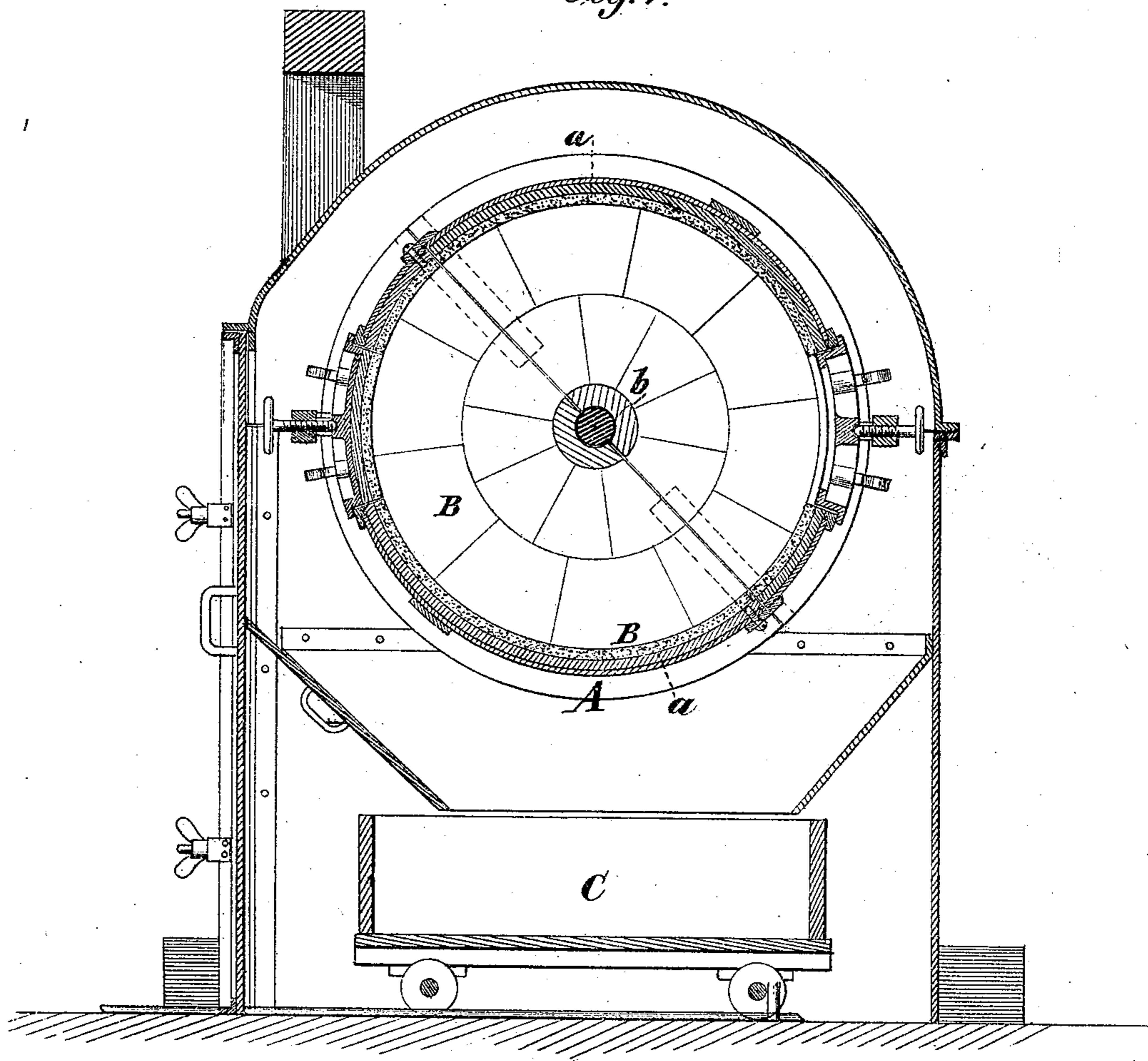


C. P. ALSING.
Triturating Mills.

No. 151,338.

Patented May 26, 1874.

Fig. 1.



Witnesses.
A. Rupprecht
H. G. Dainin

C. P. Alsing
Inventor.
by A. E. C. C. C.
his atty

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Fig. 2

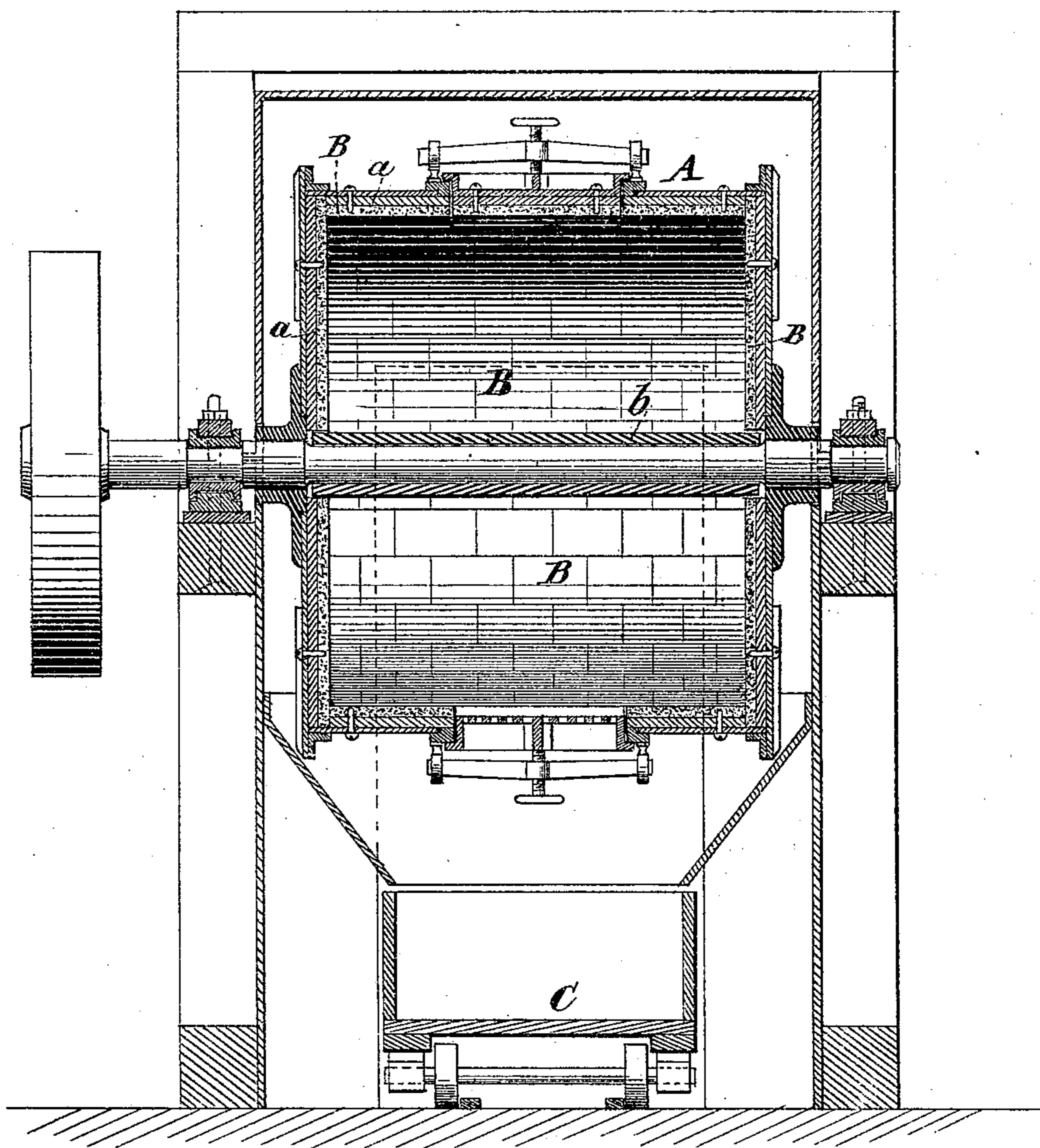
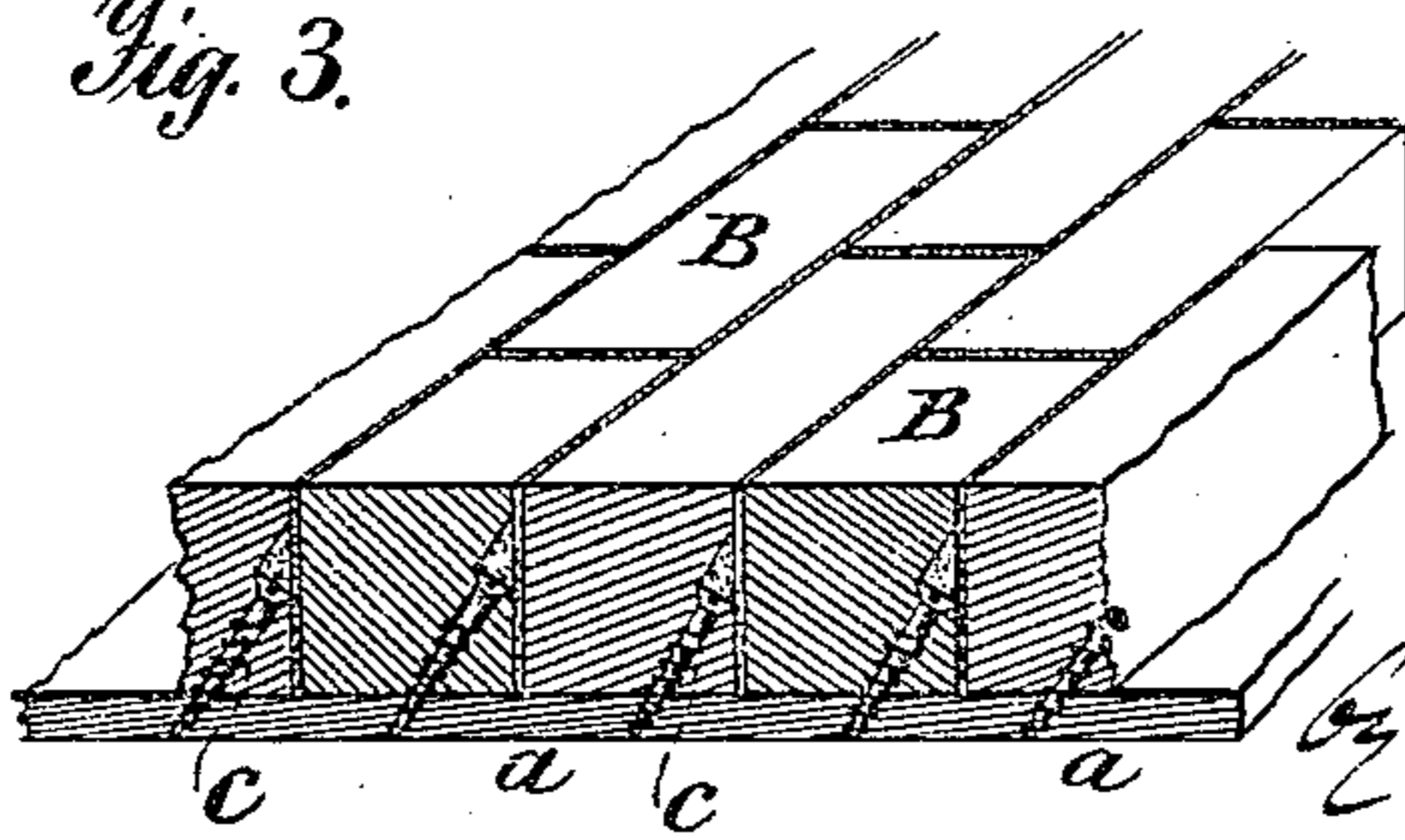


Fig. 3.



Witnesses.
A. Ruppert.
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C. P. Alsing
Inventor.
By C. E. C. C. C.
his Atty

UNITED STATES PATENT OFFICE.

CARL PETRUS ALSING, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS
RIGHT TO F. R. BABY, OF SAME PLACE.

IMPROVEMENT IN TRITURATING-MILLS.

Specification forming part of Letters Patent No. **151,338**, dated May 26, 1874; application filed
April 1, 1874.

To all whom it may concern:

Be it known that I, CARL PETRUS ALSING, of the city, county, and State of New York, have invented a certain Improvement in Triturating-Mills, of which the following is a specification:

This invention relates to triturating-mills, more especially designed for the reduction of materials for porcelain-paste and other similar substances.

It is well known to those skilled in the art that the reducing of this material in a metallic cylinder is subject to many objections. In 1870 a United States patent, bearing date January 25, and numbered 99,128, was granted to Johan Robert Alsing, for an apparatus for pulverizing porcelain-paste, in which he describes the use of a porcelain instead of a metallic cylinder, as not liable to the objectionable features of the latter. While this is true, yet there are important practical obstacles in the way of the successful employment of porcelain cylinders for this purpose. I substitute for such a porcelain cylinder one the grinding-surface of which is composed of united blocks of either marble or French burr-stone; and my improvement consists in securing these blocks upon a wood lining of a metallic cylinder.

Figure 1 is a transverse vertical section of a triturating-mill embodying my invention. Fig. 2 is an axial vertical section of the same. Fig. 3 illustrates a portion of the cylinder on a magnified scale.

The same letters of reference are used in all the figures in the designation of identical parts.

The cylinder A is preferably constructed of a strong shell of sheet or cast iron, upon the interior surface of which is secured a wooden lining, and upon this lining *a* are fastened the marble or French burr-stone blocks B, forming the grinding-surface. These blocks are properly cemented together, and are arranged to break joints, as best seen in Fig. 3; and it is also desirable that the grain of the stones should run at right angles to the axis of the cylinder, the whole interior surface of which is covered with them. The cylinder is sup-

ported in suitable bearings, either by short gudgeons extending from the respective heads, or by a shaft, as shown. In the latter case, that portion of the shaft within the cylinder must be surrounded with a wooden sleeve, *b*, to prevent the material being ground from coming in contact with the metal of the shaft, which would taint it.

The material to be ground is introduced into the cylinder, together with about an equal quantity of flint-pebbles, which I use as the triturating mediums, through a suitable aperture, which is then closed by a cover, also lined upon its interior surface with marble or French burr-stone blocks. After reduction of the material to an impalpable powder, such as required, it is sifted out of the cylinder through a sieve or grate placed over an aperture in its shell, as shown in Fig. 2. The cylinder revolves in a tight chest, into which a car, C, can be run to receive the powder or paste as it is sifted out of the cylinder. The material having to be ground so fine that it will penetrate, to some extent, through the minutest cracks in the cylinder and the inclosing chest, and being very injurious when inhaled, it is recommended to slightly dampen it to prevent its escape.

I prefer to operate the cylinder by means of cog-gearing.

The blocks B are suitably cemented onto the wood lining, and further secured thereto by screws *c*, passing obliquely through the blocks from the side, in the manner clearly illustrated in Fig. 3.

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

The herein-described triturating-cylinder, composed of the metallic shell A, wood lining *a*, and marble or French burr-stone blocks B, secured by cementing and hidden screws *c*, substantially as specified.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

CARL PETRUS ALSING.

Witnesses:

B. EDW. J. EILS,
H. E. QUINN.