

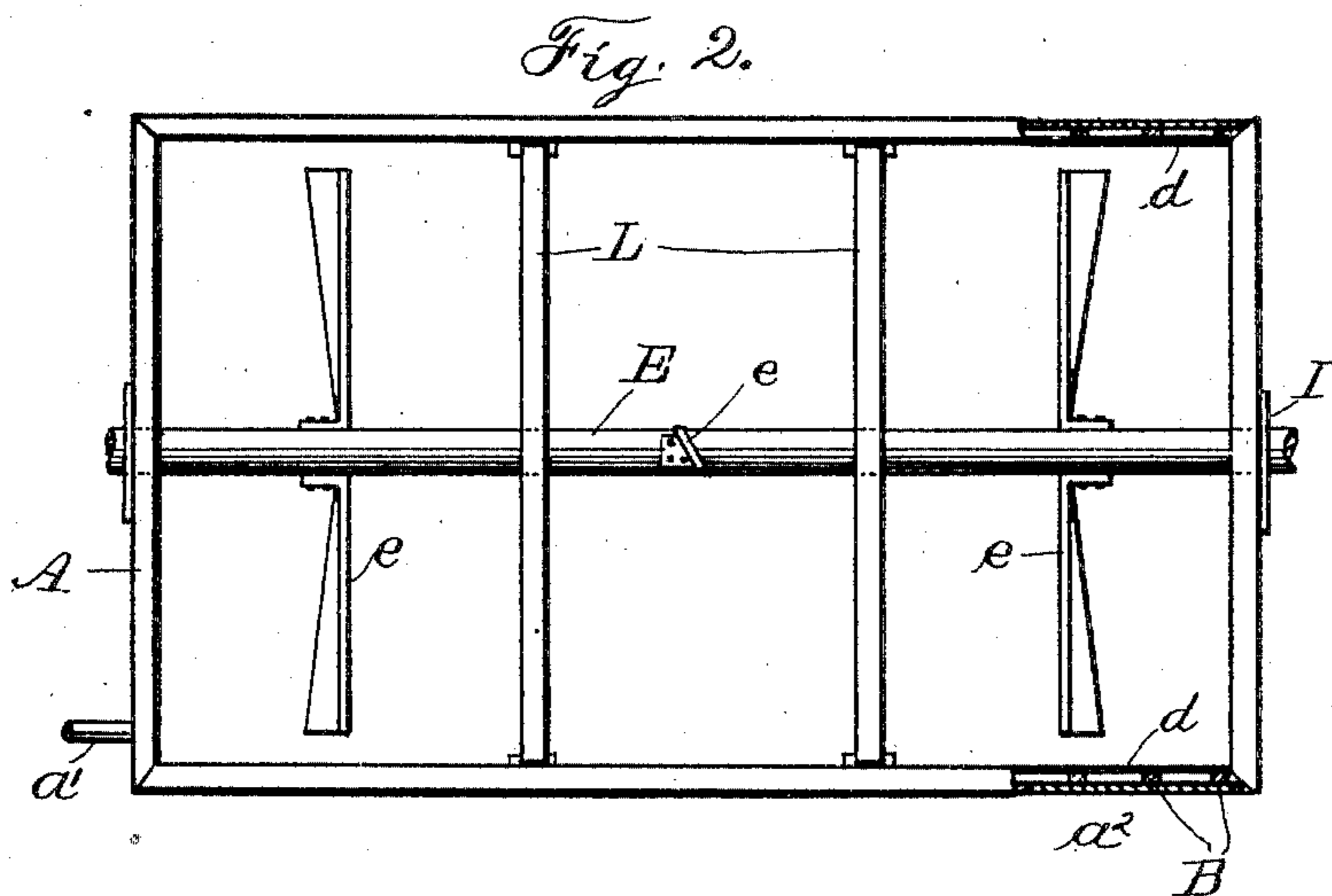
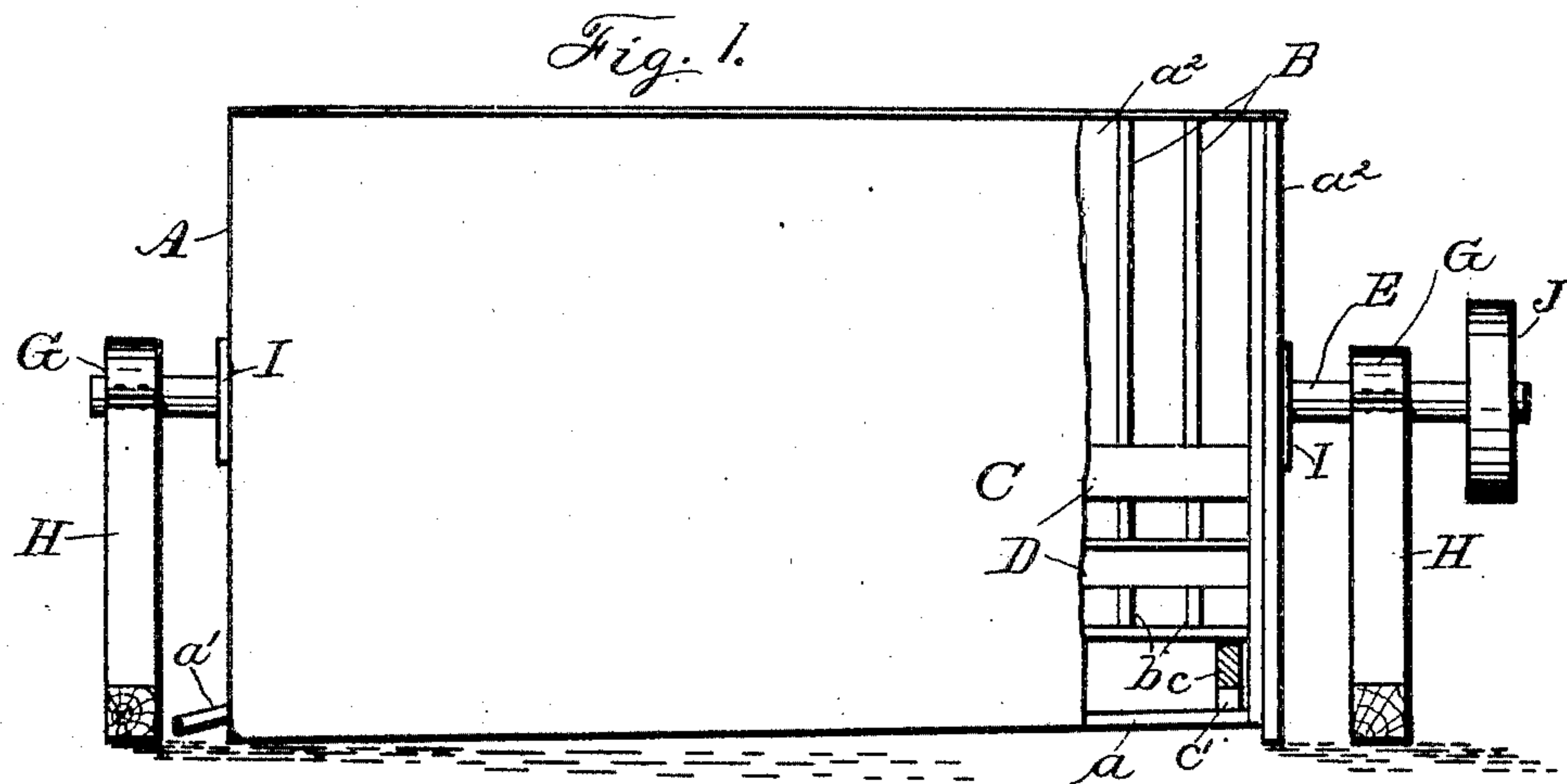
No. 789,325.

PATENTED MAY 9, 1905.

R. A. KERR.
DEVICE FOR TREATING SLIMES.

APPLICATION FILED OCT. 19, 1904.

2 SHEETS—SHEET 1.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 3.

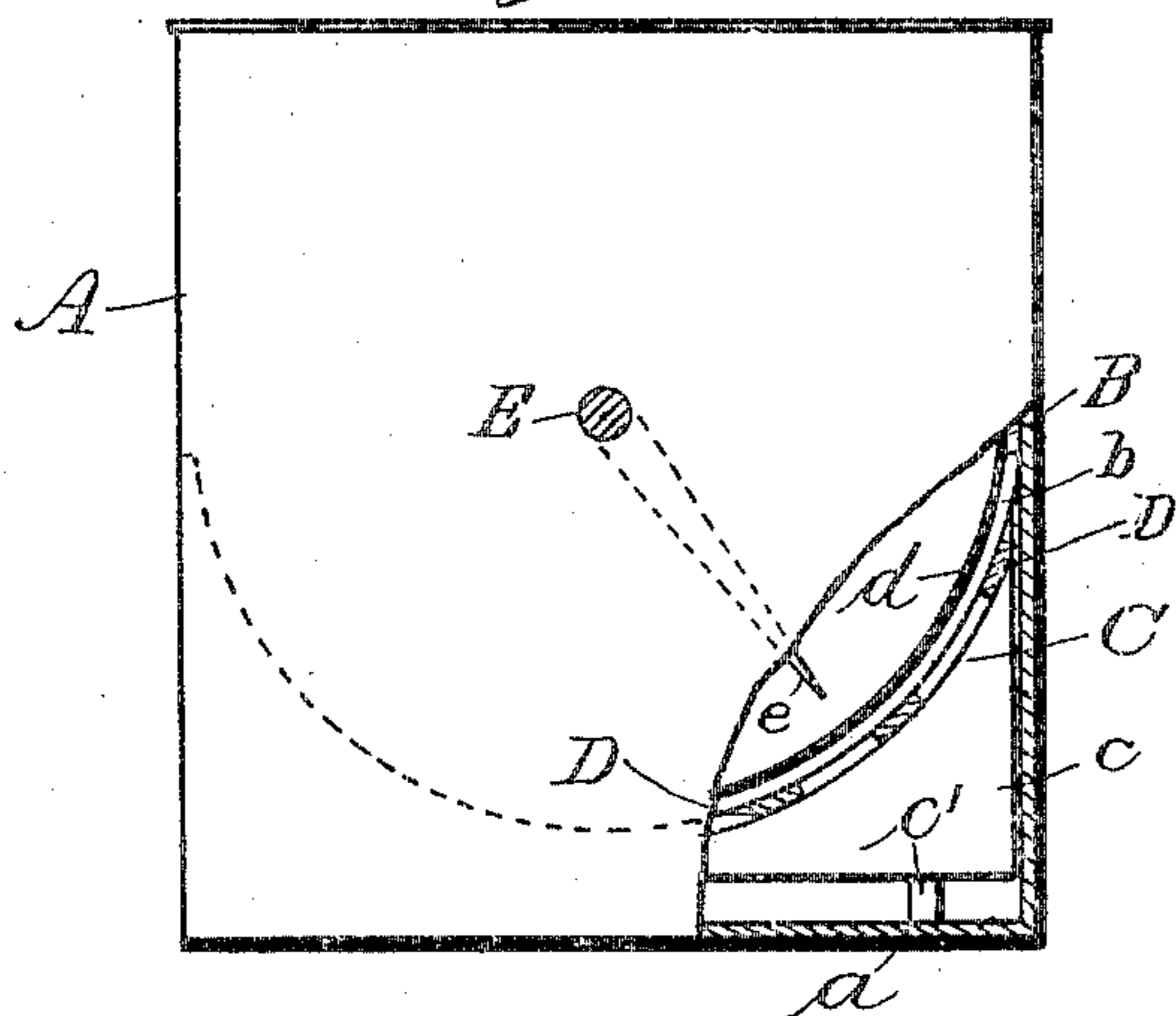


Fig. 4.

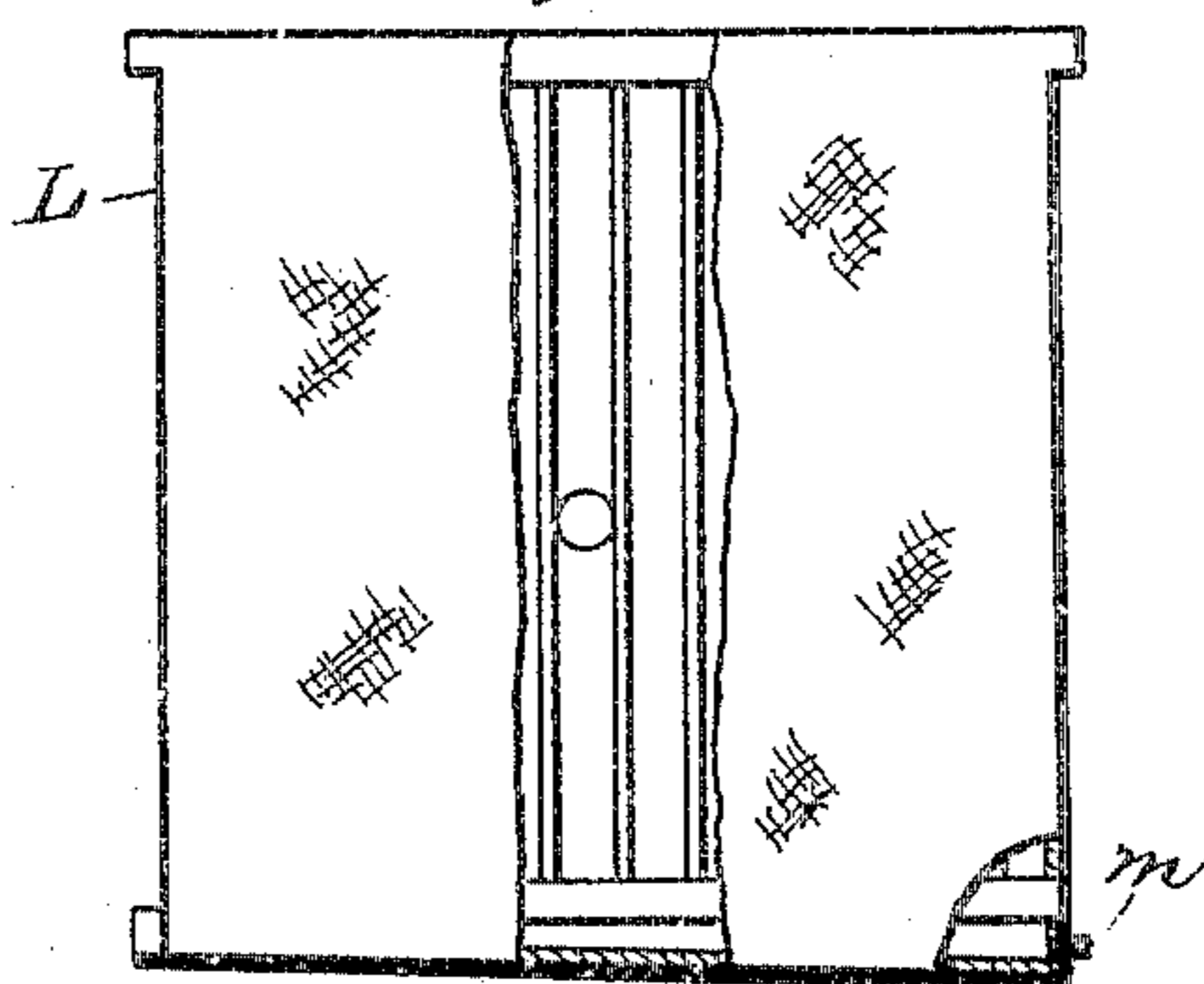
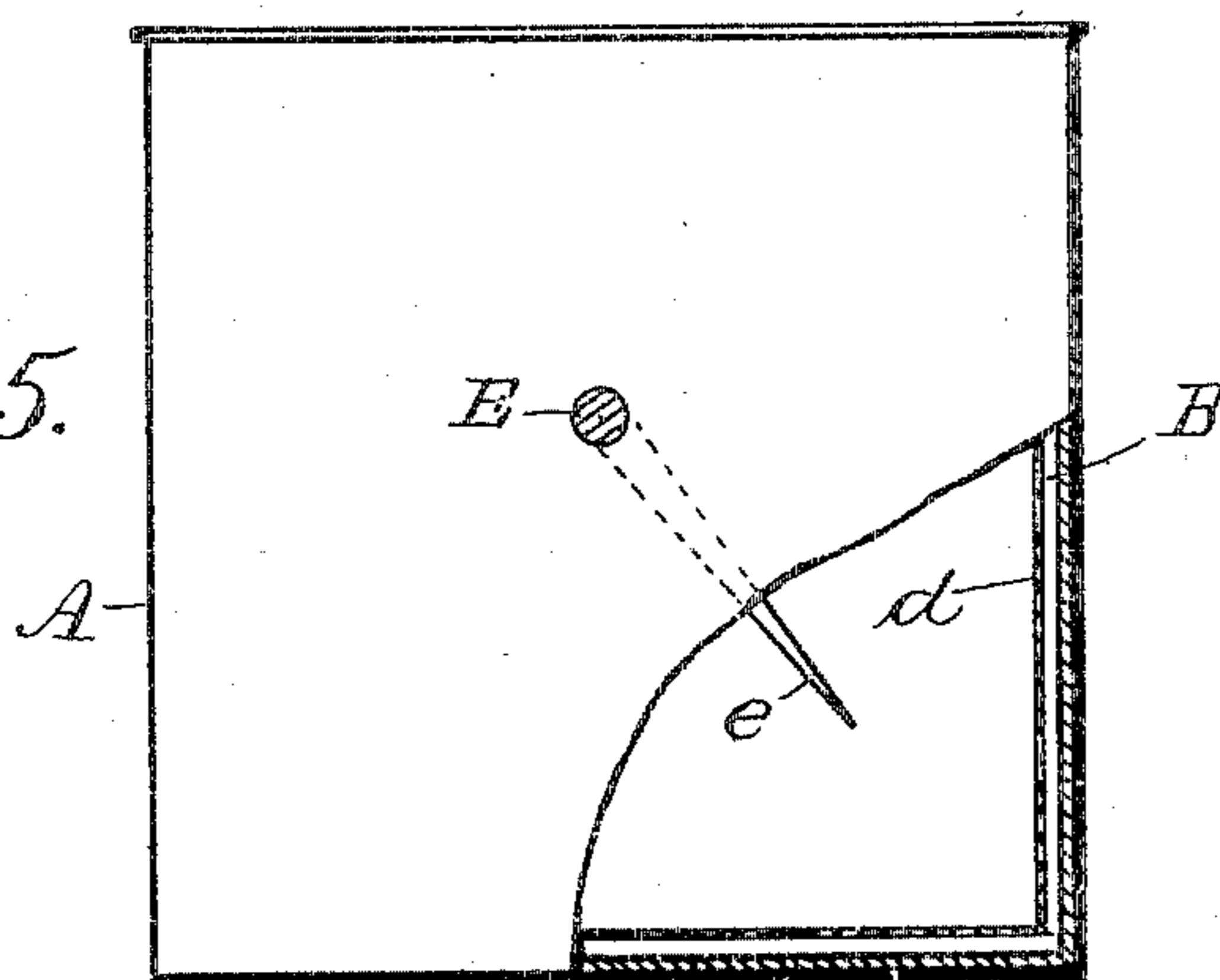


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT ALEX KERR, OF SALT LAKE CITY, UTAH.

DEVICE FOR TREATING SLIMES.

SPECIFICATION forming part of Letters Patent No. 789,325, dated May 9, 1905.

Application filed October 19, 1904. Serial No. 229,057.

To all whom it may concern:

Be it known that I, ROBERT ALEX KERR, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Devices for Treating Slimes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to apparatus for treating ores by lixiviation; and it consists in general of a filtering-tank and an agitator or stirrer therein, both being adapted to cooperate in separating the values from the gangue.

The novel features of this device will be described particularly in this specification and are illustrated fully in the accompanying drawings, in which—

Figure 1 is a side elevation of the device partly in section or broken away to disclose its inner construction. Fig. 2 is a plan view of the tank and agitator partly in section. Fig. 3 is an end elevation of the tank partly broken away. Fig. 4 is a side elevation of a filtering-partition partly in section; and Fig. 5 is an end elevation, partly in section, showing a modification of the bottom of the filter.

The various features of the device are referred to by letters, similar letters denoting corresponding parts in the several views.

The letter A designates a water-tight tank of a form adapted to receive a revolving agitator. This tank has an inclined floor *a* and a vent *a'* at its lower corner. The inner faces of the ends and sides *a² a³* of the tank A are provided with vertical strips B B, extending from the top to the curved frame C in the bottom of the tank. This frame C is made of transverse base-bars *c c*, with feet *c' c'* to stand upon the floor *a* of the tank A. The upper edges of the bars *c c* are curved downward and support the horizontal binders D D. On these binders are secured transverse curved strips *b b*, forming a continuation of

the strips B B across the lower part of the filter. The strips B B and *b b* are covered with any preferred filtering material *d*.

E is the horizontal shaft of the agitator and is provided with blades *e e* of any desired number. This shaft is journaled in pillow-blocks G G on frames H H outside of tank.

Stuffing-boxes I I are provided for the passage of the shaft through the sides of the tank, and at those points the strips B B do not reach quite to the stuffing-boxes, but allow a space, so that the filtrate may pass around said boxes on its way to the floor of the tank.

I especially adapt my agitator for use in the "Device for treating slimes," patented by William E. Holderman September 8, 1903, No. 738,329, and the "Leaching-tank" patented by the same inventor October 13, 1903, No. 741,402, by making openings through the sides and the partitions of said devices for the passage of the shaft E of my agitator. As many of the filtering-partitions may be used as is found desirable, and the blades are adjusted upon the shaft so as to rotate between the partitions and between the partitions and the sides of the tank.

In operating this device the agitator is connected with the actuating power by means of the band-wheel J, and the material is fed into the open top of the tank in any preferred way. The rotation of the agitator-shaft carries the blades continuously through the material and thoroughly mixes the ores with the cyanid or other agent. The solution charged with the valuable metals is strained off through the filtering materials and on reaching the floor of the tank runs out through the vent *a'* to be further treated.

The partitions L referred to are formed of frames covered with a filtering-cloth and having vents *m* to carry the filtrate from the partition through the filtering-cloth on the sides of the tank between its strips B, and so on down to the floor of the tank.

What I claim, and desire to secure, is—

1. A device for treating slimes consisting in a water-tight tank having an inclined floor and a vent at its lower part, vertical strips on the sides and ends of said tank, a down-

wardly-curved frame in the lower part of said tank, transverse strips across said frame alining with said vertical strips, a filtering fabric covering the interior surface of all of
5 said strips, a horizontal revoluble shaft extending through said tank and blades on said shaft adapted to rotate in said curved frame, substantially as described.

2. A device for treating slimes comprising
10 a filtering-tank having a downwardly-curved filtering-surface in its lower part and means to carry off the filtrate, filtering-partitions across said tank and means to discharge

their filtrate, a revoluble shaft extending across and through said tank and said parti- 15 tions, bearings outside of said tank for said shaft, blades on said shaft adapted to rotate through the curvature of said filtering-surface, and means to connect said shaft with actuating power as herein set forth. 20

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT ALEX KERR.

Witnesses:

C. E. TAYLOR,
N. A. HALL.