E. VAN WINKLE.

Cotton-Condenser for Cotton-Gins.

No. 159,532. Patented Feb. 9, 1875.

Fig. 1

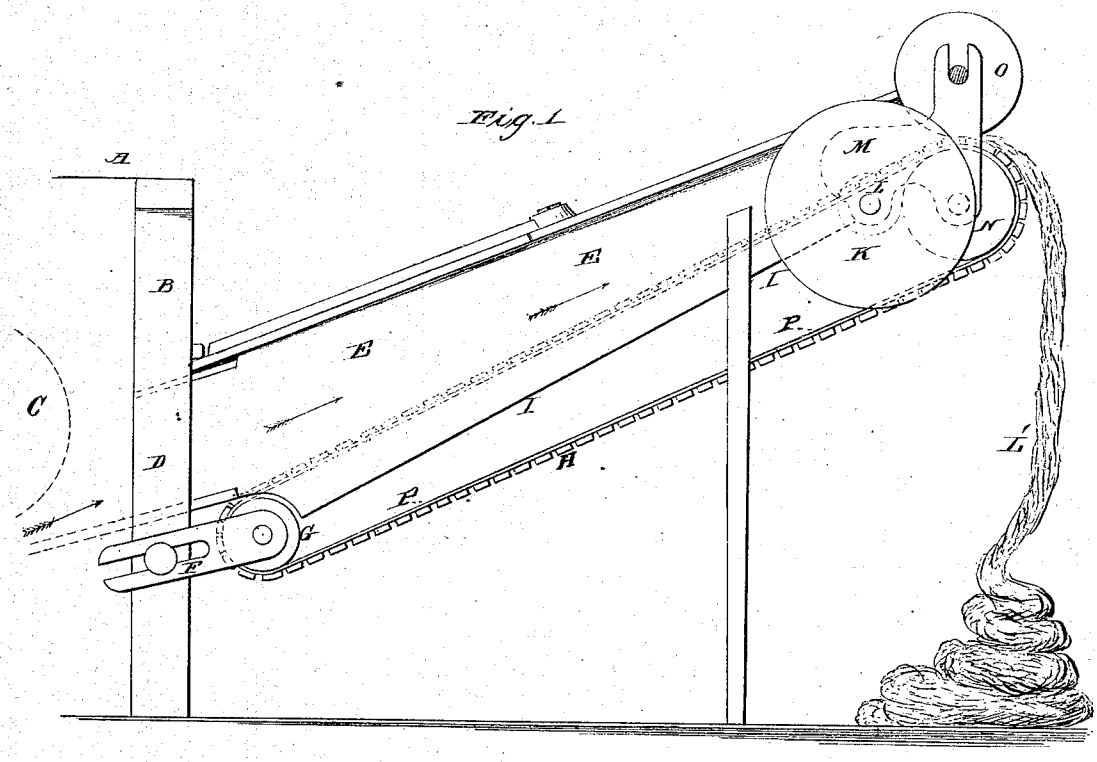
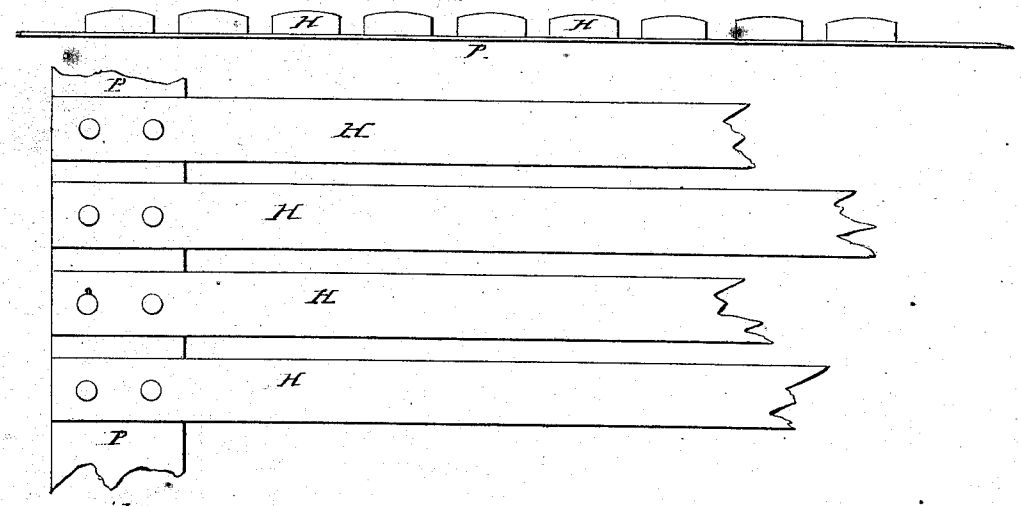


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD VAN WINKLE, OF ATLANTA, GEORGIA.

IMPROVEMENT IN COTTON-CONDENSERS FOR COTTON-GINS.

Specification forming part of Letters Patent No. **159,532**, dated February 9, 1875; application filed September 15, 1874.

To all whom it may concern:

Be it known that I, EDWARD VAN WINKLE, of Atlanta, Georgia, have invented Improvements in Cotton-Gin Condensers.

The following is a description of my newly-invented condenser for cotton-gins:

The object of my invention is to operate upon or treat the lint as it leaves the cotton-gin, it being then in a non-condensed form, and mixed with trash and dust.

My improvement separates the dust and light trash from the lint, manufacturing the lint into a condensed form, preserving the length of staple, and at the same time dispenses with the lint-room and consequent danger of fire, all of which is hereinafter more fully described by the accompanying drawings and letters of reference marked thereon, in which—

Figure 1 is a side elevation of my improved condenser attached to the ordinary cotton-gin. Fig. 2 is a side view of my endless apron; and Fig. 3 is a plan view of part of my endless apron, and

In all cases the same letters refer to the same parts.

A and B are the rear side of a cotton-gin. C is the brush-cylinder. D is the flue-escape for the lint. E is the lint or direction box. H P is the slotted conveyancer or endless apron which forms the bottom of the lint-box held together by the bands P. I are open spaces for the dust to pass out. G is the lower roller for the endless apron to work upon, and N is the upper roller for the apron to move on, being the driving-roller. F is an adjustable piece, forming the bearing for the roller G and lower attachment of the carrier to the gin, and at the same time a means for taking up the slack in the endless apron. O is a pressure-roller. L is a pinion attached to the pulley-wheel M.

To enable those skilled in the art to make and use my improvement, I will describe its construction and operation.

I construct a lint-box, E, open at the bottom, and wedge or tapering shaped. The large end connects with the cotton-gin, and the smaller end carries the rollers O and N, and this end is also made to be thrown up or elevated. In the open bottom of this box E moves an endless apron, H P, constructed of slats having spaces left between them and their ends attached to an endless belt, P, thereby permitting small trash and dirt to pass out. This apron is placed upon two rollers, G and N. From N it derives its motion, as this roller is geared into the pinion L, and this pinion is driven by the pulley M, which is driven by a belt connecting it to the cotton-gin motor. The adjustable roller G takes up the slack of the endless apron. O is a pressure-roller placed above the roller N, so as to press upon the fibers of the staple and reduce or condense them, as shown at L. The roller O is held in position by the V-shaped bearings at the smaller end of the lint-box E.

To operate my improvement, we will suppose the lint, dust, and trash are driven into the lint-box E. Falling upon the moving endless apron, which is moving in the direction of the arrows, the dust and trash pass out through the opening of the slats, and the staple is conveyed or carried up to the junctures of the carrier-roller N and pressure-roller O, causing it to condense into laps.

In the action of this endless apron, hereinbefore named, there is derived the following advantages: That as the staple, dust, and trash come into the condenser the moving apron presents constantly-changing surfaces and alternate openings, all of which are more or less distant from the brush-roller C, and as the aerial suspension of the staple, dust, and trash is, in a measure, dependent upon the velocity given to it by this roller C, there is presented to this material (cotton-dust and trash) a long slatted surface, sufficiently long for all particles to come to rest on. This apron in motion prevents the staple from closing up or clogging the openings, as most of the dust and trash will leave the carrier nearest to the roller G, a point where the fresh openings of the moving apron are presented; and it is herein distinctly understood that the opera-

tion of condensing cotton by machines attached to the cotton-gin has been done heretofore; therefore

What I claim, and desire to secure by Letters Patent, is as follows:

The cotton-gin condenser herein described, consisting of the positively moving endless and adjustable slatted apron or carrier H P, arranged in connection with the lint-box E for detachable connection with cotton-gin, as set forth.

EDWARD VAN WINKLE.

Witnesses:
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