

No. 739,733.

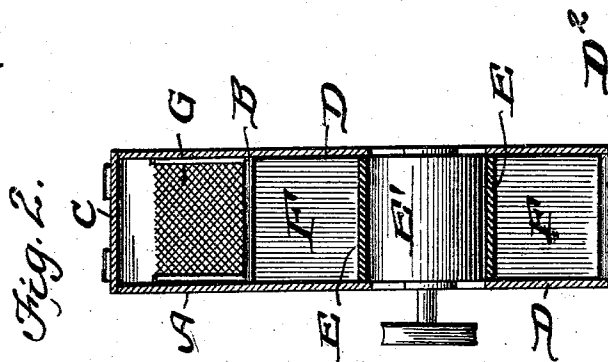
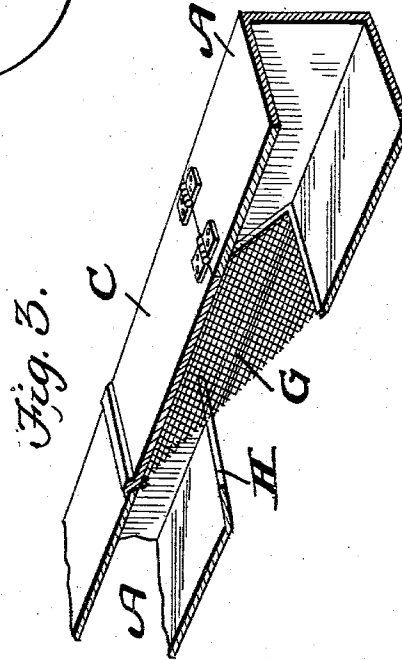
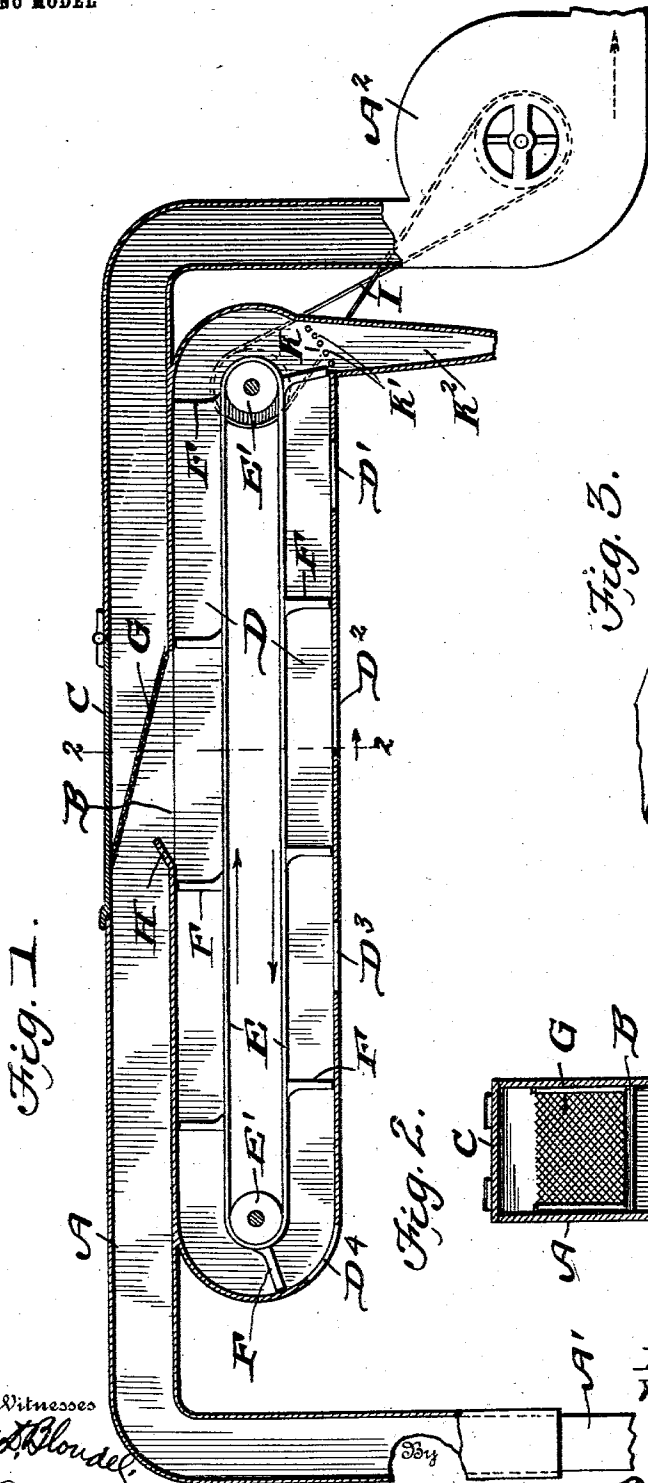
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COTTON SEPARATOR.

APPLICATION FILED MAR. 14, 1903.

NO MODEL



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UNITED STATES PATENT OFFICE.

ROBERT SOBOTKA AND WILLIAM BUNION SMITH, OF HARTSELLS,
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COTTON-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 739,733, dated September 22, 1903.

Application filed March 14, 1903. Serial No. 147,862. (No model.)

To all whom it may concern:

Be it known that we, ROBERT SOBOTKA and WILLIAM BUNION SMITH, citizens of the United States, residing at Hartsells, in the county of Morgan and State of Alabama, have invented a new and useful Cotton-Separator, of which the following is a specification.

This invention relates generally to cotton-separators, the object being to provide an exceedingly simple and highly-efficient device consisting of few parts, all of simple construction, by means of which seed-cotton can be cleaned while being conveyed from a bin or wagon to the cotton-gin; and with these objects in view the invention consists, essentially, in arranging an inclined screen in the conveyer-trunk directly over the opening leading into the box from which the cotton is fed to the gins and also in arranging an upwardly-extending deflector by means of which the cotton is caused to strike upon the screen, wiping the same clean and preventing clogging.

The invention consists also in certain details of construction and novelties of combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a vertical longitudinal sectional view illustrating our invention. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a detail view illustrating the relative positions of the screens and deflector and also the hinged cover forming a part of the conveyer-trunk.

In carrying out our invention we employ a conveyer-trunk A, the lower end of which is provided with a telescopic section A', said telescopic section being adapted to rest in the bin or wagon from which the seed-cotton is to be elevated. The opposite end of the trunk is connected to a suction-fan or blower A², by means of which a current of air is drawn through the trunk, carrying with it for a portion of the way the seed-cotton which is to be conveyed to the gins. The conveyer-trunk A is preferably square in cross-section; but it will of course be understood that we are not limited to this particular shape. The conveyer-trunk has an opening in the bottom thereof, as shown at B, and directly above

said opening the top of the trunk is provided with a hinged lid or cover C. A box or chamber D is arranged directly beneath the horizontal flight of the air-trunk and communicates therewith through the opening B. The cotton passes into said box or chamber D before passing to the gins, and for the purpose of feeding the cotton to the gins we employ an endless belt E, traveling around the rollers E' and provided with rubbered strips F, so that none of the air can escape through this endless conveyer, but will be carried on through the air-trunk. The box or chamber D is provided with openings D', D², D³, and D⁴, from which lead chutes conveying the cotton to the gin. The cotton is directed into the box or chamber D and is separated from the air and dust by means of the inclined screen G, which is arranged in the air-trunk, the lower end of said screen resting at the forward edge of the opening B, as most clearly shown in Figs. 1 and 3. The upper end of this screen contacts with the hinged cover C, and the object of placing this hinged cover-section at this point is to permit the said screen to be removed whenever desired for the purpose of repairing or replacing the same, it being understood that the said screen is connected to a frame, so that it can be quickly and easily inserted and removed. In order to direct the cotton against the screen, so as to wipe the said screen and keep it clear of all obstructions, we employ a deflector board or plate H, which is arranged at the rear edge of the opening B and extends upwardly in an inclined direction toward the screen G, as most clearly shown in Figs. 1 and 3, whereby the cotton is caused to strike against the said screen before passing downwardly into the box or chamber D, wherein it is caught by the endless carrier E and forced into the chutes which lead to the gins. If desired, the endless belt and the chamber D may be operated from the fan-shaft by means of a cross-belt I. A separator constructed as herein shown and described will efficiently perform all of the objects hereinbefore mentioned, and this separator can also be used in connection with any construction of cotton elevator or carrier.

In order to permit escape of nails, dirt, and

any foreign substance which might be carried up in the cotton, I provide one or more openings K in the bottom of box D in advance of the openings D', D², and D³ and arrange grate-bars K' across the said openings K and a chute K² for carrying off the substances which drop through the grate-bars K'.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A device of the kind described comprising an air-trunk having an opening in the bottom thereof, an inclined screen arranged in said air-trunk and extending across said air-trunk above said opening, a deflector arranged at the edge of said opening and adapted to direct the cotton against the screen, and a box or chamber arranged beneath the air-trunk, and in communication therewith, said box or chamber having an endless belt traveling therein, as set forth.

2. A cotton-separator comprising an air-

trunk having a suction device connected therewith at one end, said air-trunk having an opening in the bottom thereof, a hinged top section arranged directly above the opening, the inclined screen extending from the forward edge of the opening to the top of the air-trunk, the deflector arranged at the rear edge of the opening and inclined toward the inclined screen, the box or chamber arranged beneath the air-trunk and communicating therewith, the endless belt traveling in said box or chamber, said box or chamber having one or more openings through which the separated cotton is discharged, as set forth.

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mark

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