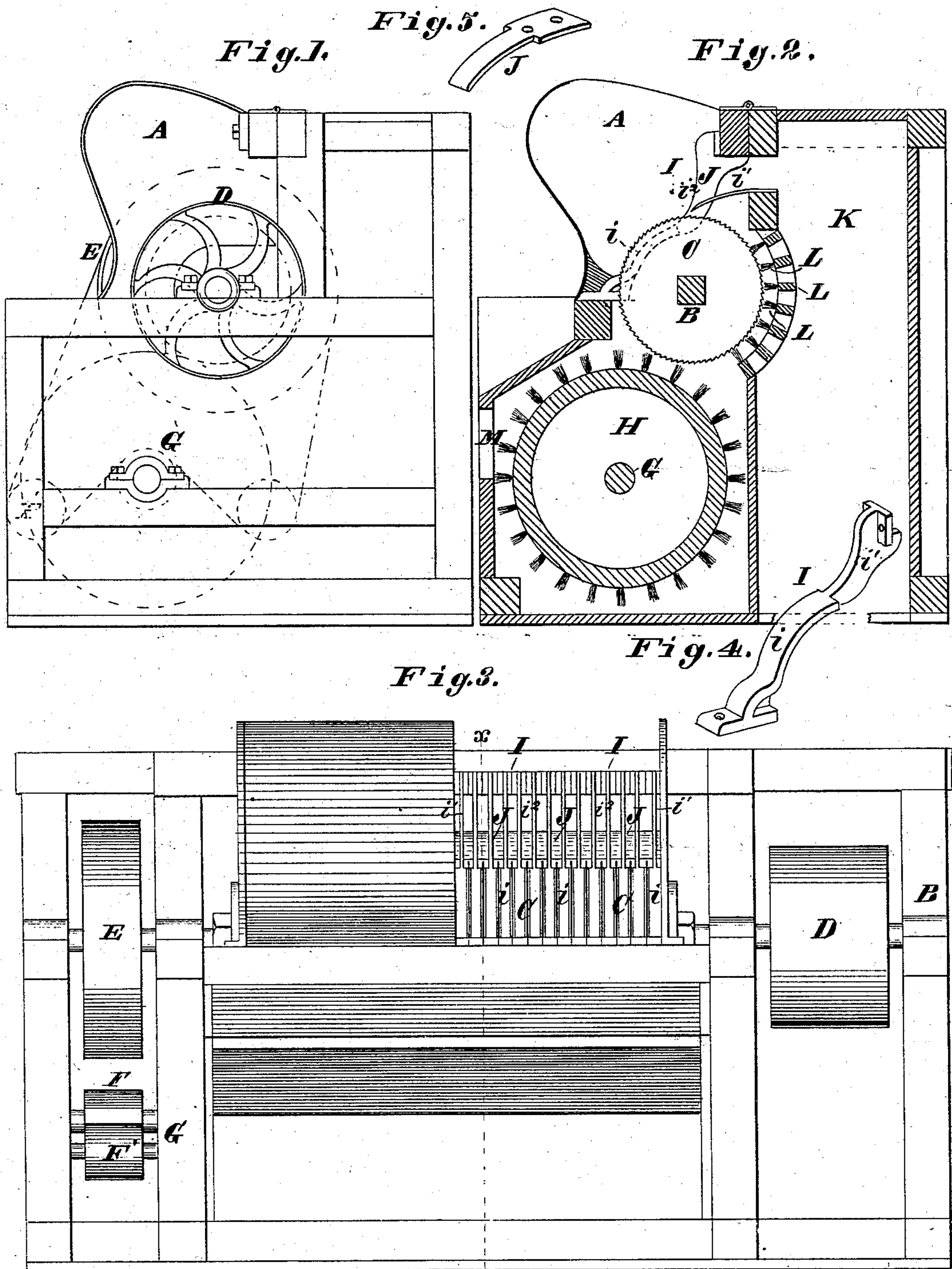


(No Model.)

G. C. THOMPSON.
Cotton Separator.

No. 237,340.

Patented Feb. 1, 1881.



Attest.
Charles Pickles
Walter Allen

Inventor:
George C. Thompson.
By Knight Bros.
Atty.s.

UNITED STATES PATENT OFFICE.

GEORGE C. THOMPSON, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF
TO JOHN ANDERSON, OF SAME PLACE.

COTTON-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 237,340, dated February 1, 1881.

Application filed November 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. THOMPSON, of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Cotton-Separators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My improvement consists in the following combination of devices inclosed and supported in a suitable case: a breast or cotton box, saws substantially similar to those in a cotton-gin, bars interposed between the saws in a series having a contour substantially similar in front to an ordinary saw-plate of a gin, and having at the upper part orifices large enough to allow the seed-cotton and broken trash to pass through, a sort of comb arranged between the bars above the saws to separate the trash from the seed-cotton and carry the latter over the comb into an open-bottomed trash-chamber, and an open fixed brush to brush the seed-cotton as it is carried forward on the saw-teeth. A brush-cylinder clears the saw-teeth of the cotton and ejects it from the case.

In the drawings, Figure 1 is an end view of the machine. Fig. 2 is a transverse section at *x x*, Fig. 3. Fig. 3 is a front view with part of the breast-front removed. Fig. 4 is a perspective view of one of the saw-bars. Fig. 5 is a perspective view of one of the skimmer teeth or chisels.

A is the cotton-box, made in the usual or any suitable form. Into this the cotton is fed in the condition in which it comes from the field.

B is the saw-shaft, and C the saws, which may be of the ordinary construction used in a cotton-gin. The saw-shaft carries a driving-pulley, D, and a pulley, E, connected by a belt with the pulley F of the brush-cylinder shaft G. There is no novelty claimed in this gearing; but I would explain that the belt from the pulley E passes around two idler-pulleys, one each side of the pulley F, (see dotted lines in Fig. 1,) and the back of the belt lies over the top of the pulley F, so as to give to the brush-cylinder H a rotation in opposite direction to the saws. One of the friction-pulleys is shown at F', Fig. 3.

The bars I occupy the place of the ordinary saw-plate of a cotton-gin, and the front face of the series or row of bars has substantially the same contour as the said plate. The bars have sufficient depth from inside to outside to give them the proper amount of strength and rigidity. The lower portion, *i*, of the bar is made thick, so as to extend almost to the saws on each side; but the upper portion, *i'*, is made thin, so as to leave apertures *i''* between the bars at this place, such apertures being large enough to allow the seed-cotton and broken trash to be carried by the action of the saws through between the bars. As these matters are carried through the spaces *i''* they are separated by what I denominate a "skimmer," which consists of a number of chisels, J, dividing the spaces *i''* and separating the seed-cotton, which is carried below the skimmer, from the broken trash, which is carried over the skimmer and falls into the open-bottomed trash-chamber K.

L L, &c., are a number of brushes extending parallel to the saw-shaft and in proximity to the saws, whose purpose is to brush the cotton as it is carried around by the saw-teeth, to cause the separation therefrom of any small trash that may have escaped beneath the skimmer. There will be a considerable current of air created by the saws and the cotton which they carry, which will blow the trash through between the fixed brushes L into the trash-chamber K.

H is an ordinary brush-cylinder clearing the teeth of the saws in the ordinary manner; but its location is changed from that found in cotton-gins, to make room for the fixed brushes L and trash-chamber K.

M is a chute for the escape of the seed-cotton from the machine, and this chute may lead directly to the seed-box of a cotton-gin, if desired, the purpose of my machine not being to gin the cotton or to separate any of the seeds from the lint, but to separate trash and dust before ginning.

The operation of the machine is as follows: The cotton, in the condition in which it is brought from the field, is fed into the cotton-box A, and the seed-cotton is seized by the saw-teeth and carried through the parts of the

spaces i^2 beneath the skimmer, and the broken trash passes over the skimmer into the trash-chamber K. Any trash in the cotton-box too large to pass through the spaces i is broken up
5 by the saws, so that everything fed into the cotton-box passes through these spaces. Thus this machine differs essentially from a cotton-gin in which the lint alone passes through the saw-plate, and the seeds drop out beneath the
10 front plate of the cotton-box. After the seed-cotton has passed beneath the skimmer the brushes L brush the remaining trash and dust from it, and it is discharged from the machine by the brush-cylinder H.

15 I claim as my invention—

1. The combination of saws C and bars I,

composed of the described portions i i' , leaving spaces i^2 for the passage of seed-cotton and trash, all constructed and arranged substantially as set forth. 20

2. In combination with the saws C and bars I, constructed and associated as set forth, the skimmer J, arranged and operating substantially as set forth.

3. The combination of saws C, bars I, skimmer J, fixed brushes L, and discharging-cylinder H, all relatively arranged substantially in the manner set forth. 25

GEORGE C. THOMPSON.

Witnesses:

SAML. KNIGHT,
C. H. BROWN.