

No. 828,591.

PATENTED AUG. 14, 1906.

M. F. ABBÉ.
PEBBLE MILL.

APPLICATION FILED FEB. 9, 1906.

Fig. 1.

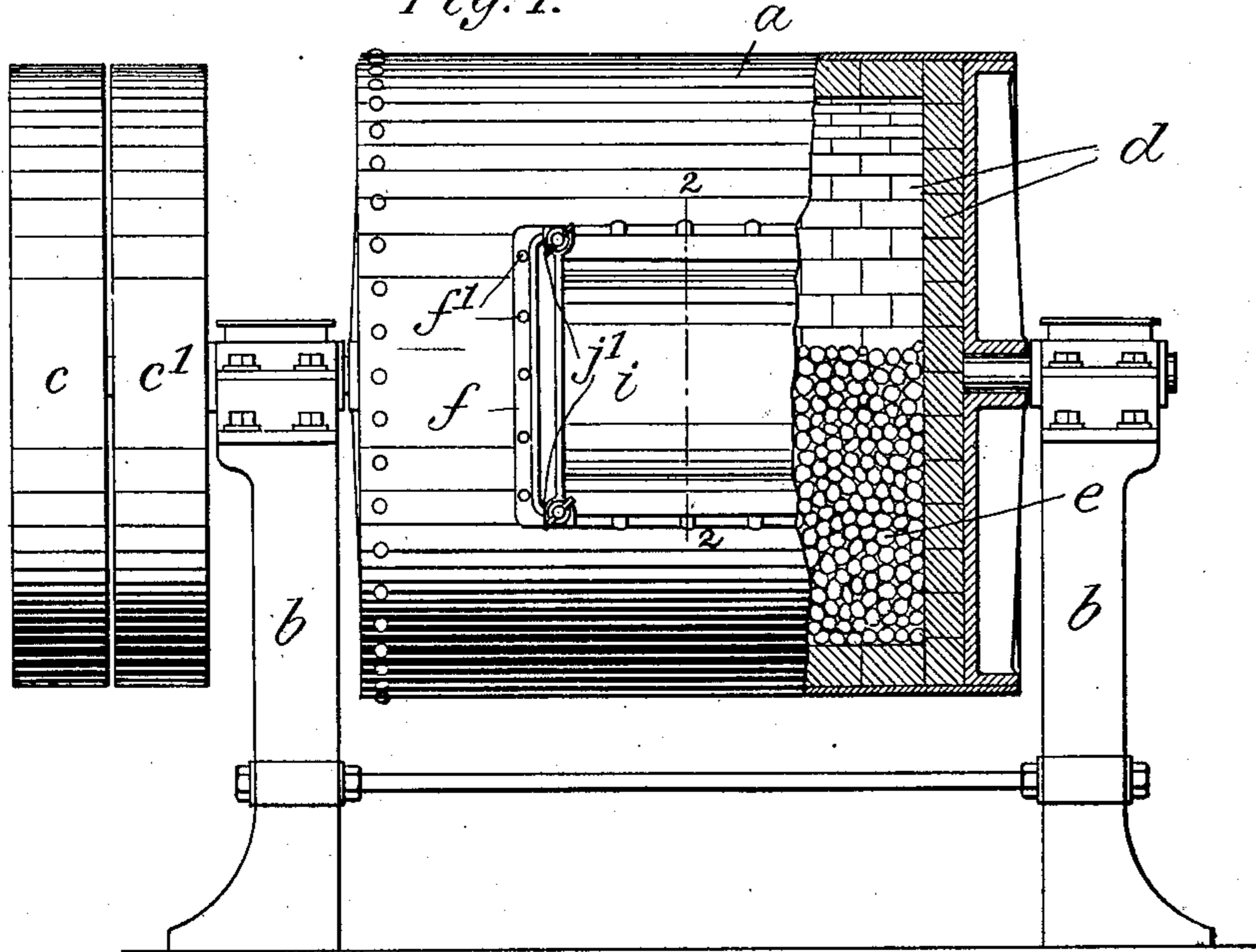


Fig. 3.

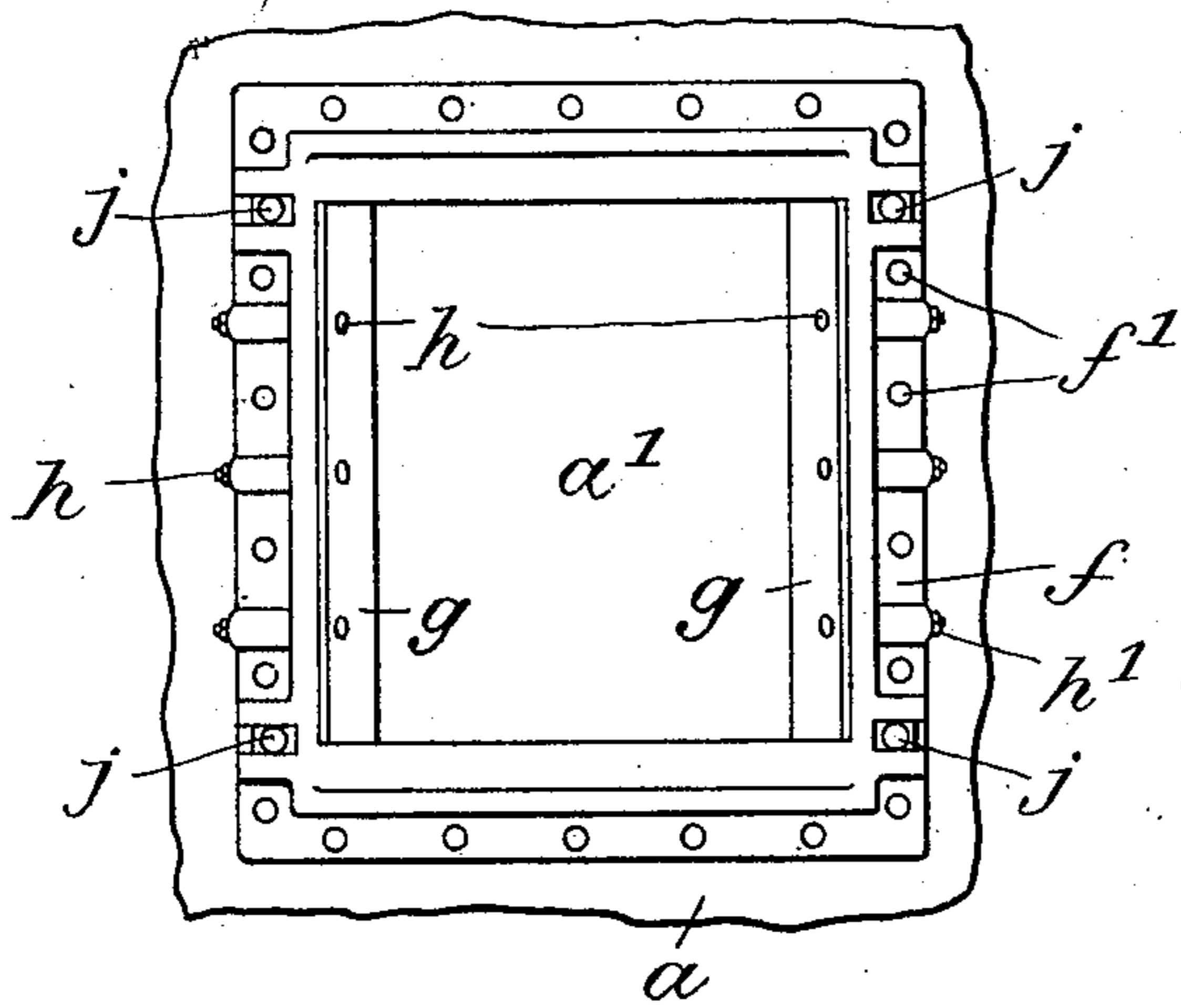


Fig. 4.

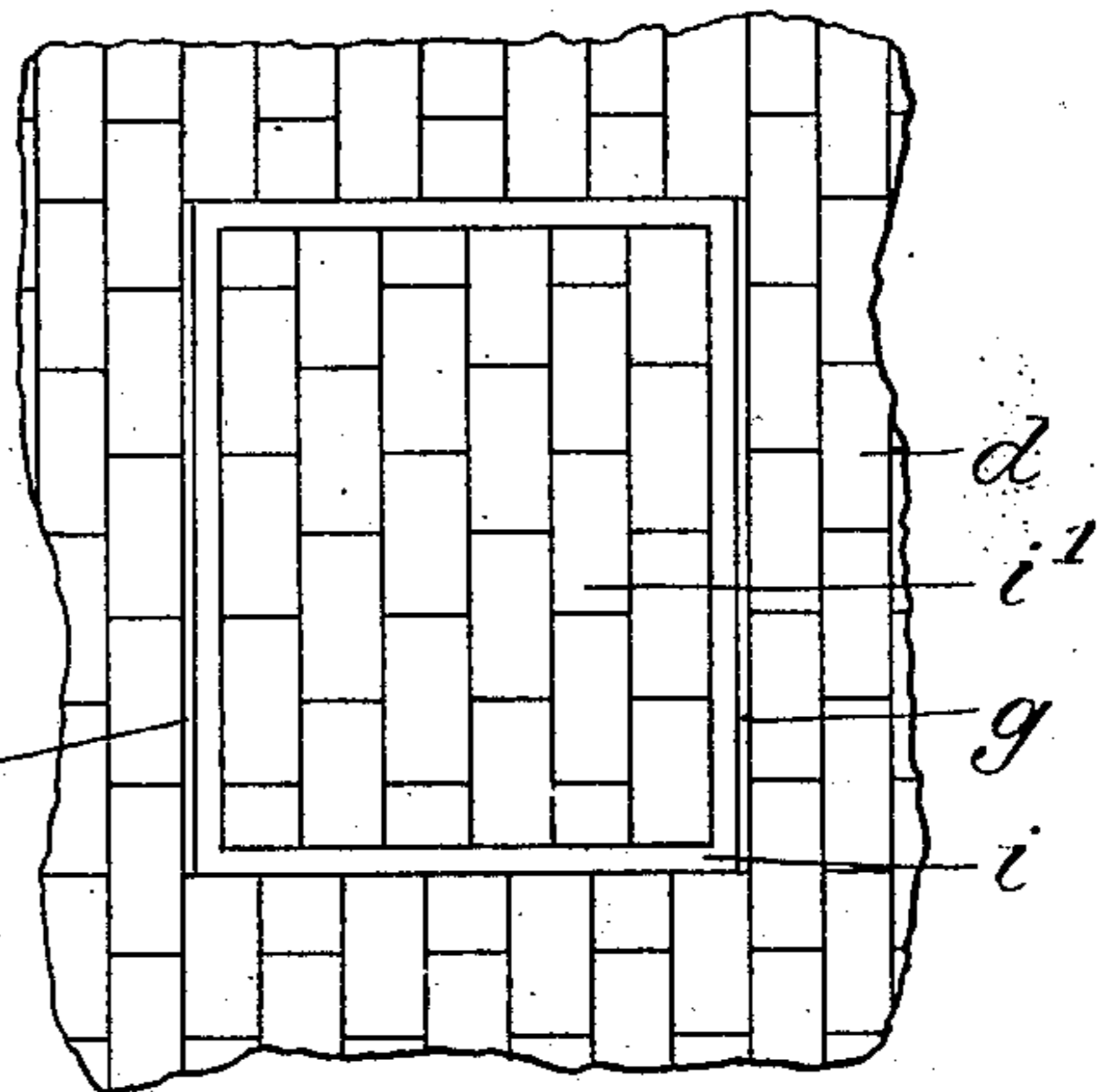


Fig. 2.

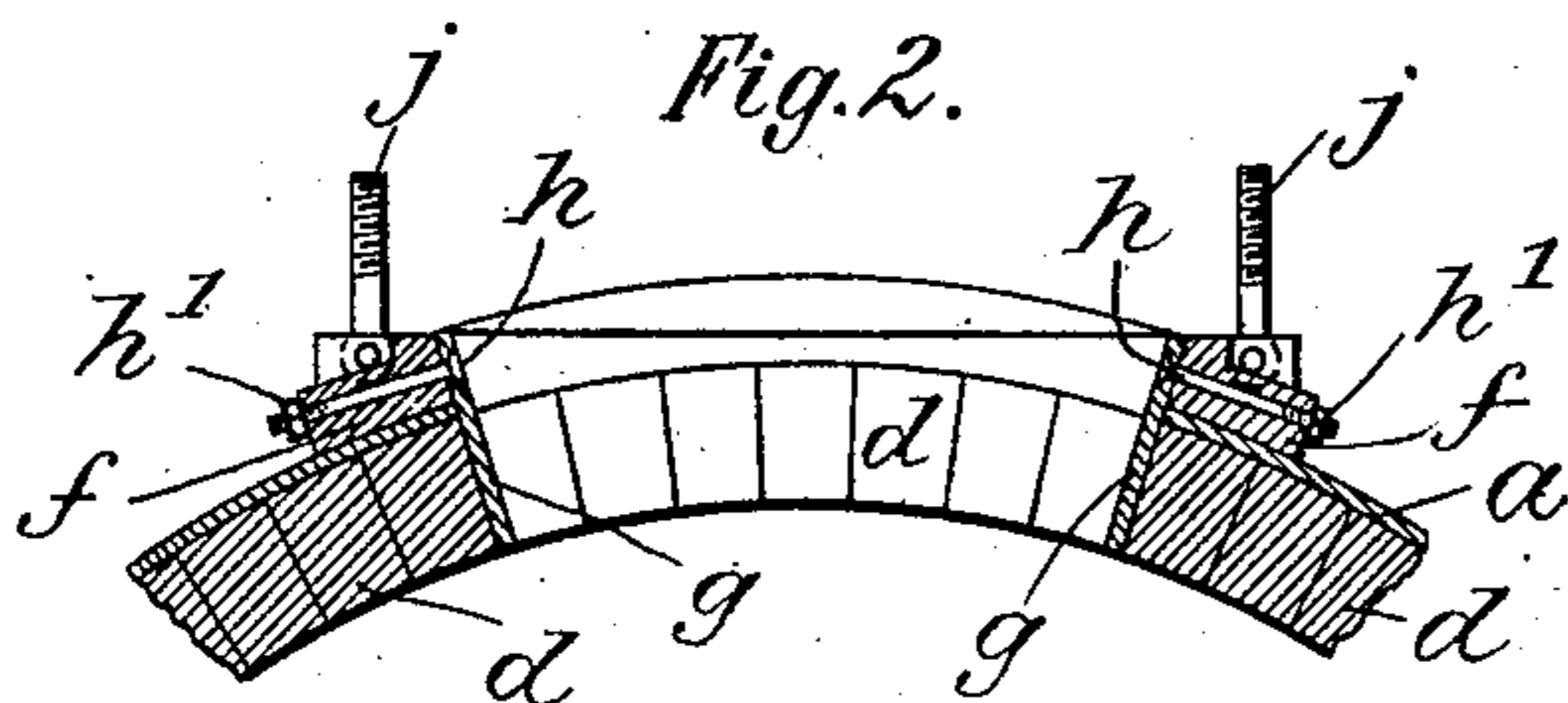
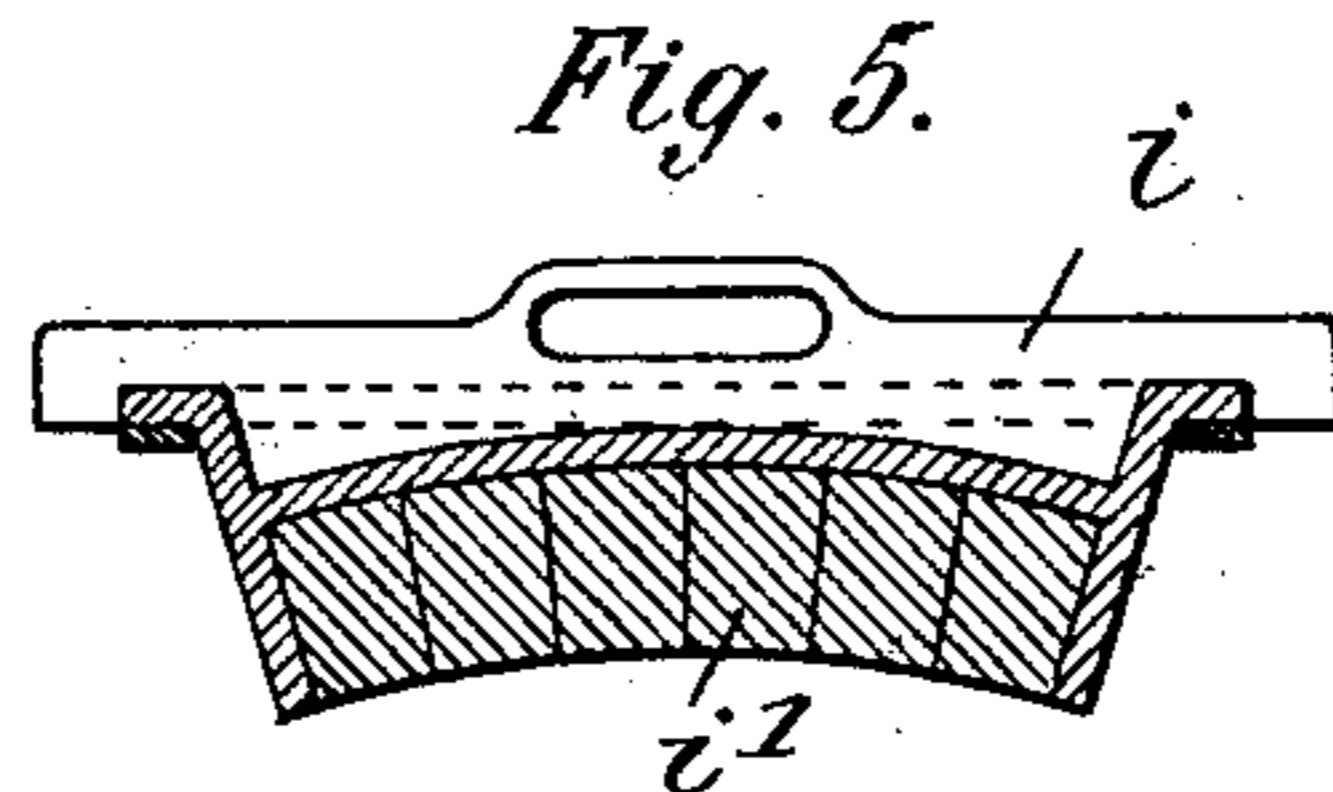


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

MAX F. ABBÉ, OF NEW YORK, N. Y.

PEBBLE-MILL.

No. 828,591.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed February 9, 1906. Serial No. 300,211.

To all whom it may concern:

Be it known that I, MAX F. ABBÉ, a citizen of the United States, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Pebble-Mills, of which the following is a specification.

This invention relates to an improved pebble-mill, and more particularly to an improved construction of the abutments for the lining at the sides of the manhole. These abutments gradually become worn down, together with the lining, during the ordinary operation of the mill, and it is a matter of considerable importance to provide means for quickly removing and replacing said abutments without dismantling the mill.

In the accompanying drawings, Figure 1 is a front view, partly in section, of my improved pebble-mill; Fig. 2, an enlarged cross-section on line 2 2, Fig. 1, with the cover removed; Fig. 3, a plan of Fig. 2; Fig. 4, a bottom view of Fig. 2, showing the cover in position; and Fig. 5, a cross-section through the cover, taken on line 2 2, Fig. 1.

The letter *a* indicates the cylinder of the mill, hung in standards *b* and rotatable by pulleys *c c'*. The cylinder *a* is provided with a lining *d*, of porcelain blocks or other material, and contains the usual grinding balls or pebbles *e*. The manhole *a'* of cylinder *a* is surrounded by a frame *f*, riveted to the outer face of the cylinder, as at *f'*. To those two sides of frame *f* which are parallel to the axis of the cylinder are removably secured a pair of sheet-metal plates *g*. These plates project through shell *a* into the interior of the mill and terminate flush with the inner surface of the lining. The plates are inclined to conform to the radial joints between the lining-blocks *d* and constitute abutments for

those blocks that flank the longitudinal sides of manhole *a'*. The means for removably securing plates *g* to frame *f* consist of bolts *h*, carrying nuts *h'* and passing through aligned perforations of the parts *g* and *f*. The manhole-cover *i*, lined as at *i'*, extends into cylinder *a* between plates *g*. It may be locked to frame *f* by nuts *j'* of swinging bolts *j*, which are pivoted to frame *f* and engage the cover in the usual manner. When the lining *d*, together with the plates *g*, have become unduly worn, the plates and the lining are removed, new plates are bolted to frame *f*, and a new lining is inserted. The old worn cover is also replaced by a new cover.

It will be seen that by my invention the worn parts may be readily replaced without unripping frame *f* from cylinder *a* or subjecting the latter to any other manipulation which is apt to injure it.

What I claim is—

1. In a pebble-mill, a cylinder having a manhole, combined with a frame surrounding said manhole, inwardly-projecting plates removably secured to said frame, and a lining flanked by the plates, substantially as specified.

2. In a pebble-mill, a cylinder having a manhole, combined with a frame surrounding said manhole, a pair of inwardly-projecting inclined plates, bolts for removably securing said plates to opposite sides of the frame, and a lining flanked by the plates, substantially as specified.

Signed by me at New York city, Manhattan, New York, this 8th day of February, 1906.

MAX F. ABBÉ.

Witnesses:

FRANK V. BRIESEN,
WILLIAM SCHULZ.