

(No Model.)

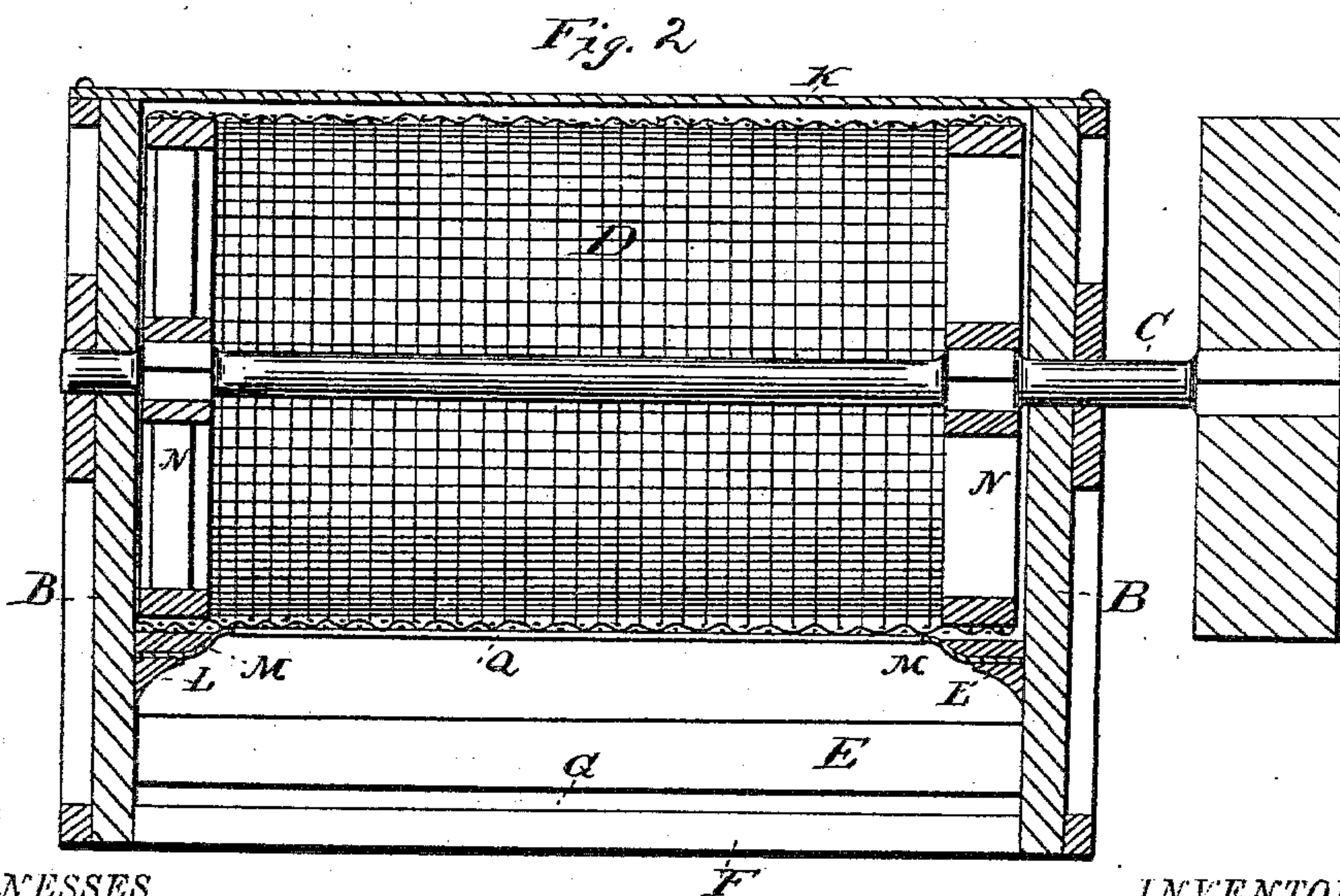
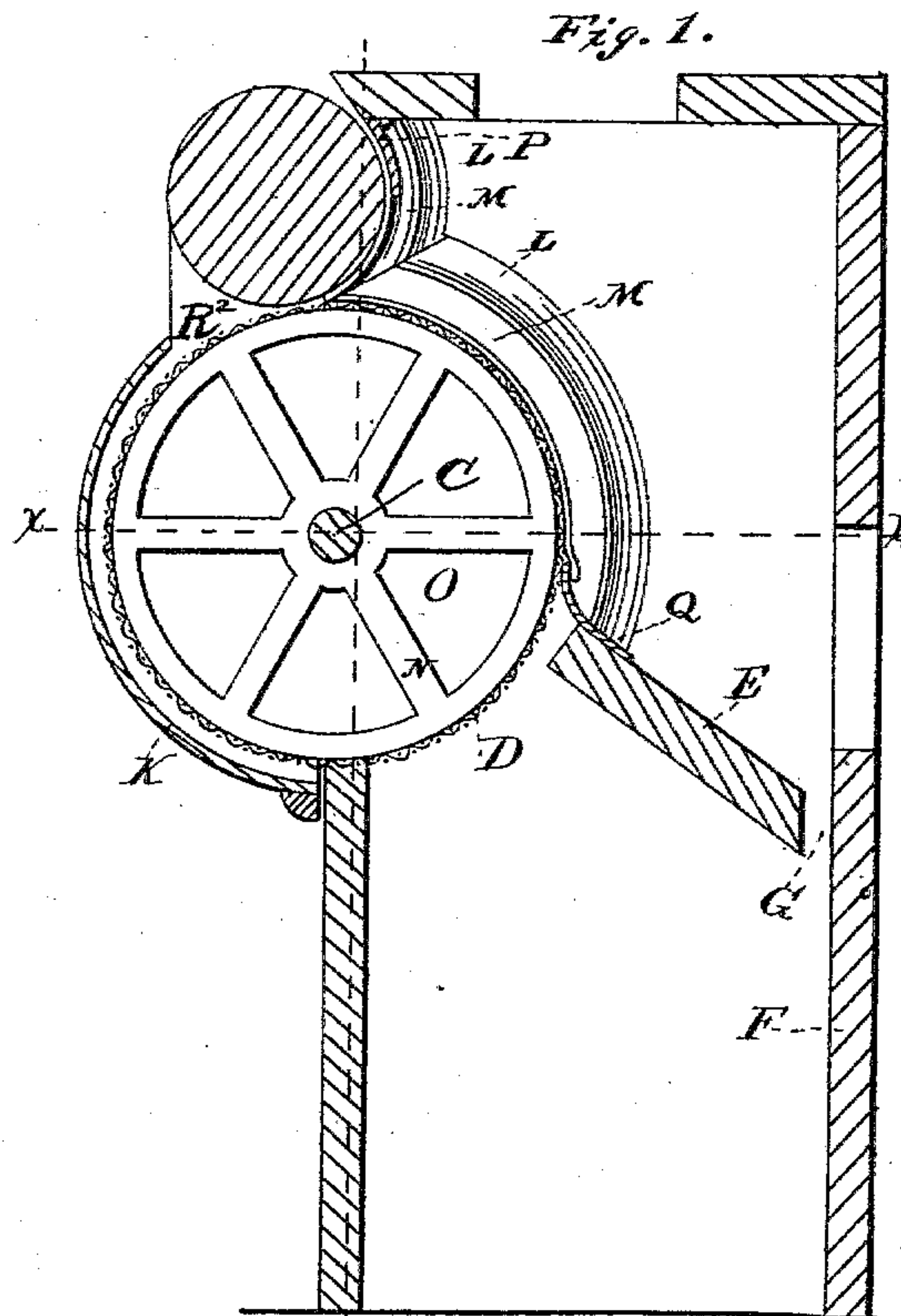
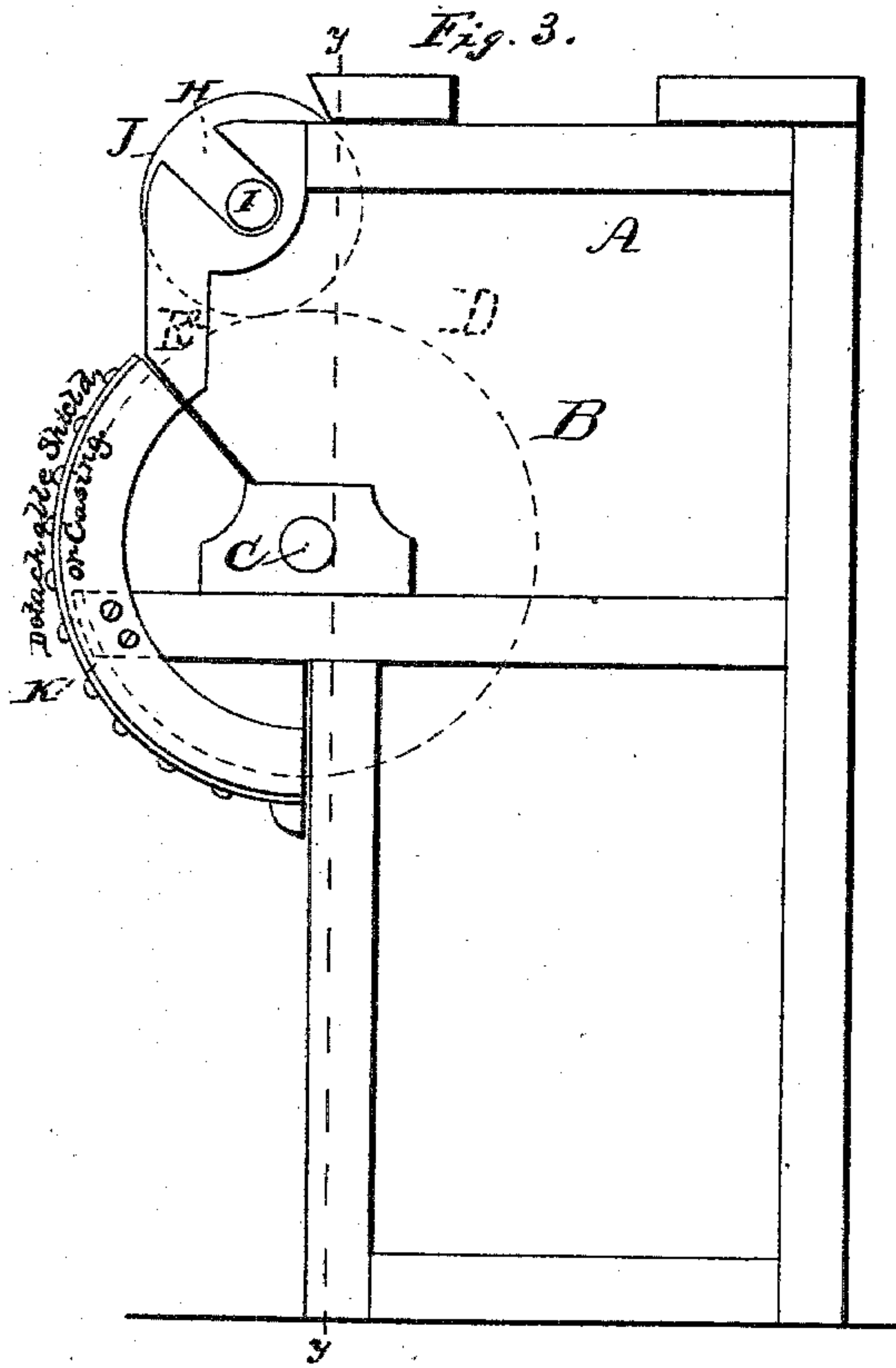
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W. H. SAWYER.

COTTON CLEANER AND CONDENSER.

No. 286,334.

Patented Oct. 9, 1883.



WITNESSES  
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INVENTOR  
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2 Sheets—Sheet 2.

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Fig. 4.

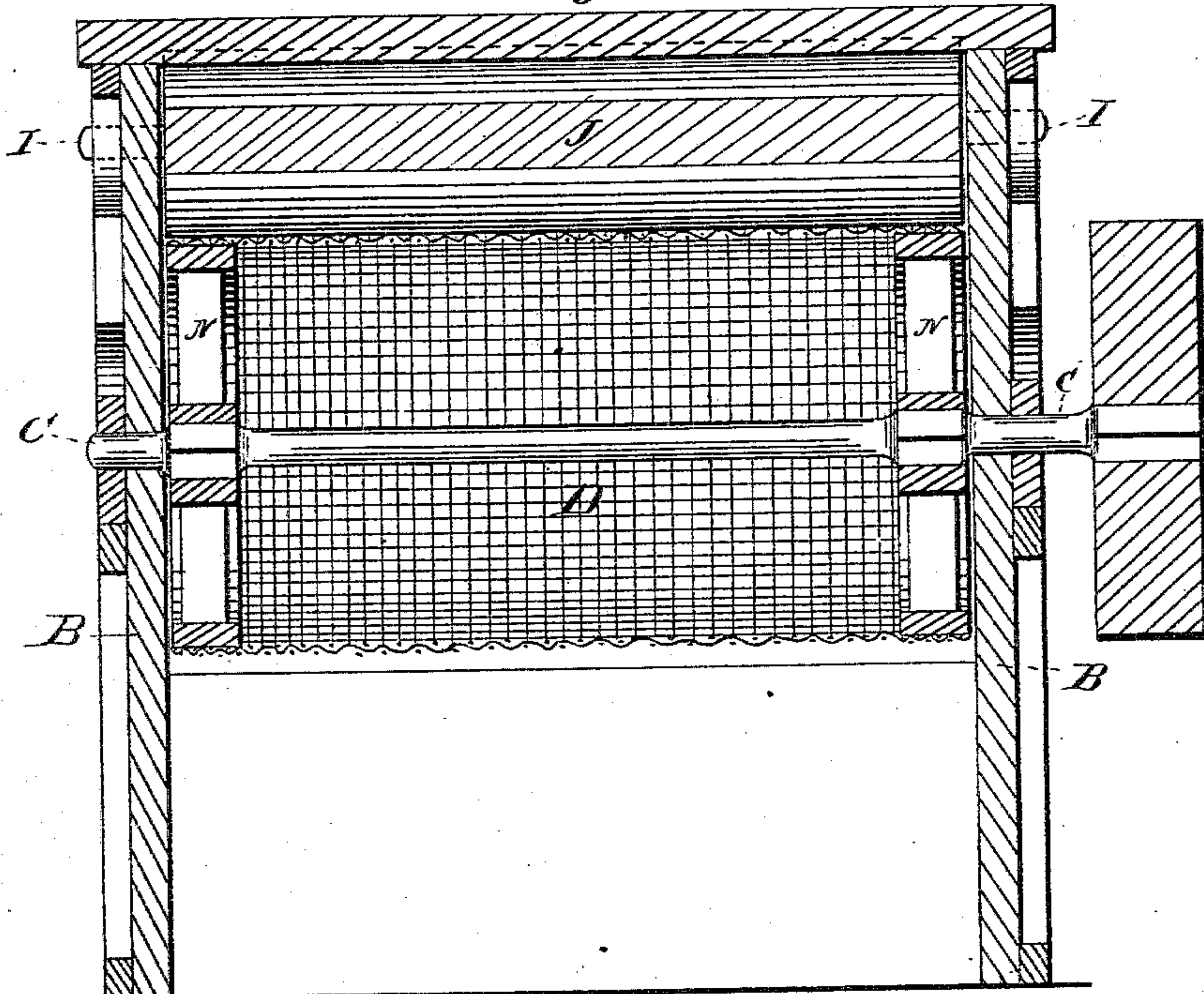
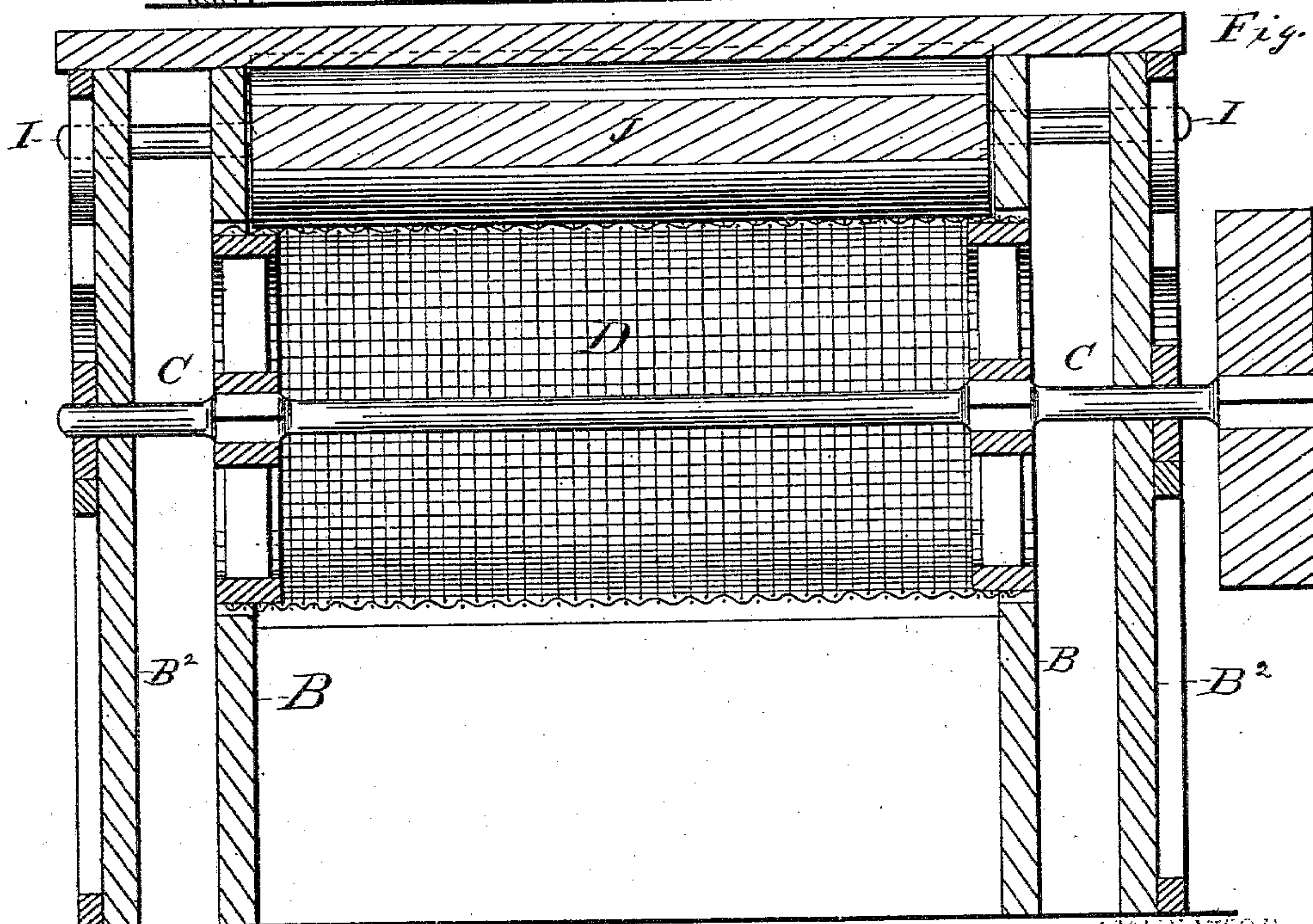


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WALTER H. SAWYER, OF FORT VALLEY, GEORGIA.

## COTTON CLEANER AND CONDENSER.

SPECIFICATION forming part of Letters Patent No. 286,334, dated October 9, 1883.

Application filed March 22, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER H. SAWYER, a citizen of the United States, residing at Fort Valley, in the county of Houston and State of Georgia, have invented a new and useful Cotton Cleaner and Condenser, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to cotton cleaning and condensing devices; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a vertical longitudinal sectional view of my improved cotton cleaner and condenser. Fig. 2 is a horizontal sectional view of the same on the line  $x x$  in Fig. 1. Fig. 3 is a side view. Fig. 4 is a vertical transverse sectional view on the line  $y y$  in Fig. 3, and Fig. 5 is a vertical transverse sectional view illustrating a modification.

The same letters refer to the same parts in all the figures.

A in the drawings designates the frame of my cotton cleaner and condenser, which is attached to or placed at the rear or discharge end of a cotton-gin, to receive the cotton as it is thrown from the gin-brush. The frame comprises the sides B B, having bearings for the ends of a shaft, C, carrying the perforated or meshed cleaning-cylinder D. E is an inclined "cleaning-board," placed in front of the said cylinder, and having at its upper edge an elastic packing-strip bearing against the latter, the object of which will be hereinafter more fully set forth. Between the lower edge of the cleaning-board and the front F of the casing is a slot, G, to allow the escape of sand and other heavier impurities, and the front F, it will be seen, projects above the said slot, in order to prevent the escape of the lint through the same. The upper rear corners of the sides of the frame are provided with inclined slots H, forming bearings for the shaft I of the condensing-roller J, which is an ordinary light roller, resting upon the upper side of the cleaning-cylinder D, and adapted to revolve by friction against the latter or the sheet of batting passing between the said rollers. The front side of the cleaning-cylinder is cov-

ered by a detachable shield or casing, K, which may be readily removed, when necessary, for the purpose of cleaning the cylinder. Upon the inside of the sides B of the frame, and adjoining the ends of the cleaning-cylinder D and condensing-roller J, are placed segmental moldings L, having elastic strips M, of leather, rubber, or other suitable material, which overlap the ends of said cylinder and roller. The ends or heads N of the cleaning-cylinder D are open, as shown at O.

P is an elastic strip secured to the upper side of the frame, and bearing or pressing against the front side of the condensing-roller J, over the entire length of which it extends. This, together with the strips M and the strip Q, secured to the upper edge of the cleaning-board, makes the joints covered by said strips air-tight, and causes the blast from the gin-brush to pass transversely through the cleaning-cylinder and down through the latter and out through the bottom of the casing, carrying with it the dust and impurities. The packing-strips also prevent lint from getting between the ends of the cylinder and roller and the sides of the casing, thereby clogging the machine; but they will admit of the blast passing through the open ends of the cylinder and back under the packing-strips, bearing against the inner side of the latter, carrying with it any impurities which might otherwise lodge at the ends of the cylinder and prevent the same from revolving freely. When the lint passes from the gin-brush, which revolves with great velocity, it is thrown with considerable force against the inclined cleaning-board, thereby dislodging the sand and other heavy impurities, which pass through the slot G and out through the bottom of the frame. The blast forces the lint against the cleaning-cylinder, which carries it around under the condensing-roller, by which it is compacted into a sheet or bat, said roller readily adapting itself to any thickness of sheet or bat. The blast forces the impurities contained in the cotton in through the perforations or meshes in the cylinder and out through the lower part of the latter and the bottom of the casing. The blast also serves to lift the sheet or bat off the cleaning-cylinder at R<sup>2</sup> as it passes from under the condensing-roller, thus preventing



it from being carried by the said cylinder D under the shield K and out through the bottom of the casing.

In the modification illustrated in Fig. 5 of the drawings I have shown a frame constructed with double sides, B and B<sup>2</sup>. The open ends of the cleaning-cylinder in this case extend out through the inner sides, B, and the shaft of the said cylinder is journaled in the outer sides, B<sup>2</sup>. By this construction the tendency of the blast will be to carry the impurities out through the heads or ends of the cylinder and off between the sides B and B<sup>2</sup> of the casing.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. In a cotton cleaner and condenser, the combination, with the casing, the cleaning-cylinder, and the condensing-roller, of flexible packing-strips arranged to bear against the sides and ends of said cylinder and roller at all points where they adjoin the sides, top, and cleaning-board of the casing, within the latter, as set forth.

2. The combination of the casing, the perforated or meshed cleaning-cylinder, the inclined cleaning-board, there being a slot between the latter and the front side of the casing, and a flexible strip secured to the upper edge of the cleaning-board and pressing against the cleaning-cylinder, as set forth.

3. The combination of the casing, the opened

cleaning-cylinder journaled in the sides of the same, the vertically-movable condensing-roller, the detachable shield covering the outer side of the cleaning-cylinder, the inclined cleaning-board, there being a slot between the latter and the front side of the casing, the segmental moldings on the inside of the casing, at the ends of the cleaning-cylinder and the condensing-roller, and the elastic packing-strips secured to the said moldings and to the top of the casing and upper edge of the cleaning-board, as and for the purpose set forth.

4. In a cotton cleaner and condenser, the combination of the casing having double sides, the open-ended cleaning-cylinder, extending through the inner sides and having its shaft journaled in the outer sides, the vertically-movable condensing-roller, the inclined cleaning-board, and flexible packing-strips arranged to bear against the sides and ends of the cylinder and roller at all points where they adjoin the sides, top, and cleaning-board of the casing, within the latter, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WALTER H. SAWYER.

Witnesses:

WILLIE C. GRAY,  
JOHN F. TROUTMAN, Jr.