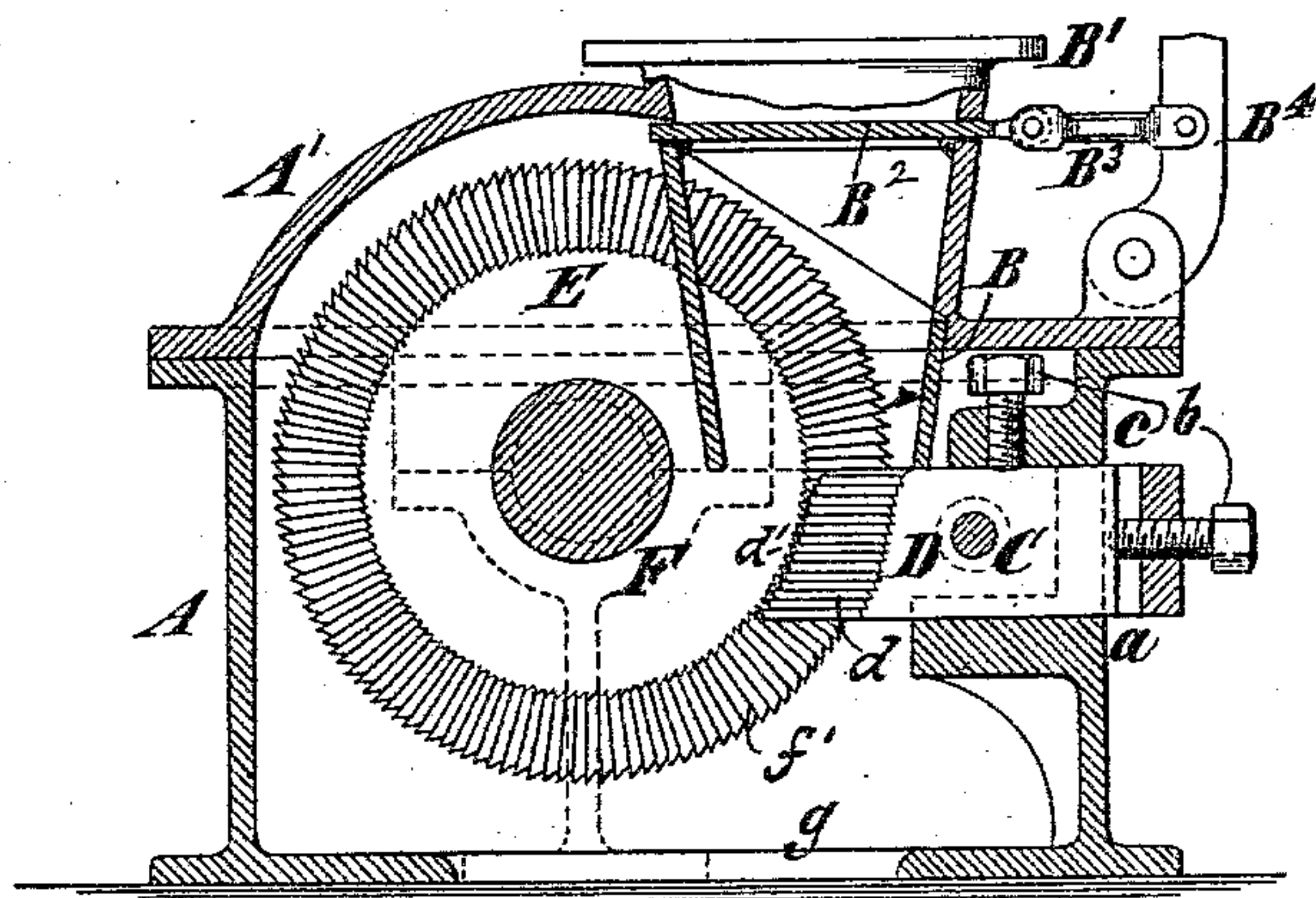


Fig. 2.

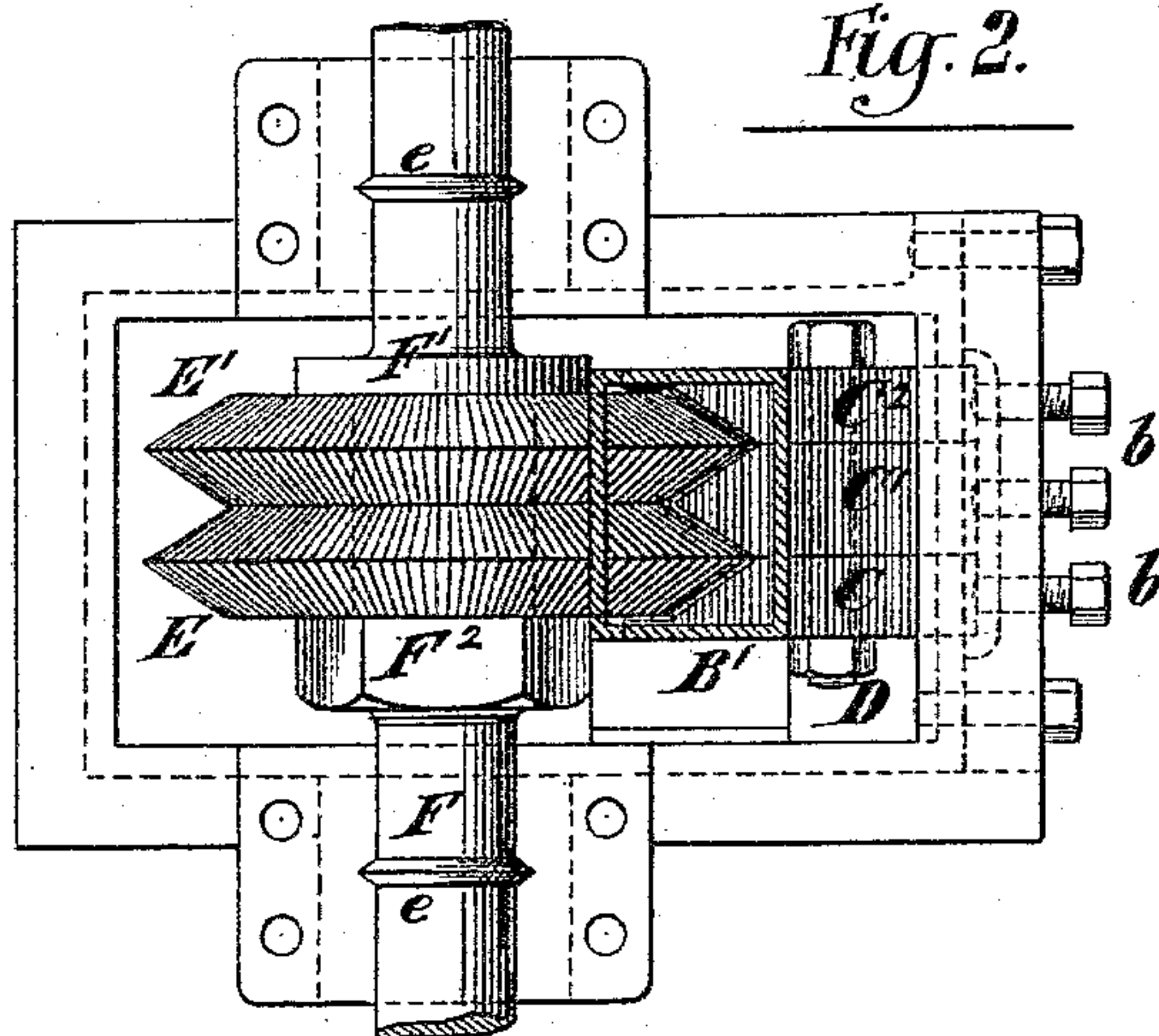
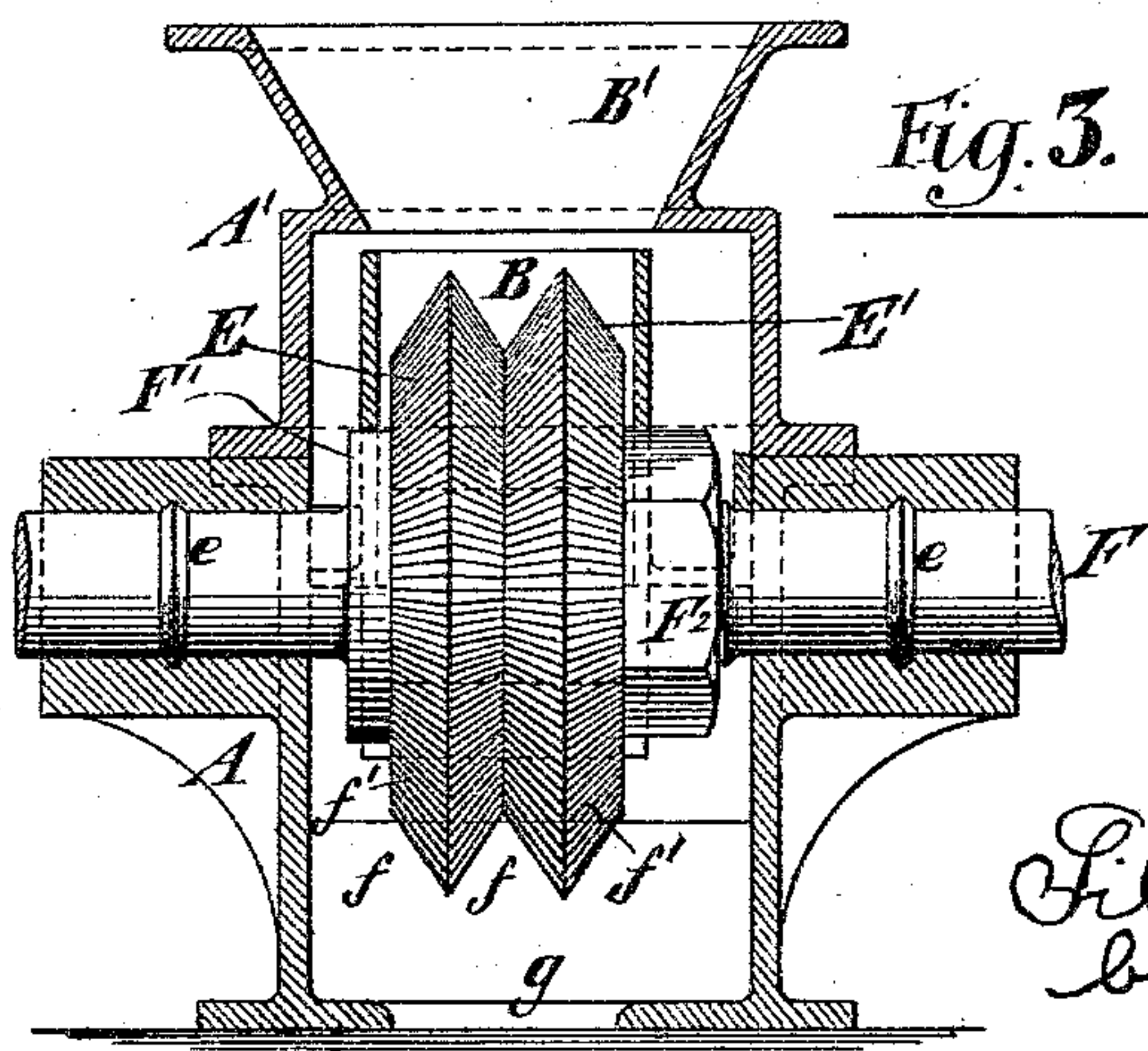


Fig. 3.



Witnesses:-
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UNITED STATES PATENT OFFICE.

SILAS DODSON, OF NEW YORK, N. Y.

DISINTEGRATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 274,574, dated March 27, 1883.

Application filed December 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, SILAS DODSON, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Disintegrating-Machines, of which the following is a specification.

My improvement consists in the combination, in a disintegrating-machine, of a rotary part and a fixed abutment composed of sections between which the material to be disintegrated is operated upon, the said rotary part having V-shaped circumferential ribs or projections and the said abutment having corresponding V-shaped grooves, which are closer at the bottom to said ribs or projections and extend outside the sides of the rotary part, with devices for adjusting and securing said abutment.

In the accompanying drawings, Figure 1 is a vertical section of a machine embodying my improvement. Fig. 2 is a top view of the same, with the top of the case removed and the hopper in section; and Fig. 3 is a partly-sectional elevation of the same, taken in a plane at right angles to that of Fig. 1.

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

A A' designate the case of the machine. It is composed of a lower base portion, A, and an upper removable portion, A'. This case is provided with a hopper, B B', which is made in two sections, the upper being attached to or made integral with the upper section of the case. The upper section of the hopper is provided with a sliding gate, B², whereby the passage of material through it may be controlled. This gate is connected by a link, B³, to a hand-lever, B⁴.

C C' C² designate a stationary abutment, here shown as composed of three sections connected by a bolt, D. This abutment is supported in a bearing or slideway, a, in the lower section of the case. Against its outer end impinge screws b, whereby it may be adjusted inward. One of these screws might suffice. On the top of the abutment bears a set-screw, c, whereby it may be secured in different positions to which it may be adjusted. As the sections of the abutment are held together by the bolt D, only one set-screw c is necessary to hold them in place after adjustment. This abutment has V-shaped grooves, forming a

series of inclined sides or faces, d, which have angular arc-shaped profiles. On these sides or faces preferably are teeth d'.

E E' designate a rotary part composed of two sections mounted on a shaft, F. This shaft is provided with a collar, F', against which one of these sections bears, and a nut, F², screwed on the shaft, bears against the other of the sections, whereby the sections are secured in position. The journals of the shaft fit in bearings formed partly in the lower section and partly in the upper section of the casing. They are furnished with collars e, which enter grooves, and so serve to steady the shaft in its movements. The sections of the rotary part have a circular profile and one or more V-shaped circumferential ribs or projections, forming beveled sides or faces f, extending into proximity with the sides or faces of the abutment. The arc-shaped profile of the abutment is preferably arranged eccentrically to the profile of the rotary part, so that between the two parts will be left a space which will contract or decrease in size downwardly. The face of the abutment is very short, and it is arranged at a considerable distance above the lower side of the rotary part, so that the disintegrated material may drop freely from between them, and thus be delivered by gravity alone. The beveled faces d, which are nearest the opposite sides of the abutment, overlap or fit outside the beveled faces f on the outer sides of the rotary part E E'. As the abutment has a rectilinear adjustment toward and from the rotary part, the degree of eccentricity of its face relatively to the rotary part will be the same, no matter at what distance from the rotary part its face is. I may provide the beveled sides or faces of the rotary part with teeth f', preferably arranged reversely to the teeth of the abutment.

The material to be disintegrated is introduced into the hopper, and is disintegrated in its passing between the abutment and the rotary part. The degree of fineness of the disintegration may be varied by adjusting the abutment. The material disintegrated may pass through an opening, g, in the lower section of the case into any suitable receptacle.

This machine may be used for disintegrating grain, ores, or other materials.

The sections of the rotary part E E' will

preferably be made of cast-steel; but the sections C C' C² of the abutment may, with advantage, be made of cast-steel or of stone, or in some cases of wood, and the abutting surfaces of the sections of the abutment are at the bottoms of the grooves therein.

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

In a disintegrating-machine, the combination of a rotary part and a fixed abutment composed of sections between which the material to be disintegrated is operated upon, the

said rotary part having V-shaped circumferential ribs or projections and the said abutment having corresponding V-shaped grooves, which are closer at the bottom to said ribs or projections and extend outside the sides of the rotary part, with devices for adjusting and securing said abutment, substantially as specified.

SILAS DODSON.

Witnesses:

JAMES R. BOWEN,
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