No. 624,237. Patented May 2, 1899.

R. C. NEWELL.

CONVEYER FOR COTTON.

(Application filed Nov. 30, 1898.)

(No Model.)

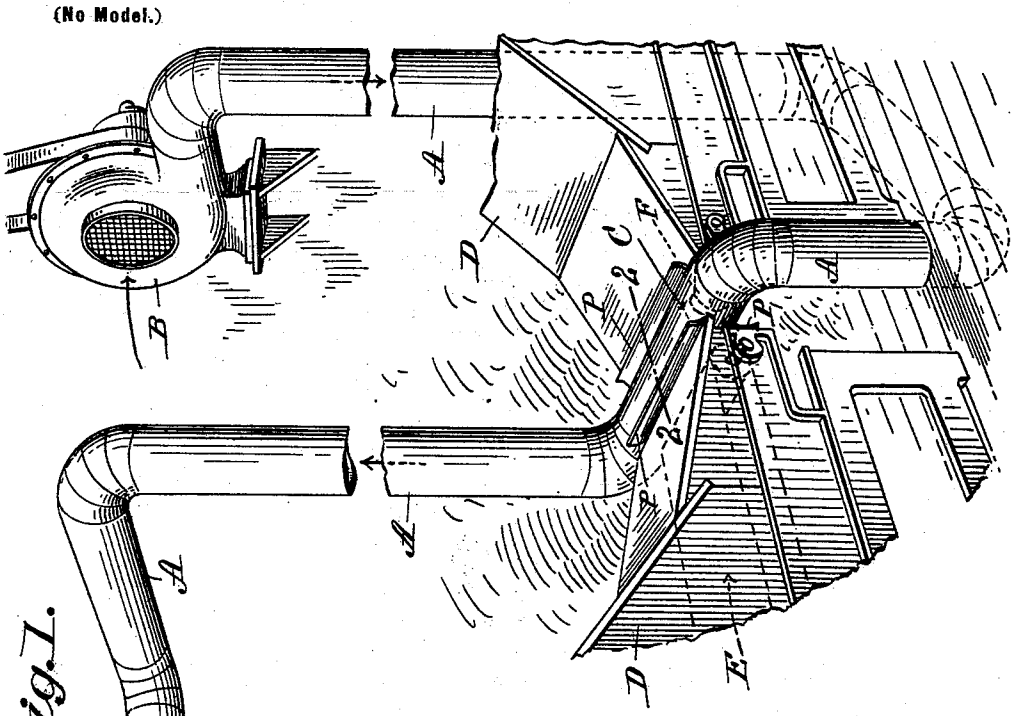


Fig. 1.

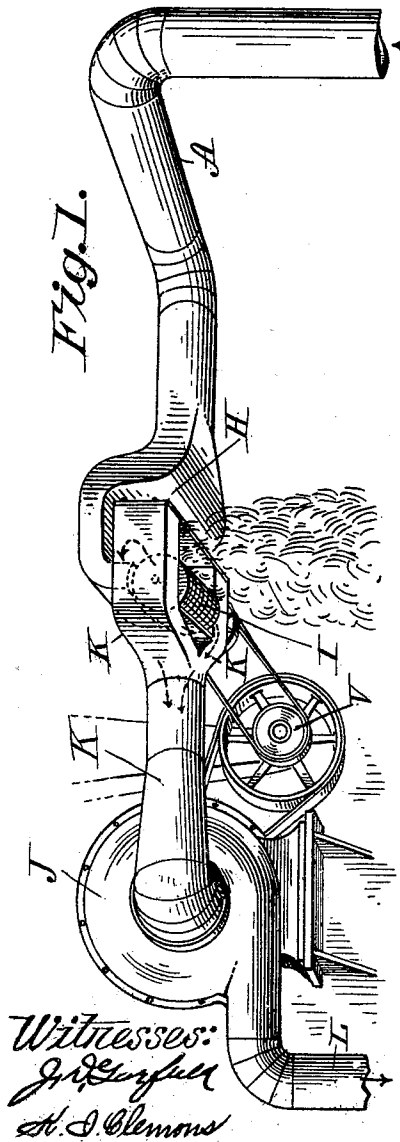


Fig. 3.

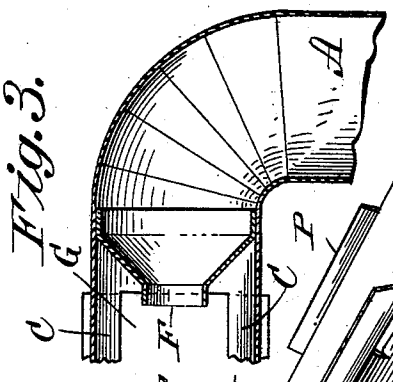


Fig. 4.

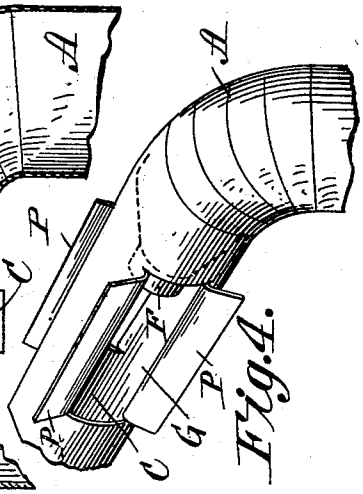
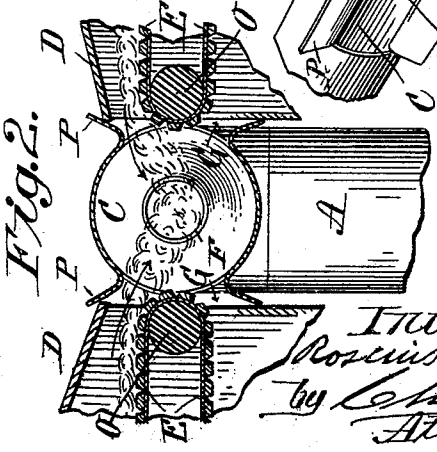


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROSCIUS CLINTON NEWELL, OF PALMER, MASSACHUSETTS.

CONVEYER FOR COTTON.

SPECIFICATION forming part of Letters Patent No. 624,237, dated May 2, 1899.

Application filed November 30, 1898. Serial No. 697,831. (No model.)

To all whom it may concern:

Be it known that I, ROSCIUS CLINTON NEWELL, a citizen of the United States of America, residing at Palmer, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Conveyers for Cotton and Like Materials, of which the following is a specification.

This invention relates to cotton-conveyers for cotton-mills and like places for transporting cotton and like materials in loose condition to devices for opening up, cleaning, and condensing the same, the object being to provide an improved conveyer of this class in which the cotton is fed into the conveyer tube or conduit through one or more openings through the side thereof between the air-forcing device and the condenser, thereby avoiding all injurious contact with the air-forcing device or with certain "ginning" mechanisms heretofore employed for so feeding the cotton into the conveyer-tubes; and a further object of this invention is to provide improved means for pneumatically opening up the cotton when the same is introduced into said tube or conduit and driving or carrying the same to the condenser and dust-receiving cylinder and in means for feeding the cotton through the openings in the side of said conduit; and the invention consists in the peculiar construction and arrangement of mechanism and devices whereby the above-named objects are attained, all as hereinafter fully described, and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view illustrating cotton-conveyer devices, condenser, and dust-removing appliances, and means for feeding cotton to said devices embodying my improvements. Fig. 2 is a sectional view on line 2 2, Fig. 1. Fig. 3 is a sectional view of a portion of the air-conduit at that point therein where the cotton is acted upon by the propelling air-blast. Fig. 4 is a perspective view of the parts shown in Fig. 3, but illustrating more fully in connection therewith the construction of that section of the conduit into which the cotton to be operated upon is fed.

Referring to the drawings, B indicates a fan-blower driven by any suitable power.

H indicates the condenser, and A is a cotton-conducting pipe or conduit uniting said fan-blower and condenser. A section C of said cotton-conducting pipe intermediate of said fan-blower and condenser has, as shown in Figs. 2 to 4, inclusive, openings G (one or more) in its sides, through which cotton is placed in or fed to said section C by means hereinafter described. The said section C has, preferably, two side openings G on opposite sides thereof and the wings P on the borders thereof extending in opposite directions, the latter aiding, as below described, in suitably fitting certain devices against the sides of said section. The end of that part of said cotton-conducting pipe A leading from said fan-blower to said section C and terminating at the latter in curved form, as shown in Figs. 1, 3, and 4, has a restricted air-passage F, through which the air entering said open-sided section must pass, thereby increasing the force or velocity of the air driven through said section. Opposite said open sides G of the section C are box-like housings D D for one or more cotton-carrying aprons E, Fig. 2, contained in said housings, said aprons being supported on suitable rollers *o* at the extremities thereof and actuated for said carrying movement by suitable connection with a driving power.

The cotton to be operated upon by the herein-described conveyer devices is taken from bales thereof and laid upon said aprons and by the latter is fed into said section C, as illustrated in Fig. 2, where it encounters said forced-air blast. The ends of said housings are so fitted for contact with the sides and wings of said conduit-section C as to prevent the escape of any quantity of air therefrom which can impair the air force needed for carrying the cotton to the condenser. Adjacent said condenser H is an exhaust-fan J, having a two-branch pipe K connected thereto, between the two extremities of which is hung a rotatable dust-receiving drum I, whose open ends communicate with said pipe branches and which is rotated by a pulley V, having belt connection therewith, as shown, and the shaft carrying said pulley is driven by belt or other connection with suitable motor force. A dust-discharging pipe L is connected to said exhaust-fan J.

In the use of the above-described conveyer construction the danger from fire occasioned by hard substances in the cotton is entirely obviated, for the reason that the cotton-moving action in the conduit is wholly pneumatic.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a conveyer for cotton and like fibrous material, a conduit, an air-blowing device connected with one end thereof, a section in said conduit having an opening through its wall for the introduction of fibrous material into said conduit, a restricted air-passage axially located at one end of said section, whereby an air-blast is directed centrally through said section at a higher velocity than it attains before entering or after leaving it, and devices for delivering said material into said section through the opening therein forward of, and above the axis of, said restricted air-passage, substantially as described.

2. In a conveyer for cotton and like fibrous material, a pipe-like conduit, an air-blowing device connected with one end of said conduit, a section in said conduit intermediate of its extremities having a restricted air-passage at one end thereof, through which an air-blast enters the same, one or more openings through the side thereof, said openings having on their upper and lower borders the wings P, the housings D, on opposite sides of said intermediate section covering said openings and having contact with said wings, and devices within said housings conveying material into said intermediate section, combined and operating substantially as described.

3. In a conveyer for cotton and like fibrous material, a pipe-like conduit, an air-blowing device connected with one end of said conduit, a section in said conduit intermediate of its extremities having a restricted air-passage at one end thereof through which an air-blast enters the same, and one or more openings through the side thereof, a condenser connected with the opposite end of said conduit, an exhaust-fan J supported near said condenser, a two-branch air-conducting pipe K, between said fan and condenser, and a dust-receiving drum supported between, and communicating with, the branches of said pipe, and means for revolving said drum, combined and operating substantially as described.

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