

Title (en)  
Carding machine with casing

Title (de)  
Karde mit Ummantelung

Title (fr)  
Carde avec carter

Publication  
**EP 1612303 A2 20060104 (DE)**

Application  
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Priority  

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Abstract (en)

The card assembly has an opto-electronic monitor (20A) for the quality of the carded web, located at a zone of the roller (7,13) with an exposed card clothing. The monitor (20A) is at a gap (S) from the roller mantle surface (7A) or the roller which carries the web, so that it has no effect on the web. The gap between the monitor and roller surface is at least 20 mm. The roller (7) is a card doffer, or the monitored zone is below a doffer roller (13). The monitor (20B) can also be at a web guide (16) which has a web guide and transport function independent of the monitoring, to transfer the web from the doffer (7) to the doffer roller (13). The monitoring action is at a zone of the roller (13) clothing while a web is being carried by it. The guide (16) can also transfer the web from the doffer roller (13) to a belt. The web monitor (20A,20B) is used for the comparison of a striking light intensity with a threshold which is at least partially matched to a basic brightness. A warning is given if the basic brightness is breached by a given value. The monitor (20A,20B) is used to register higher frequencies in the photo unit signals, by evaluation, when the web is out of the monitor focus. The carding assembly has a system to limit the effects of soiling on the monitor operation by cleaning the light-permeable window in a housing containing light gathering units. The window cleaning action is programmed by a control and/or a manual operation. The cleaning action is programmed after specific events, such as a sliver break and/or at set time intervals. The card, with a working width of >=1000 mm, has rotating rollers, electromotor drives and a shrouding. The drives are contained in a zone within vertical side planes of the working width, and the transmission belts or cogwheels are between the working components and the shrouding. The transmissions are divided into a number of working planes. The assembly has an exit and/or entry module, to be set on a swing axis in the working position against the carding drum and pivoted away. At least one roller module moves within a guide at the card, for it to move in and out of the ready position. In the ready position, the module is secured to the machine frame, to be moved into the working position. The card drum dia. is 700-900 mm, with a working width of >=1300 mm such as 1500 mm. The drum drive is structured for high speed rotation, to give a drum surface speed of at least 40 m/s. The feed is one or more lickers-in, and the feed has a filling shaft with a cleaning system. The rotary axis of the drum is in the lower carding zone with an included angle of =90[deg] and pref. =80[deg]. The ratio of the carding drum dia:doffer dia. is =1.8 and pref. =1.5.

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