

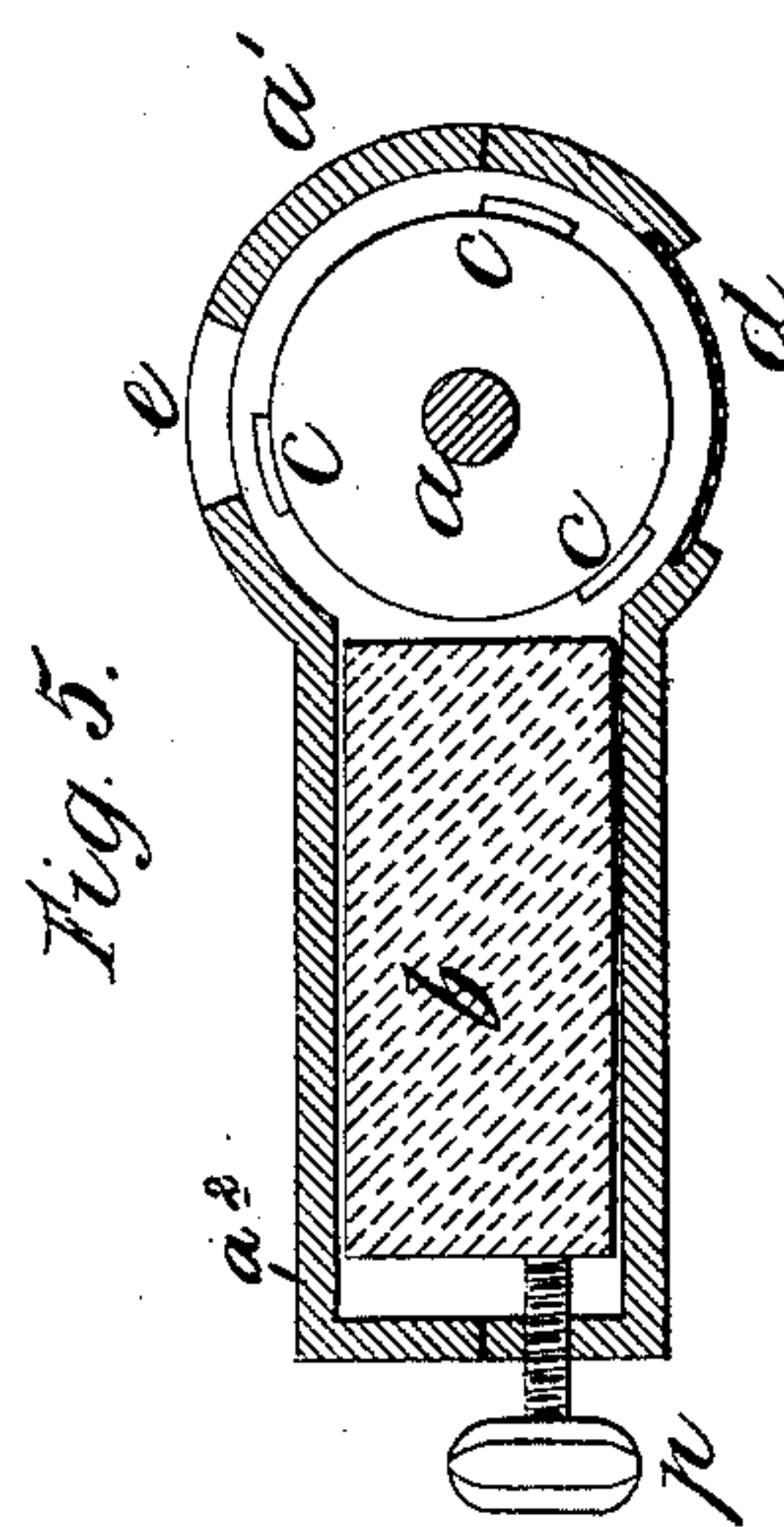
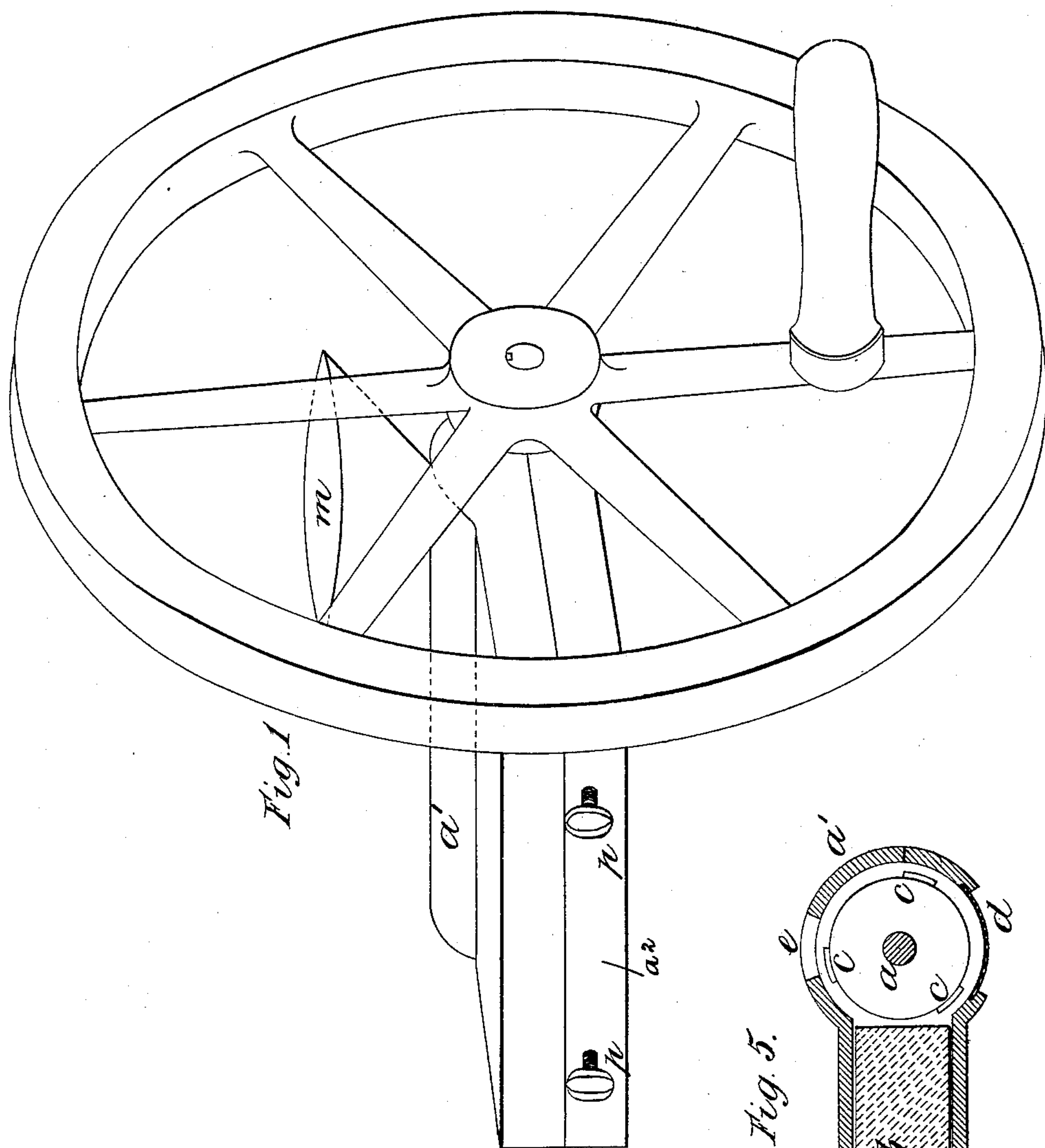
(No Model.)

2 Sheets—Sheet 1.

E. C. ENGELBERG.
MACHINE FOR HULLING RICE.

No. 341,324.

Patented May 4, 1886.



Witnesses.

J. A. Rutherford
Robert Emmett.

Inventor.

Evaristo C. Engelberg.

By James L. Norris.

Atty.

(No Model.)

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Fig. 1.

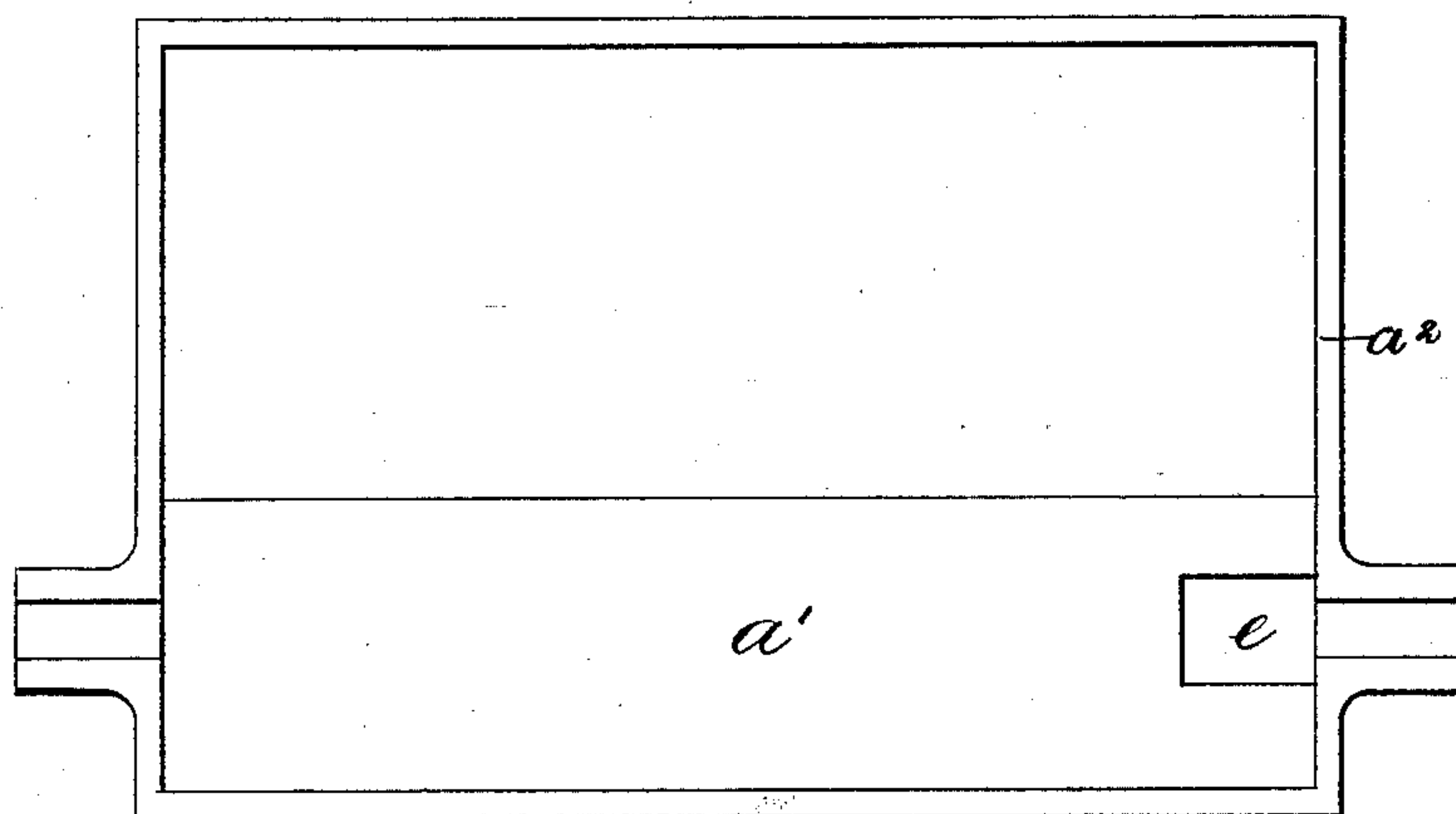


Fig. 2.

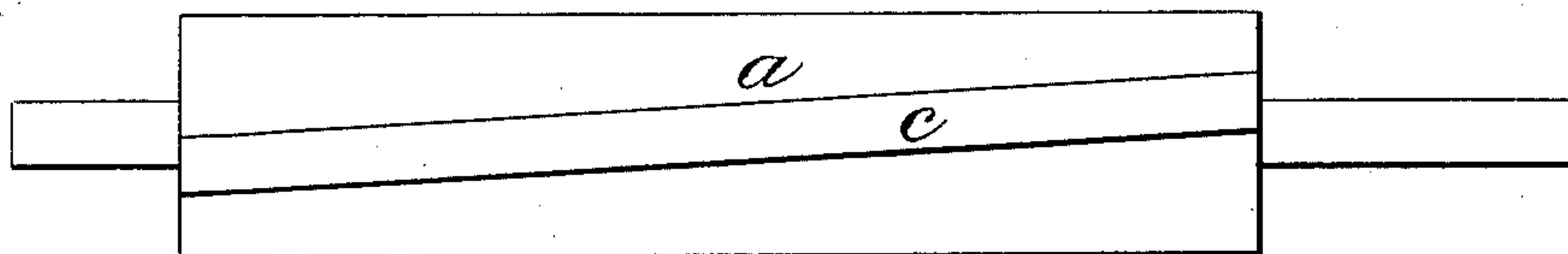
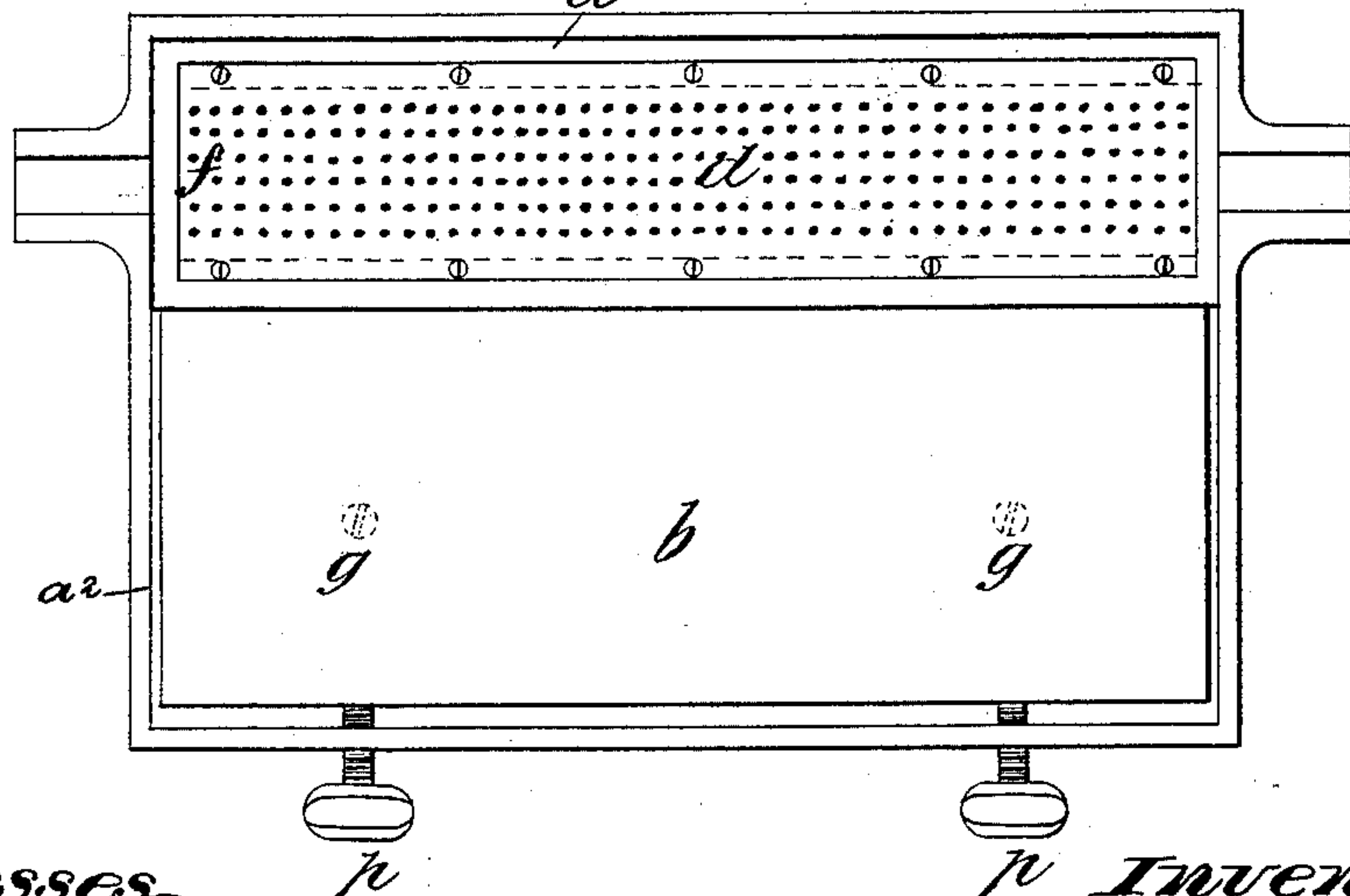


Fig. 3.



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UNITED STATES PATENT OFFICE.

EVARISTO CONRADO ENGELBERG, OF PIRACICABA, SÃO PAULO, BRAZIL.

MACHINE FOR HULLING RICE.

SPECIFICATION forming part of Letters Patent No. 341,324, dated May 4, 1886.

Application filed September 2, 1885. Serial No. 176,016. (No model.) Patented in England August 11, 1885, No. 9,574.

To all whom it may concern:

Be it known that I, EVARISTO CONRADO ENGELBERG, mechanical engineer, a subject of the Emperor of Brazil, and a resident of Piracicaba, in the Province of São Paulo, Brazil, have invented a new and useful Improved Machine for Hulling Rice, (for which I have obtained a patent in Great Britain, No. 9,574, bearing date August 11, 1885,) of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a machine for hulling rice, and comprises the improvements hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the improved machine. Fig. 2 is a view of the hulling-cylinder removed. Fig. 3 is a plan of the lower portion of the machine-casing, and Fig. 4 is an under side view of the upper portion. Fig. 5 is a transverse section of the machine through the feed-opening.

a is the hulling-cylinder, which is preferably of cast-iron, and on the surface of which are fixed, according to its size, three or more bars, c , of wrought-iron or steel. These bars project from four to five millimeters from the surface of the cylinder, and are arranged at an angle of three degrees (more or less) to the axis of the said cylinder.

The cylinder a works within a cylindrical casing, a' , preferably of cast-iron, which casing is open below the cylinder. Over this opening is secured, by means of screws or otherwise, a perforated plate, d , having holes of, say, one millimeter in diameter, and forming a sieve for the discharge of the fine particles arising during the operation of the machine.

e is an opening in the upper part of the casing, through which the rice is fed, and f is an opening in the lower part of the casing, through which the hulled rice is discharged.

g g are screws or bolts, by means of which the machine may be secured to any suitable frame-work.

The cylindrical casing a' is extended laterally at one side to constitute a rectilinear case, a'' , forming a correspondingly-shaped chamber.

b , Figs. 3 and 5, is a rectangular stone or a block of concrete or other suitable material fitted into the chamber within the laterally-extended case a'' , against which the rice is hulled. The position of this stone or block relatively to the cylinder a is adjusted by means of the screws p , which extend transversely through the outer wall of the case a'' , and bear at their inner ends against the stone b , so as to slide the latter horizontally along the said case toward the cylinder.

The machine, as shown in Fig. 1, is adapted to be operated by means of a crank-handle attached to a fly-wheel. It is clear, however, that this machine could be made of large size and be operated by any suitable motive power.

The operation of the improved machine is as follows—that is to say, after starting the machine the rice is placed in the hopper m , and entering the casing at e the bars c of the cylinder carry it against the stone b , where it is subjected to friction between the said stone and the roller, whereby it is hulled without being much crushed.

What I claim is—

A machine for hulling rice, consisting of the following elements, to wit: the cylindrical casing a' , having the top inlet-opening and the longitudinal bottom opening extending approximately throughout the length of said cylinder, the concave perforated plate d , arranged in said longitudinal opening, the lateral rectilinear closed case a'' , projecting from the cylindrical case, the screws tapped through the end wall of the latter, the sliding stone b , inclosed by the rectilinear case, and the rotating cylinder a , having the attached longitudinal metal bars c , substantially as and for the purpose described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EVARISTO CONRADO ENGELBERG.

Witnesses:

JULES GÉRAUD,
DOUGLAS WATSON.