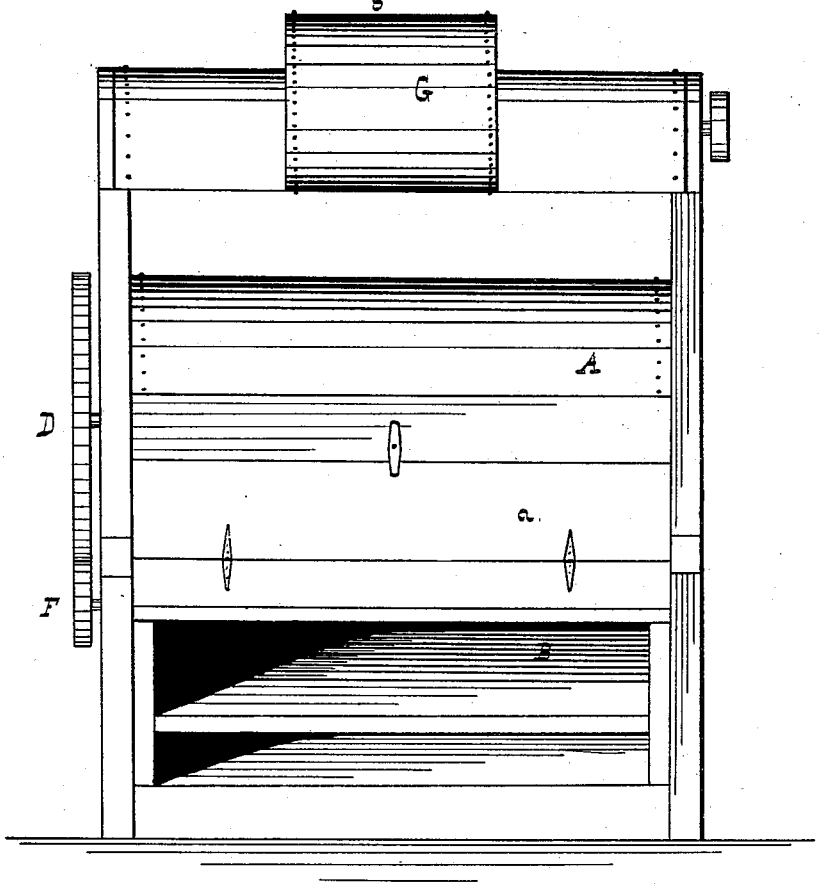
2 Sheets—Sheet 1.

J. GREAVES.

COTTON CLEANERS AND CONDENSERS.

No. 190,313. Patented May 1, 1877.

Fig 1.



Attest.

W. A. Bertram

D. L. H. Barclay.

Inventor.

James Greaves.

per Atty

R. D. Williams.

2 Sheets—Sheet 2.

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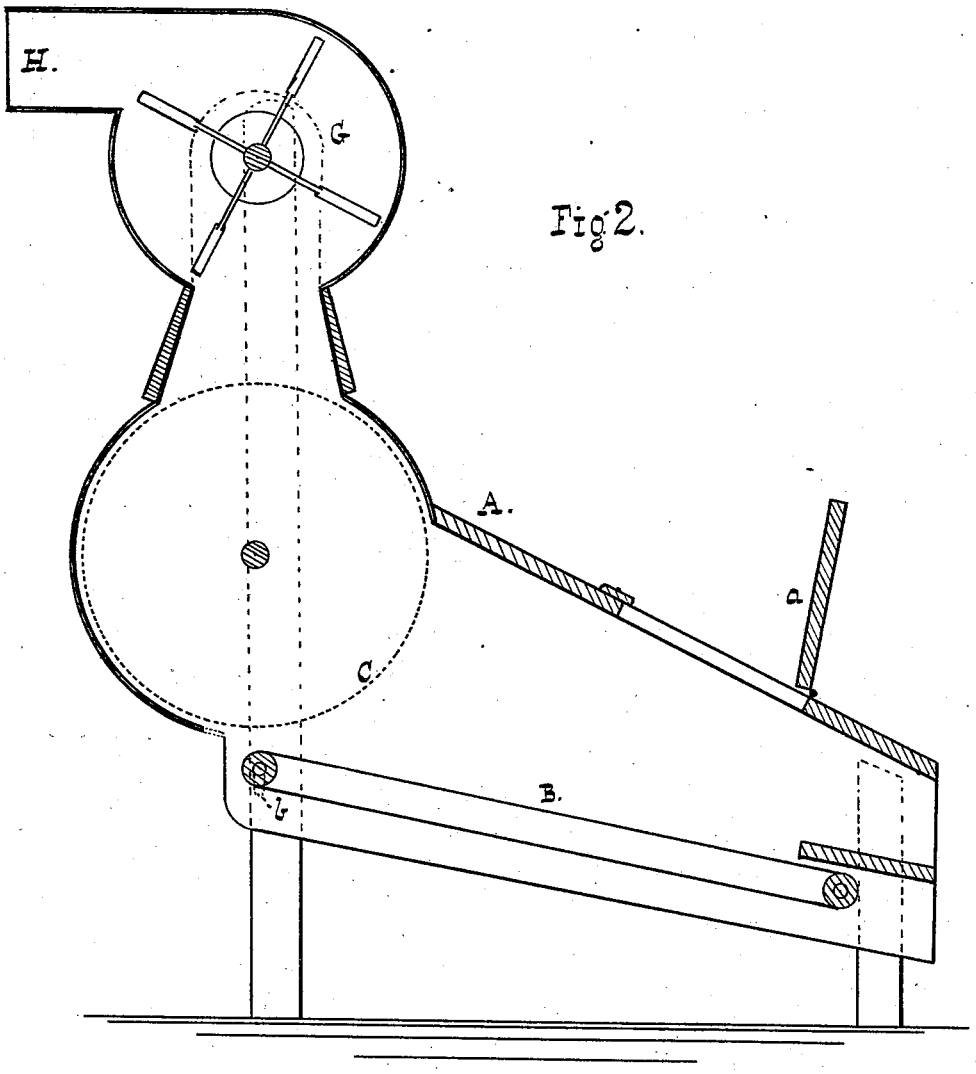

Fig 2.

Attest.
W. A. Bertram
Del. H. Barclay

Inventor:
James Greaves
per Atty
R. D. Williams

UNITED STATES PATENT OFFICE.

JAMES GREAVES, OF WACO, TEXAS.

IMPROVEMENT IN COTTON CLEANERS AND CONDENSERS.

Specification forming part of Letters Patent No. **190,313**, dated May 1, 1877; application filed April 17, 1877.

To all whom it may concern:

Be it known that I, JAMES GREAVES, of Waco, county of McLennan, State of Texas, have invented certain new and useful Improvements in Cotton-Condensers; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings.

This invention relates to devices for cleansing and compacting cotton as it comes from the gin; and it consists in certain details of construction and combinations of parts, as hereinafter fully set forth and claimed.

As the cotton-lint is delivered from the gin it is extremely bulky, and contaminated by dust and various other impurities, which greatly detract from the market value of the cotton.

The object of my device is to eliminate these impurities, and at the same time to compact the cotton into an endless sheet, and thereby greatly facilitate the process of baling.

In the accompanying drawings are illustrated, in Figure 1, a front, and in Fig. 2 a longitudinal vertical sectional, view of my device.

A represents the outer case, which is preferably inclined, as shown, into the open end of which the cotton is forced by the gin-brush, and falls upon the endless apron B. Near the end of the apron, and in close proximity to its surface, revolves the cylindrical sieve or screen C, the shaft of which carries a gear-wheel, D, which meshes with a similar wheel, F, upon the shaft, which drives the apron B.

Above the cylindrical screen is situated a fan-blower, G, having a suitable discharge-spout, H. The upper part of the case is furfurnished with a hinged lid, *a*, in order to give access to the interior of the case, and a small sliding door is arranged opposite the screen for a similar purpose.

The operation of the device is as follows: The lint, being delivered into the open end of the case, is carried forward by means of the revolving apron to the screen. A strong current of air is induced by the fan-blower upward through the revolving screen, whereby the dust is eliminated from the lint, and passes out at the mouth of the blower. In its passage between the apron and the screen the cotton is compacted into a thin sheet—a form very convenient for baling—and is practically freed from dust and impurities.

The bearings of the apron-shaft are slotted, as shown at *b*, in order to raise or lower the apron, and thus regulate the thickness of the sheet of cotton, as may be desired.

The screen should revolve at about the same speed as the apron, and to this end the number of cogs upon their driving-wheels should be as the radius of the screen to the radius of the apron-shaft.

In the drawings the fan-shaft is shown as having a pulley for the attachment of a belt; but the fan may also be driven by means of a train of cog-wheels gearing with the wheel D.

The main driving-power is applied to any one of the shafts in any convenient way.

Some of the advantages attending the use of my device may be briefly mentioned. The cotton being compacted into an endless bat greatly facilitates the process of baling, enabling a greater weight of cotton to be compressed into a given bulk; and the sample is rendered more uniform than by the present method, thus preventing "mixed-packed" bales.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cotton-condenser, the combination of an endless apron, a revolving screen, and a fan-blower, all arranged substantially as described.

2. In combination with the screen C, the apron B, having slotted bearings *b*, substantially as described, and for the purpose set forth.

3. The case A, having lid *a*, in combination with the apron B, screen C, and fan G, substantially as described.

Witness my hand this 11th day of April, 1877.

JAMES GREAVES.

Witnesses:
J. T. DONOVAN,
J. T. WALTON.