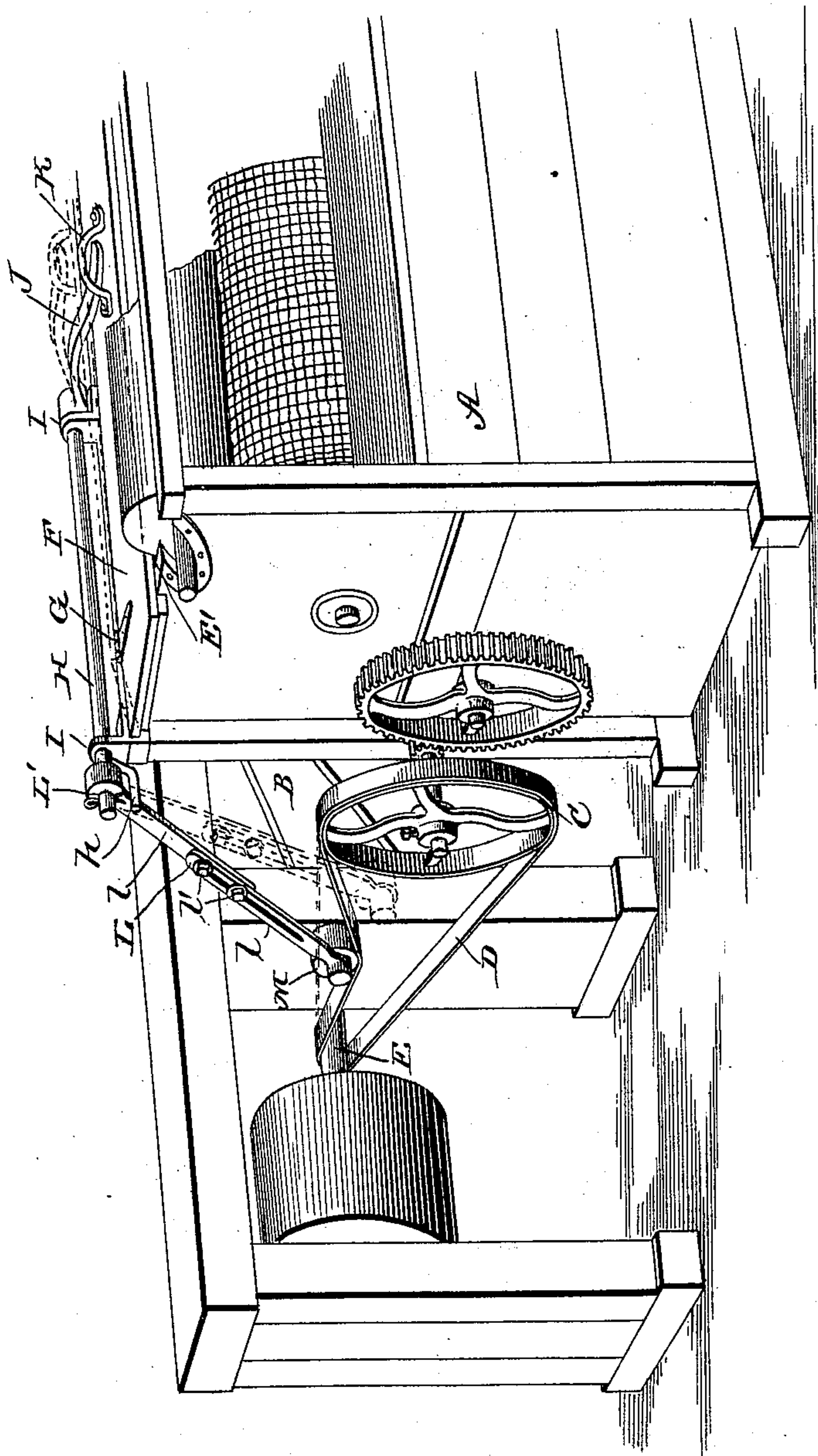


(No Model.)

G. P. MELCHIOR.
SAFETY CAP FOR COTTON CONDENSERS.

No. 459,298.

Patented Sept. 8, 1891.



WITNESSES:
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GEORGE P. MELCHIOR, OF BELLEVUE, MISSISSIPPI.

SAFETY-CAP FOR COTTON-CONDENSERS.

SPECIFICATION forming part of Letters Patent No. 459,298, dated September 8, 1891.

Application filed July 24, 1890. Serial No. 359,838. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. MELCHIOR, of Bellevue, in the county of Bolivar and State of Mississippi, have invented a new and useful Improvement in Safety-Caps for Cotton-Condensers, of which the following is a specification.

My invention is an improvement in cotton-condensers, and seeks to provide a simple and novel construction whereby in case the condenser-belt slips from the condenser-drum an outlet cap or gate will be opened to provide an outlet for the cotton, to prevent the same from accumulating and choking within the condenser-casing.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawing the figure is a perspective view of a portion of a cotton-condenser provided with my improvements.

The condenser A, except in the particulars hereinafter described, may be of ordinary construction, having the inlet at B, through which the cotton from the gin enters, and also having the pulley C, the shaft of which is geared with the condenser-drum and which pulley may for such reason be referred to as the "condenser-drum pulley." A belt D connects this pulley C with a drive-shaft E and serves, in the operation of the machine, to drive the pulley C and the condenser-drum. Now if at any time during the operation the belt D should slip from the pulley C the condenser-drum will cease to revolve, and the cotton, continuing to feed from the gin into condenser, will, in the absence of means to prevent such accumulation and clogging, accumulate in the condenser-casing and clog the condenser. To provide for the outlet of the cotton lint at such time, I provide an opening E' and a cap or gate F, which is suitably supported so it may be opened, it being preferably secured by strap-hinges G, as shown. The shaft H is journaled in bearings I, mounted on the condenser-casing. This shaft H is so connected with the cap F that the turning of the shaft in one direction will operate to open the cap or gate. In the construction shown the connection is an arm

J, projected from the shaft and arranged at its free end to enter a loop or keeper K, fixed on the cap or gate.

To effect the proper turning of the shaft H to open the gate F when desired, I provide the arm L, connected at one end with the shaft H and arranged to be supported at its opposite end by the belt D, so that, in case the belt is slackened by slipping off the pulley C or by breaking, the arm L will swing down and will turn the shaft H to open the cap or gate F. Preferably the arm L has at its swinging end an idler or roller M, which bears upon the belt D, and the said arm is also preferably made in sections *l l*, connected by a screw or screws *l'*, so the arm can be adjusted longitudinally to obtain the desired weight to lift the cap or gate F when the belt slips from its pulley. While the arm L might be secured rigidly to the shaft H, it is preferred to connect it therewith in the manner shown and which I shall now describe. In the said construction the arm L journals at *L'* on the shaft, and the shaft has a crank-like portion or projection *h*, arranged for engagement by the arm L when the latter falls. By this construction the arm as it lowers will operate to turn the shaft H and open the cap or gate. At the same time this construction permits the cap or gate to be opened by the operator at will, such opening of the gate in nowise affecting the position of the swinging arm, as will be understood from the drawings.

It will be seen that I provide intermediate mechanism between the cap or gate and the condenser drive-belt, such mechanism including an operating device supported on said belt and arranged, when such support is removed, to operate by gravity to open the cap or gate.

It will be understood that while I prefer the construction as shown and before described I do not desire to be limited in the broad features of my invention thereto, as, so far as I am informed, I am the first to provide mechanism by which an outlet is automatically provided for the cotton when the condenser-drum ceases its revolution, so that such cotton will not become clogged within the condenser-casing. The pressure of the

idler on the belt also operates to secure a more certain action of the condenser by constant pressure on the condenser-belt.

Having thus described my invention, what I claim as new is--

1. The combination of the condenser having an outlet-opening and a cap or gate by which to close said outlet-opening, the condenser drive-belt, and intermediate mechanism between the said cap or gate and the drive-belt, including an operating device supported on the drive-belt, all substantially as described, whereby the displacement of the said drive-belt and the consequent lowering of the operating device will effect the opening of the cap or gate, substantially as set forth.

2. The combination, substantially as described, of the condenser having an outlet-opening and the cap or gate by which to close the said outlet-opening, the shaft, bearings for said shaft, connections between the shaft and the cap or gate, and the swinging arm connected with and arranged to operate the shaft, said arm being arranged and adapted at its swinging end to be supported on the condenser drive-belt, all substantially as and for the purposes set forth.

3. The combination, substantially as described, of the condenser having the cap or gate, the shaft H, having a crank-like part or projection *h*, bearings for said shaft, connections between the said shaft and the cap or gate, and the swinging arm journaled on the shaft H, arranged to engage the projection *h* and being arranged and adapted at its lower edge to be supported on the condenser drive-belt, substantially as set forth.

4. The combination of the condenser having the cap or gate, the shaft, bearings for such shaft, connections between the shaft and the cap or gate, and the arm connected at one end with the shaft and having at its swinging end an idler or roller arranged to bear upon the condenser drive-belt, all substantially as and for the purposes set forth.

5. The combination of the condenser having the cap or gate, the shaft and connections between the shaft and the cap or gate, and the operating-arm connected with the shaft and made in sections and adjustable, substantially as set forth.

6. The combination, substantially as described, of the condenser having an outlet E and a cap or gate F, the loop K on said cap or gate, the shaft H, provided with an arm J, fitting in the loop K, and the operating-arm connected with the shaft and arranged at its free end to be supported by the condenser drive-belt, substantially as set forth.

7. The combination, with the condenser, its cap or gate, and the condenser drive-belt, of the loop K on the cap or gate, the shaft H, having an arm J fitting in the loop K and also having a crank-like portion or projection *h*, and the operating-arm journaled at one end on the shaft and arranged to engage the portion *h*, the said arm being made in sections and adjustable and being provided at its free end with an idler or roller arranged to bear upon the condenser drive-belt, all substantially as and for the purposes set forth.

GEORGE P. MELCHIOR.

Witnesses:

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