

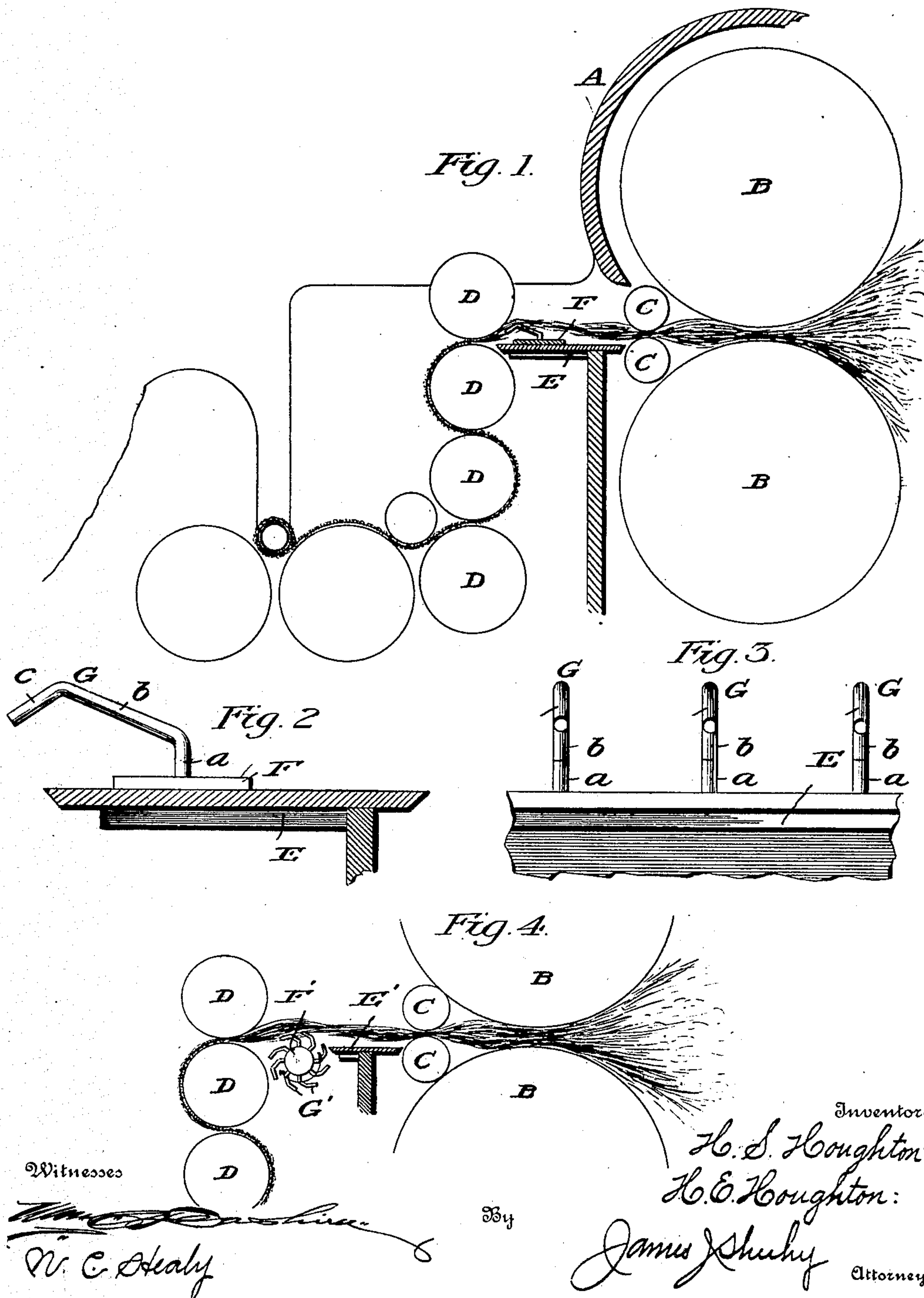
No. 860,295.

PATENTED JULY 16, 1907.

H. S. & H. E. HOUGHTON.

COTTON PICKER.

APPLICATION FILED NOV. 14, 1906.



UNITED STATES PATENT OFFICE.

HENRY S. HOUGHTON AND HARRY E. HOUGHTON, OF WOONSOCKET, RHODE ISLAND.

COTTON-PICKER.

No. 860,295.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed November 14, 1906. Serial No. 343,347.

To all whom it may concern:

Be it known that we, HENRY S. HOUGHTON and HARRY E. HOUGHTON, citizens of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Cotton-Pickers, of which the following is a specification.

Our invention pertains to the manufacture of cotton yarn.

10 Cotton as it is discharged from a picker is in the form of a lap or wide thin layer which is wound into a large roll precedent to being carried to a carding machine for further operations on the cotton. In the unwinding of the said roll it frequently happens that part of one 15 coil of the lap adheres to part of another coil thereof which results in the lap being split so that more cotton is fed into the carding machine at one point than at another and uneven or thick and thin work is produced.

20 The above mentioned splitting of the lap is due to the fact that ordinarily the cotton composing the lap is in a fluffy and loose or open state; and the object of our invention is to provide simple and efficient means for firmly condensing the fibers of cotton entering into the 25 lap with a view of preventing one coil of the lap when the same is formed into a roll from becoming entangled with another coil and pulling fibers of cotton from the latter on the unwinding of the roll.

30 With the foregoing in mind the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which:

35 Figure 1 is a vertical section illustrating our improvement as properly arranged relative to the several rolls of a cotton picker. Fig. 2 is an enlarged, detail vertical section of our improved means for condensing the fibers of cotton. Fig. 3 is a detail front elevation of the said means, and: Fig. 4 is a view similar to Fig. 1 but showing a modification of our invention.

40 Referring by letter to the said drawings, and more particularly to Figs. 1 to 3, thereof: A is the casing of a cotton picker. B B are the screen rolls of the picker. C C are rolls which receive cotton from the screen rolls 45 after the manner illustrated, and D D are rolls between which the cotton is carried out of or discharged from the picker. In the casing A at a point intermediate the pair of rolls C and the upper of the rolls D is arranged a table E, and on this table is fixed a body plate 50 F carrying a plurality of teeth G which in practice are arranged at a distance of two or three inches apart. These teeth G are fixed at their heels to the body plate F, and extend upward therefrom, as indicated by *a*, and then forward and upward, as indicated by *b*, and 55 then forward and downward, as indicated by *c*. The angle of the teeth G intermediate the portions *b* and *c*

thereof is always, by preference, the same, but in practice it may be found necessary to vary or change the angle between the portions *a* and *b* of the teeth in order to best adapt the teeth to the picker and the grade of 60 cotton that is to be operated on.

Arranged as stated relative to the rolls of the picker A, the teeth G will be found to be highly efficient in condensing the fibers of the cotton. This is due to the fact that the layer or mass of cotton is light and fluffy 65 as it passes over the teeth or wires, and the said teeth or wires are allowed to penetrate the mass of cotton to a considerable extent, as indicated in Fig. 1.

The condensing of the fibers of cotton is materially advantageous because when the lap is wound into a 70 roll one coil of the roll is not liable to be fastened to another coil thereof, and hence when the roll is unwound incident to the feeding of the cotton to a carding machine there is no splitting or pulling apart of the lap.

By virtue of our improved teeth G being arranged in 75 a position intermediate the rolls C which receive the formed lap from the screen rolls B and the rolls D which conduct the lap out of the picker, it will be apparent that the said teeth G only engage the cotton when the same is in the form of a lap, and hence there 80 is no liability of fibers of cotton collecting on the teeth G and in that way causing an uneven and bunchy lap.

In the embodiment of our invention illustrated in Fig. 4, a table E' narrower than the table E of Figs. 1 to 3 is employed, and a roller shaft F' is located between 85 the forward edge of said table and the upper of the rolls D, and teeth G' for serving the purpose hereinbefore ascribed to the teeth G are arranged on the periphery of the said roller shaft at intervals in the length and circumference thereof. The teeth G' are arranged to ex- 90 tend about the distance shown above the table E' when the roller shaft is rotated, and the said roller shaft is designed to be positively rotated in the direction indicated by arrow, but at a speed slower than the feed of the lap. When the teeth G' are thus operated, they 95 will be found to be quite as efficient as the teeth G of Figs. 1 to 3 in condensing the fibers of cotton.

It will be gathered from the foregoing that our improvements do not add greatly to the cost of a cotton picker, and yet are calculated to materially improve 100 the product of the picker in the respect mentioned.

The constructions herein shown and described are the best embodiments of our invention known to us, but we desire it understood that in practice changes may be made in the form, construction and relative 105 arrangement of parts within the scope of the appended claims without involving departure from the scope of our invention.

Having described our invention, what we claim and desire to secure by Letters-Patent, is: 110

1. The combination in a cotton picker, of screen rolls, rolls for receiving a lap from the screen rolls, means for

conducting the lap out of the picker, and fixed teeth, intermediate the receiving rolls and said conducting means, arranged to extend into the path of the lap at intervals in the width of said path; each of said teeth extending upward and then forward, with reference to the direction in which the lap is moved, and then downward.

2. The combination of means for moving a lap of cotton, and teeth arranged to extend into the path of the lap at intervals in the width of said path; each of said teeth extending upward and forward, with reference to the direction in which the lap is moved, and each having an angle adjacent to its heel and another angle adjacent to its forward end.

3. An attachment for a cotton picker or analogous machine, comprising a body, and teeth fixed at one end to the body and extending upwardly therefrom, then forward and then downward.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

HENRY S. HOUGHTON.
HARRY E. HOUGHTON.

Witnesses:

GEO. W. SPAULDING,
EDGAR L. SPAULDING.