

Title (en)

Method and apparatus for removing foreign substances from fiber material, especially from raw cotton

Title (de)

Verfahren und Vorrichtung zum Ausscheiden von Fremdstoffen in Fasermaterial, insbesondere in Rohbaumwolle

Title (fr)

Procédé et appareil pour éliminer les corps étrangers de la matière fibreuse, en particulier du coton brut

Publication

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Application

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Priority

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Abstract (en)

To separate dirt and impurities and other debris from fiber materials, and especially raw cotton, a sensor system (2) is used to detect the foreign matter in the fiber flow channel (1) carried in an air stream. The sensor triggers a mechanism to eject the foreign matter by air bursts to blow it through an opening (7) into a waste collection container (8). The sensor system (2) detects foreign matter in the fiber flow channel (1) carried in an air stream. The sensor triggers a mechanism to eject the foreign matter by air bursts to blow it through an opening (7) into a waste collection container (8). The volume of the waste collection container (8) is increased at least during the duration of an air pulse, or air is extracted from the container (8) through an air suction opening (11). An air movement system is activated to extract a volume of air from the collection container (8), and the extracted air is returned to the fiber flow channel (1) or it is passed into an outflow channel (20). An underpressure source is connected to the waste collection container, for the air extraction by suction. The volume increase or air extraction at the waste collection container (8) is triggered by the sensor system (2), and the action is maintained for the duration of a compressed air burst. An Independent claim is included for a fiber cleaning assembly, where the waste collection container (8) has a system to increase its volume or extract air (14) from it temporarily, to compensate for the volume of air blown into it while foreign matter is ejected from the fiber flow channel. Preferred Features: The waste collection container (8) is linked to the underpressure source through a controlled barrier (15). A control (12) activates the operating units, in response to signals from the sensor system (2). At least one flow guide plate (10) is within the waste collection container (8).

Abstract (de)

In einer Fasertransportleitung (1) wird das Fasermaterial in Transportrichtung hintereinander an einem Sensorsystem (2) und einer Ausscheiddevorrichtung (5) vorbeigeführt. Beim Erkennen von Fremdstoffen durch das Sensorsystem wird die verunreinigte Teilmenge des Fasermaterials mittels eines quer zur Fasertransportleitung gerichteten Luftdruckimpulses (b) in einen Ausscheidebehälter (8) umgelenkt, der über eine Ausscheideöffnung (7) mit der Fasertransportleitung verbunden ist. Der Ausscheidebehälter ist gegenüber der Atmosphäre weitgehend druckdicht ausgebildet. Für die Kompensation der in den Ausscheidebehälter (8) eingeleiteten Luftmenge wird wenigstens während der Dauer des Gasdruckimpulses entweder das Volumen des Ausscheidebehälters vergrößert oder über eine Luftabzugsöffnung im Ausscheidebehälter Luft abgezogen. Dadurch werden Turbulenzen im Ausscheidebehälter und ein Rückströmen der verdrängten Luft über die Ausscheideöffnung verhindert.

<IMAGE>

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- [E] EP 0879905 A1 19981125 - JOSSI HOLDING AG [CH]
- [A] GB 2260145 A 19930407 - TRUETZSCHLER GMBH & CO KG [DE]
- [A] WO 9635831 A1 19961114 - JOSSI HANS PRAEZISIONSMECHANIK [CH], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 16, no. 43 (C - 0907) 4 February 1992 (1992-02-04)

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