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(54) **SLUBBING MACHINE WITH AN ARRANGEMENT FOR DETECTING AND REMOVING YARN FLAWS**

(71) Applicant: **Maschinenfabrik Rieter AG**, Winterthur (CH)

(72) Inventors: **Gerd Stahlecker**, Eislingen/Fils (DE); **Rudolf Härdi**, Tennwil (CH)

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(57) **ABSTRACT**

The invention relates to a slubbing machine for producing a rove (**1**) from a fiber web (**2**), wherein the slubbing machine has at least one spinning nozzle (**3**) with an inlet opening (**4**) for the fiber web (**2**), wherein the spinning nozzle (**3**) is assigned at least one air nozzle through which the air can be channeled into the spinning nozzle (**3**) in order to impart a protective rotation to the fiber web (**2**) within the spinning nozzle (**3**), wherein the spinning nozzle (**3**) has an outlet (**5**) through which the rove (**1**) can be drawn out of the spinning nozzle (**3**), and wherein the slubbing machine comprises at least one receiving device (**28**) arranged downstream of the spinning nozzle (**3**) in the transport direction of the rove (**1**), particularly in the form of a winding device (**6**) to receive the rove (**1**) leaving the spinning nozzle (**3**). The invention proposes that the slubbing machine comprises an arrangement (**7**), to be passed by the rove (**1**), for detecting and removing yarn flaws (**8**), the arrangement (**7**) being placed between the outlet (**5**) of the spinning nozzle (**3**) and the receiving device (**28**). The invention further discloses a method for producing a rove (**1**) from a fiber web (**2**) using a slubbing machine, which is characterized in that, after leaving a spinning nozzle (**3**), the rove (**1**) passes an arrangement (**7**) for detection and removal of yarn flaws (**8**), which is placed between the outlet (**5**) of the spinning nozzle (**3**) and a receiving device (**28**), wherein by means of the arrangement (**7**), yarn flaws (**8**) are detected upstream of where the rove (**1**) is received, and are removed from the rove (**1**).

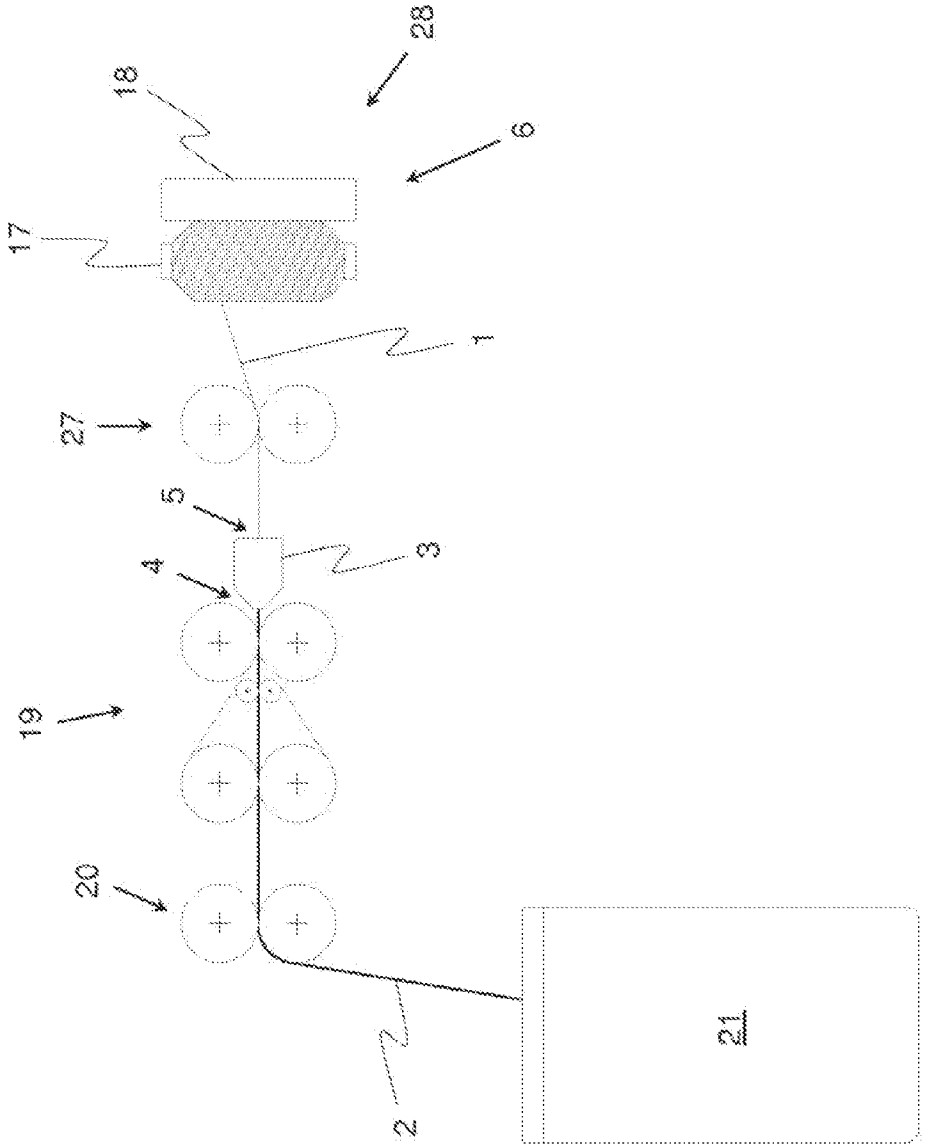

Fig. 1

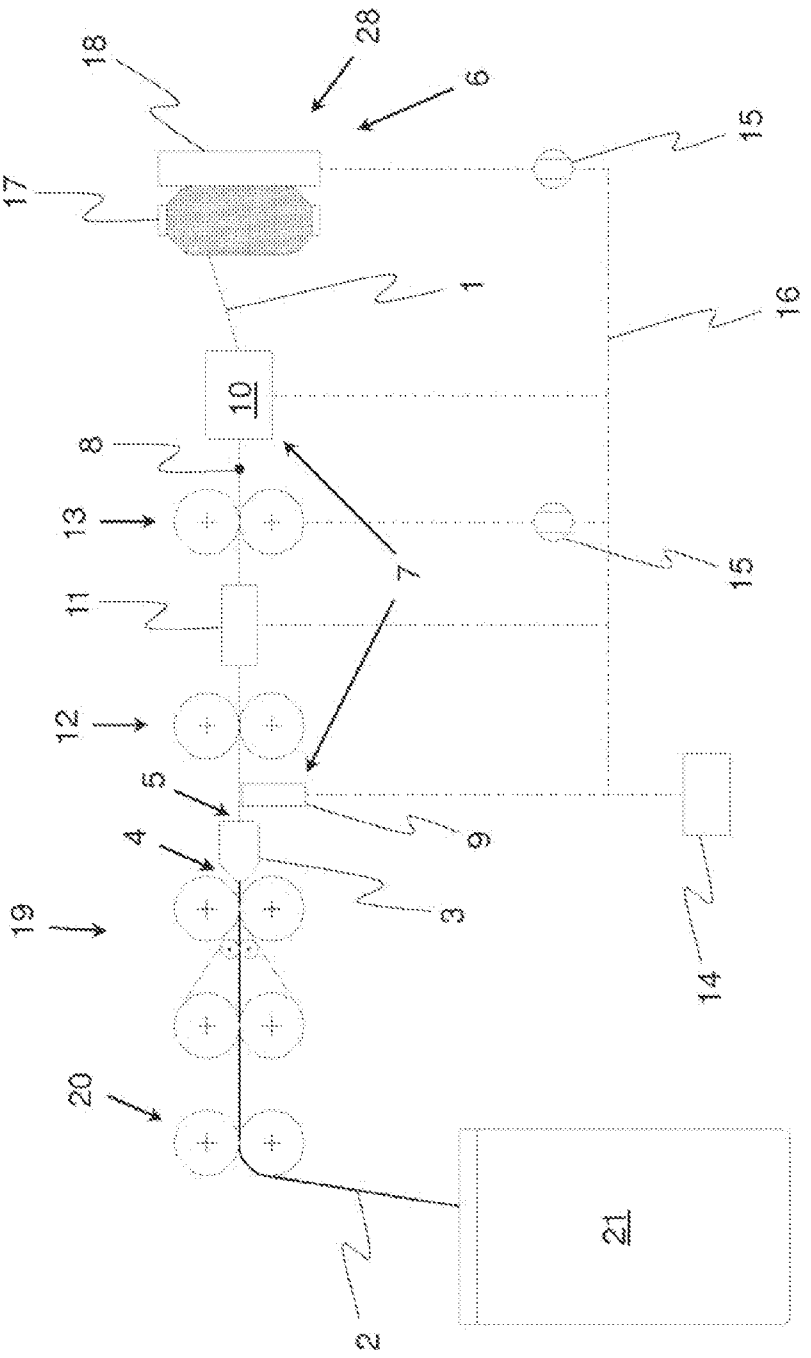

Fig. 2

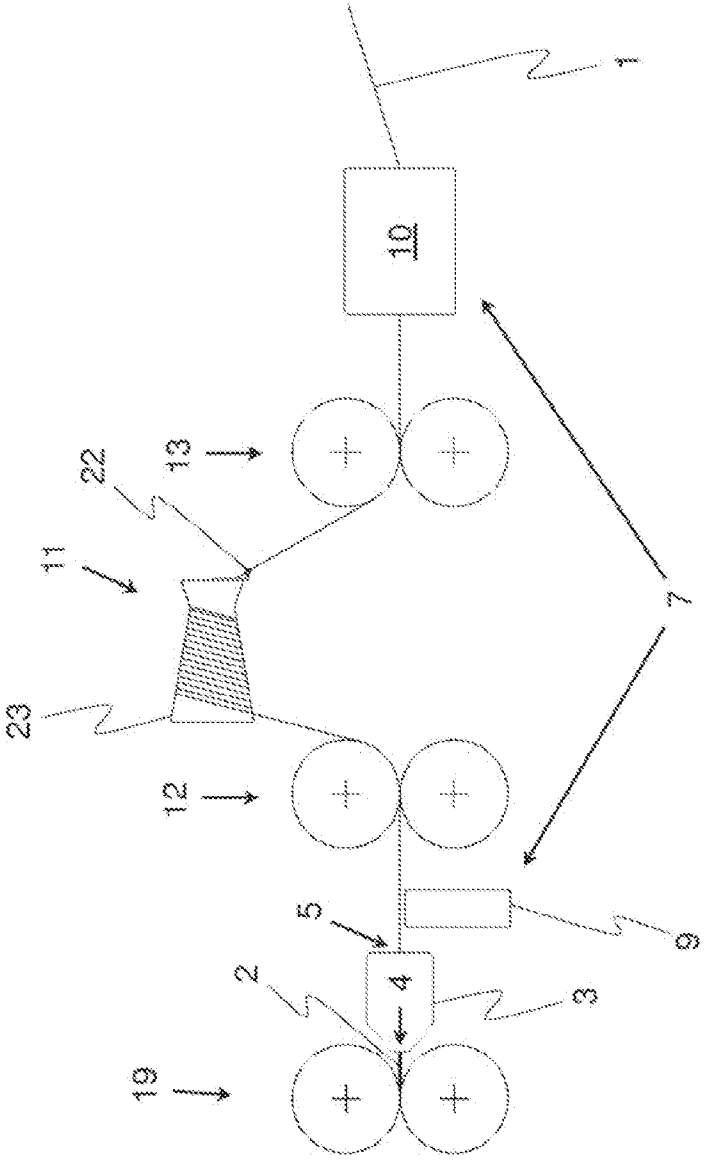

Fig. 3

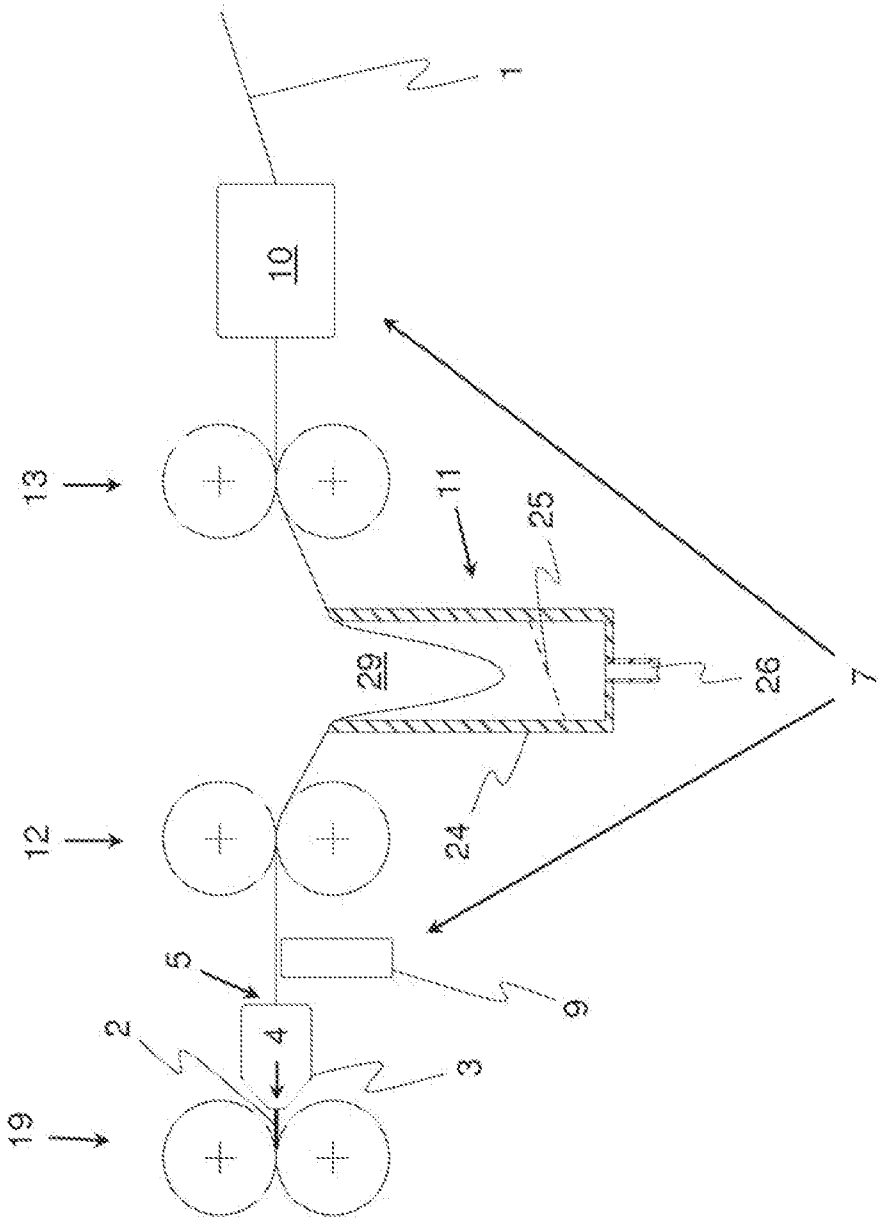

Fig. 4

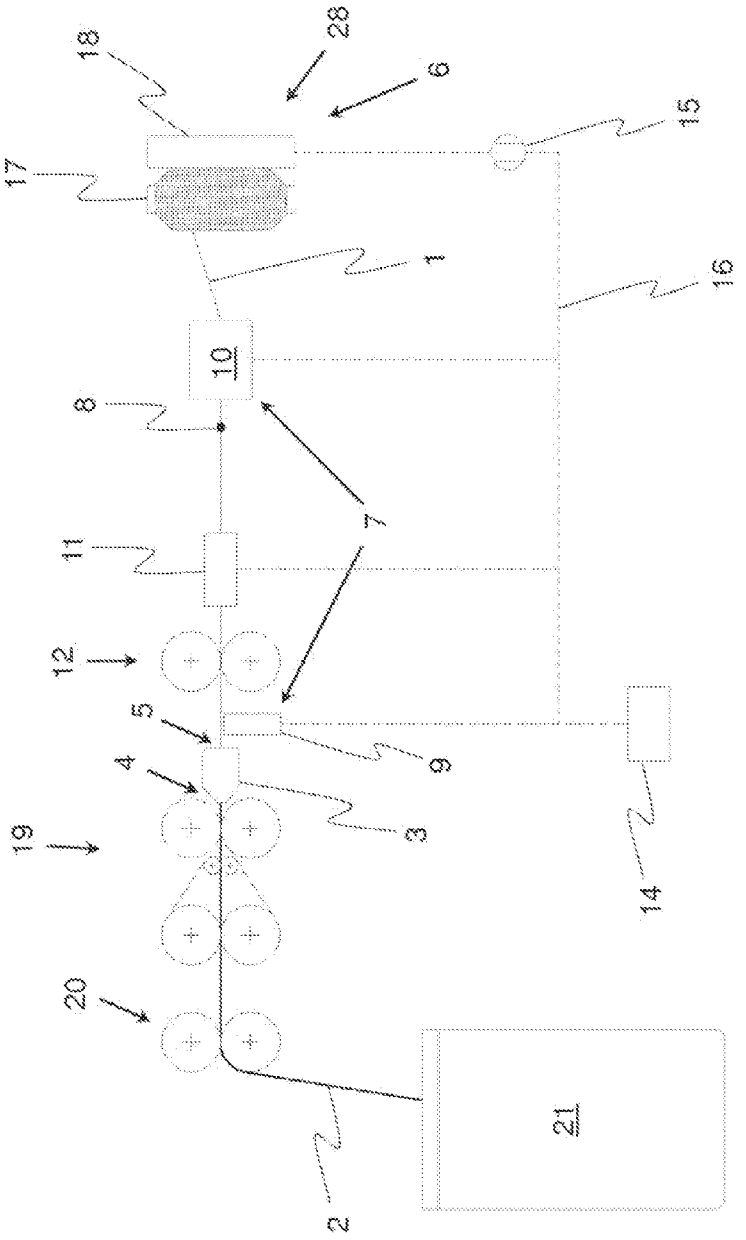

Fig. 5

SLUBBING MACHINE WITH AN ARRANGEMENT FOR DETECTING AND REMOVING YARN FLAWS

[0001] The invention relates to a slubbing machine for producing a rove from a fiber web, wherein the slubbing machine has at least one spinning nozzle with an inlet opening for the fiber web, wherein at least one air nozzle is assigned to the spinning nozzle through which air nozzle the air can be channeled into the spinning nozzle in order to impart a protective rotation to the fiber web within the spinning nozzle, wherein the spinning nozzle has an outlet through which the rove can be drawn out of the spinning nozzle, and wherein the slubbing machine comprises at least one receiving device arranged downstream of the spinning nozzle in the transport direction of the rove, particularly in the form of a winding device to receive the rove leaving the spinning nozzle. In addition, a method for producing a rove from a fiber web using a slubbing machine is proposed, wherein the fiber web is introduced into a spinning nozzle through an inlet opening, wherein, using an air flow, a protective rotation is imparted to the fiber web within the spinning nozzle, wherein the rove can be drawn out of the spinning nozzle through an outlet and wherein the rove leaving the spinning nozzle is received using a receiving device, for example a winding device, arranged downstream of the spinning nozzle in the transport direction of the rove.

[0002] The production of rove (coarse roving) using a slubbing machine conforming to this type is already known. Thereby, in principle, a fiber web fed to the spinning nozzle, in a vortex chamber of the spinning nozzle, is exposed to a selected air flow. Thereby, the air flow is directed to the fiber web in such a manner that the outer ends of the fibers forming the fiber web are pulled to some extent from the web and ultimately wrapped around the remaining, untwisted core area of the fiber web. In this manner, a rove is received that, despite a strength increased compared to the fiber web, still features a certain capability of being drafted, such that, in a subsequent textile machine (for example, a ring spinning machine), it can be drafted using a drafting system, i.e. homogenized.

[0003] With such a production of rove, the fact that yarn flaws (i.e., sections of the rove, the physical parameters of which, such as diameter, length-related weight, density, strength, etc., are outside defined limits) cannot be ruled out is disadvantageous. However, such flaw spots represent blemishes in the rove, which cannot be completely remedied even using a drafting system of the subsequent textile machine.

[0004] The task of the present invention is to propose a slubbing machine or a method for producing a rove, with the assistance of which a rove of the highest possible quality can be produced.

[0005] The task is solved by a slubbing machine and a method with the characteristics of the independent claims.

[0006] In accordance with the invention, it is proposed that the slubbing machine includes an arrangement to be passed by the rove, for detecting and removing yarn flaws, wherein the arrangement is placed between the outlet of the spinning nozzle producing the rove and the receiving device downstream of the spinning nozzle in the conveying direction of the rove. Thereby, the receiving device may be designed, for example, as a winding device, with the assistance of which the rove drawn out of the spinning nozzle can be spooled onto a coil, in order to be able to feed a downstream textile machine at a later point in time. Alternatively, it is also conceivable to design the receiving device as an intermediary component which feeds the produced rove, without an interposed spool, directly to the downstream textile machine. In such an event, it is conceivable, for example, to design the receiving device as a (preferably driven or drivable) pair of rollers, with the assistance of which the rove can be collected and selectively fed for its further use.

[0007] In any event, the invention provides that the device for the detection and removal of a yarn flaw is assigned to the slubbing machine, such that yarn flaws are immediately removed after the production of the rove on the slubbing machine itself (if the slubbing machine has two or more spinning nozzles, it is advantageous if a separate device for the detection and removal of a yarn flaw is assigned to each spinning nozzle). Thus, a subsequent rewinding for the purposes of the removal of yarn flaws is no longer necessary. Rather, the slubbing machine delivers an error-free rove, which can be further processed without additional intermediate steps.

[0008] For the detection of the yarn flaw, optical sensors or ultrasonic, microwave or other sensors suitable for the detection of a yarn flaw can be used. The sensors are preferably connected to a control unit, which also may be connected to components of the slubbing machine and/or its drives (more specifically described below), in order to control the respective rotational speeds and/or conveying speeds.

[0009] It is advantageous if the arrangement comprises, in addition to a device for the detection and a device for the removal of the yarn flaw, a yarn accumulator for the interim storage of the rove leaving the spinning nozzle during the removal of the yarn flaw. Thereby, the yarn accumulator is preferably placed between the outlet of the spinning nozzle and the device for the removal of the yarn flaw. The yarn accumulator has, for example, a drivable coil bobbin, in order to loop the rove around several times, starting from a first front side, and draw it out again in the area of a second front side. If the coil bobbin turns with a circumferential speed equivalent to the delivery speed of the spinning nozzle, the filling level of the yarn accumulator remains constant (the quantity of the rove taken from the yarn accumulator is equivalent to the quantity of rove dispensed again). If a yarn flaw is now detected by the device for the detection of a yarn flaw, the receiving device (for example, in the form of the specified winding device) is stopped in such a manner that the section with a yarn flaw comes to a stop in the device for the removal of the yarn flaw, and the yarn flaw can be removed from the yarn. In such an event, through the yarn accumulator, it is possible that the spinning nozzle still produces rove that can now be stored in the yarn accumulator on an interim basis. After the removal of the yarn flaw and the linkage of the ends of the yarn that arose upon the removal, the receiving device is once again put into operation. If the receiving speed is selected so high that more yarn is received than that produced by the spinning nozzle, the yarn accumulator gradually empties. After reaching a defined filling level, the receiving speed is once again adjusted to the production or delivery speed of the spinning nozzle, such that the filling level of the yarn accumulator is once again constant.

[0010] It is also advantageous if the yarn accumulator is placed between the device for the detection of a yarn flaw and the device for the removal of the yarn flaw. In such a case, the device for the detection of the yarn flaw may be arranged, for example, immediately after the outlet of the spinning nozzle, such that yarn flaws can be detected as early as possible. Thereby, the receiving speed (i.e., the quantity of rove that

will be received by the receiving device) may be gently throttled to zero, since the section of the rove featuring the yarn flaw must still pass a certain distance until it comes to a stop inside the device for the removal of the yarn flaw.

[0011] It is also advantageous if a first conveying device for the rove is arranged between the outlet of the spinning nozzle and the yarn accumulator, and a second conveying device for the rove is arranged between the yarn accumulator and the device for the removal of the yarn flaw. In particular, it is thereby advantageous if the conveying speed of the second conveying device is adjustable independent of the conveying speed of the first conveying device. If a yarn flaw is to be removed in the device for the removal of the yarn flaw, the second conveying device may be stopped, while the first conveying device continues to draw out rove from the spinning nozzle and deliver it to the yarn accumulator. If necessary, the two conveying devices may be designed, for example, as a pair of rollers, wherein the rove may pass the pair of rollers between each corresponding roller and, when the rollers are at a standstill, may be kept in place by them in a clamping manner.

[0012] It is also advantageous if the yarn accumulator is placed between the first conveying device and the second conveying device. Thereby, the first conveying device serves the purpose of drawing out the rove during and after the removal of the yarn flaw, while the second conveying device downstream of the yarn accumulator serves the purpose of, while it is at a standstill, fixing the rove locally and thereby holding the yarn flaw in the device for the removal of the yarn flaw.

[0013] As a general matter, it must be stated here that the device for the removal of the yarn flaw preferably has a cutting or separating unit, with the assistance of which the rove is able to be severed before and after the yarn flaw. An additional device is also integrated, with the assistance of which the ends of the yarn that arose after the cutting of the yarn flaw can be linked together again. For example, a linking through a rubbing, needling or calendering process is conceivable. Air jets can also be used to achieve the link, with the assistance of a selected air flow.

[0014] Particular advantages are entailed if a pneumatic yarn accumulator is used, which accumulator is designed to suck the rove produced during the removal of the yarn flaw into a recess. Preferably, the negative pressure prevailing in the recess can thereby be controlled. It is also conceivable that there is a constant negative pressure, such that the (otherwise sagging) section of the rove drawn out from the spinning nozzle that is not received by the receiving device (for example, because a yarn flaw is removed) is always sucked from the yarn accumulator into the recess. The recess may have a screen on which the rove is placed, wherein the screen separates the recess from a subsequent vacuum line.

[0015] Advantages are also entailed if the slubbing machine comprises a control unit that is designed to continue to operate the first conveying device during the removal of the yarn flaw, and to abort the conveying of the rove using the second conveying device. In such an event, the production of the rove may take place continuously, even if the rove leaving the spinning nozzle has a yarn flaw, which must be removed from the rove. If the second conveying device stops, the rove drawn out of the first conveying device is stored in the yarn accumulator on an interim basis. After the removal of the yarn flaw, the second conveying device and, with it, the receiving device, is once again put into operation using the control.

[0016] It is advantageous if the slubbing machine includes a control unit that is designed to stop the receiving of the rove carried out using the receiving device during the removal of the yarn flaw, and resumes after the removal of the yarn flaw. In such an event, the rove may be freed of existing yarn flaws in the device for removing a yarn flaw, without causing an unwanted tear of the rove after the specified device.

[0017] It is also advantageous if, after leaving the spinning nozzle, the rove passes an arrangement for the detection and removal of yarn flaws placed between the outlet of the spinning nozzle and the receiving device, wherein, using the arrangement, yarn flaws are detected prior to receiving the rove and removed from the rove. Preferably, a slubbing machine with one or more of the preceding characteristics is thereby used. For the respective advantages, reference is made to the previous description.

[0018] In this connection, it is advantageous if the rove is severed after the detection of a yarn flaw using a device for removing the yarn flaw, before and after the yarn flaw, and the section featuring the yarn flaw is led away. In addition, it should be provided that the remaining ends of the yarn (i.e., the sections of the rove adjacent to the originally yarn flaw) are linked back together after the removal of the yarn flaw. The link takes place, for example, using a known splicing procedure or using air currents, which can achieve the link or a convergence of the fibers of the ends of the yarn.

[0019] It is advantageous if the production of the rove continues during the removal of the yarn flaw, wherein the rove produced during the removal of the yarn flaw is stored on an interim basis using a yarn accumulator arranged between the outlet of the spinning nozzle and the device for the removal of the yarn flaw. In such an event, the spinning nozzle may continuously produce rove, while the rove produced upon the linking of the ends of the yarn that arose upon the removal of a yarn flaw is stored on an interim basis until the yarn is received by the receiving device (for example, in the form of a winding device).

[0020] It is also advantageous if the rove is drawn out of a spinning nozzle using a first conveying device and fed to the yarn accumulator, and drawn out of the yarn accumulator using a second conveying device and fed to the device for the removal of a yarn flaw. The first conveying device ensures that the rove continuously produced by the spinning nozzle is led away, while, when necessary, the second conveying device can be halted, in order to allow for the removal of a yarn flaw. The second conveying device may fix, in a clamping manner, the rove also during the removal of the yarn flaw, such that an unintentional movement is prevented.

[0021] It is also advantageous if the first conveying device continues during the removal of the yarn flaw with the drawing out of the rove from the spinning nozzle, while the conveying of the rove using the second conveying device is interrupted. In such an event, the yarn accumulator takes the rove produced by the spinning nozzle, and releases it again after the removal the yarn flaw or the subsequent linking of the ends of the yarn.

[0022] It is particularly advantageous if the receiving of the rove using the receiving device is stopped during the removal of the yarn flaw and resumed after the removal of the yarn flaw. In such an event, a tearing of the rove that is stopped during removal in the area of the device for the removal of the yarn flaw can be prevented. After removal, the receiving

device and, if present, the second conveying device, are once again put into operation, wherein it is preferable that startup occurs synchronously.

[0023] It is also advantageous if a winding device is used as a receiving device, wherein the length of the rove stored on an interim basis using the yarn accumulator is held within defined limits using a control unit, by increasing the spooling speed of the winding device upon exceeding an upper limit and decreasing the spooling speed upon falling below a lower limit. This prevents an overflow of the yarn accumulator or a tearing of the rove. If the second conveying device described above is present between the yarn accumulator and the receiving device, its conveying speed at the spool device is also adjusted, in order to prevent a tearing or excessive sagging of the rove in this area. However, in principle, the second conveying device may also be omitted if the rotational speed of the coil is controlled in such a manner that the filling level of the yarn accumulator (regardless of a cleaner cut that might have occurred) is always kept within the specified limits. In such an event, the slubbing machine in accordance with the invention has only the described first conveying device, since the drawing out of the rove from the yarn accumulator is realized using the winding device. For this purpose, the winding device preferably has a drive roller for the coil, the rotational speed of which is adjustable, depending on the filling level of the yarn accumulator. Alternatively, as this is self-evident, a shaft bearing the coil may be directly drivable, wherein, in such an event, the rotational speed of the corresponding drive should be correspondingly adjustable.

[0024] Additional advantages of the invention are described in the following embodiments. The following is shown:

[0025] FIG. **1** a schematic side view of a slubbing machine,

[0026] FIG. **2** a schematic side view of a slubbing machine in accordance with the present invention,

[0027] FIG. **3** a schematic side view of a cut-out of a slubbing machine in accordance with the present invention,

[0028] FIG. **4** a schematic side view of a cut-out of an additional slubbing machine in accordance with the present invention, and

[0029] FIG. **5** a schematic side view of an additional slubbing machine in accordance with the present invention.

[0030] FIG. **1** shows a schematic view of a cut-out of a slubbing machine in accordance with the invention. This preferably comprises a delivery device **20** (for example, in the form of a pair of rollers) along with a downstream drafting system **19**. The drafting system **19** is in turn fed with a fiber web **2** (for example, a doubled drafting band) drawn out of a can **21** using the delivery device **20**. In addition, the slubbing machine that is shown has a spinning nozzle **3** downstream of the drafting system **19** in the transport direction of the fiber web **2** and having an inlet opening **4** for the fiber web **2**. A vortex chamber that is not seen is arranged within the spinning nozzle **3**; in this, the fiber web **2** is provided with a protective rotation (the mode of action of the spinning position will be described in more detail below).

[0031] Following the spinning nozzle **3**, a pair of draw-off rollers **27** along with a winding device **6** downstream of the pair of draw-off rollers **27** may finally be arranged for the rove **1** leaving the spinning nozzle **3** through an outlet **5**. The winding device **6** may also (as well as in the cases of the remaining figures) comprise a coil **17** for the rove **1** and a drive roller **18** driving the coil **17** through direct contact with the coil bobbin or the rove **1** spooled thereupon.

[0032] The slubbing machine in accordance with the invention need not necessarily have a drafting system **19**, as is shown or indicated in the figures. Moreover, the pair of draw-off rollers **27** is not absolutely necessary.

[0033] The production of the rove **1** then takes place according to a special air spinning process, which was originally employed to produce a finished yarn. In contrast to yarn production, with the production of rove **1**, it is essential that only a protective rotation is imparted to the fiber web **2** introduced into the spinning nozzle **3**, such that the resulting rove **1** continues to remain capable of being drafted for further processing in a subsequent spinning machine, for example a ring spinning machine. However, conventional air spinning devices impart to the fiber web **2** a rotation that is so strong that the necessary drafting following the yarn production is no longer possible. This is also desirable in this case, since conventional air spinning machines are designed to produce a finished yarn that is usually characterized by a high degree of strength.

[0034] However, the fiber web **2** within the spinning nozzle **3** of the slubbing machine in accordance with the invention receives only a protective rotation. Thereby, the fiber web **2** is collected by an air flow generated by air jets assigned to the inner vortex chamber. One part of the fibers is pulled out from the fiber web **2** at least to some extent, and wound around the top of a spindle protruding into the vortex chamber. As a result of the fact that the fiber web **2** is drawn out from the vortex chamber through an inlet mouth of the spindle by means of a draw-off channel arranged within the spindle, the free ends of the fiber are drawn in the direction of the inlet mouth and thereby looped, as wrapped fibers, around the centrally running and preferably untwisted core fibers. As a result, a rove **1** having the desired protective rotation arises, which can be drawn out of the spinning nozzle **3** through the outlet **5**.

[0035] With rove produced in such a manner, that fact that the rove **1** may have flaw spots is disadvantageous. Generally, a flaw spot is a section of the rove **1**, whose diameter, strength, density, weight per length or other physical dimension present for further processing lies outside of a predefined range of tolerance. Such flaw spots must eventually be removed in a separate step that is subsequent to the spooling onto the slubbing machine, such that the rove coil produced on the slubbing machine cannot be delivered directly to a subsequent spinning machine, knitting machine or other textile machine processing a rove **1**.

[0036] To solve this problem, it is proposed to equip the slubbing machine with an arrangement **7**, to be passed by the rove **1**, for detecting and removing yarn flaws **8**, and to place this between the outlet **5** of the spinning nozzle **3** and a receiving device **28** receiving the drawn out rove **1**, such that yarn flaws **8** can be detected even prior to the spooling or the direct delivery of the rove **1** to a subsequent textile machine, or can be removed from the rove **1**.

[0037] The receiving device **28** may be formed, for example, by the winding device **6** that is shown. Alternatively, it is also possible to deliver the rove **1** directly to an additional textile machine, wherein, in this event, the receiving device **28** may be formed by a pair of rollers, which ensures the transport of the rove **1** (leaving the device **10** for removing the yarn flaw **8**) to the subsequent textile machine. The following describes by example the case in which the rove **1** is spooled onto a coil **17** using the specified winding device **6**.

[0038] FIG. **2** shows the basic structure of a possible embodiment of a slubbing machine in accordance with the

invention. As can be clearly seen with a comparison to FIG. **1**, the slubbing machine initially has a first conveying device **12** (such as a pair of rollers), with the assistance of which the rove **1** produced in the spinning nozzle **3** is drawn out of the spinning nozzle **3**. However, the rove **1** is not only drawn out, but is ultimately spooled onto a coil **17** using a winding device **6**. Rather, prior to spooling, for example, immediately after the exit from the spinning nozzle **3**, the yarn is monitored for yarn flaws **8** using a device **9** for detecting a yarn flaw **8**. Thereby, optical or ultrasonic sensors (for example), which monitor, for example, the diameter of the rove **1** and transmit the measured values through a wire **16** or wirelessly to a control unit **14**, are employed; these ultimately compare the values with corresponding target values or permissible ranges of tolerance.

[0039] After the first conveying device **12**, a yarn accumulator **11** (which is to be described in more detail), a second conveying device **13** (which in turn may be designed as a pair of rollers) and a device **10** for removing a yarn flaw **8** follow; together with the device **9** for detecting a yarn flaw **8**, these form the arrangement **7** in accordance with the invention for detecting and removing a yarn flaw **8**. Finally, the rove **1** is spooled onto a coil **17** using a winding device **6**, wherein yarn flaws **8**, as described below, are removed prior to spooling, such that the coil **17** bearing the rove **1** can be fed immediately to a textile machine processing the rove **1**.

[0040] If a deviation from the monitored value is then recognized by the device **9** for detecting a yarn flaw **8**, the conveying of the rove **1** in the direction of the receiving device **28** continues until the yarn flaw **8** is found in the area of the device **10** for removing the yarn flaw **8** (the time can be calculated from the conveying speed of the rove **1** and the covered distance). Subsequently, the receiving device **28** (in the example shown, the winding device **6**) and the second conveying device **12** are stopped, such that the section of the rove **1** having the yarn flaw **8** is fixed within the device **10** for removing the yarn flaw **8**.

[0041] The rove **1** is then severed within the device **10** for removing the yarn flaw **8** by a separator or a cutter before and after the yarn flaw **8**. The removed section of the rove **1** is finally disposed of, for example, sucked away.

[0042] Following the removal of the yarn flaw **8**, the original sections of the rove **1** adjacent to the yarn flaw **8** and then forming two ends of the yarn are linked to each other. Thereby, either the second conveying device **13** in the transport direction (=spinning nozzle **3**→receiving device **28**) or the receiving device **28** against the transport direction are driven, in order to convey a small amount of rove **1** into the device **10** for removing the yarn flaw **8**. This can ensure that, despite the removal of the yarn flaw **8**, there is sufficient rove **1** for linking the ends of the yarn. The link may ultimately take place through splicing, needling, rubbing, calendering, through the use of air currents or through other known linking methods.

[0043] In order to not then have to stop the production of rove **1** during the removal of a yarn flaw **8**, a yarn accumulator **11** is arranged between the first conveying device **12** (with the assistance of which the yarn is drawn out of the spinning nozzle **3**) and the second conveying device **13**. This may be designed, for example, as a feeder **23** or a pneumatic yarn accumulator **11**. In the case first specified (FIG. **3**), a drivable coil bobbin is provided, the circumferential speed of which during the production of rove approximately corresponds to the delivery speed of the spinning nozzle **3**. The drawn out rove **1** is wrapped on the coil bobbin several times and ultimately drawn out once again through one of the front sides and under the interposition of a guide **22**. As long as the receiving speed of the receiving device **28** corresponds to the draw-off speed of the first conveying device **12**, the length of the rove **1** wound on the coil bobbin remains constant.

[0044] If the second conveying speed is stopped for the purpose of removing a yarn flaw **8**, the yarn accumulator **11** fills up, i.e. the rove **1** drawn out of the spinning nozzle **3** is wound on the coil bobbin through its rotation, without the rove **1** being drawn out on its front side.

[0045] If the removal of the yarn flaw **8** is ended, the second conveying device **13** and the receiving device **28** are once again put into operation. Thereby, the conveying speeds of the specified units can be increased in respect of the draw-off speed of the first conveying device **12**, such that the yarn accumulator **11** is once again emptied, to a defined minimum value. From such point in time, the first and second conveying devices **12**, **13** driven by means of the drive **15** along with the receiving device **28** (i.e., in the example shown, the drive roller **18** of the coil **17**) are once again driven at "normal speed." In other words, the quantity of rove **1** that leaves the spinning nozzle **3** is received by the receiving device **28**. The filling level of the yarn accumulator **11** remains constant until the removal of the next yarn flaw **8**.

[0046] As an alternative to the feeder **23** shown in FIG. **3**, a pneumatic yarn accumulator in **11** with a recess **29** may also be used (FIG. **4**). This has, for example, a vacuum chamber **24** connected to a vacuum line **26**, in which the rove **1** in the form of a loop may be sucked in. As storage space for the rove **1**, a screen **25** may be present within the vacuum chamber **24**, such that rove **1** with a length that exceeds the length of the vacuum chamber **24** can be stored on an interim basis. The pressure in the vacuum chamber **24** is finally adjustable in a manner analogous to the rotation speed of the coil bobbin of the feeder **23** described above. In other words, the negative pressure increases, and the yarn accumulator **11** is thus filled, if the removal of a yarn flaw **8** is pending, and is once again reduced if the removal of the yarn flaw **8** has taken place, such that the yarn accumulator **11** may once again be emptied up to a minimum filling level.

[0047] Finally, as a variation of FIG. **2**, FIG. **5** shows an additional slubbing machine in accordance with the invention. As can be seen in FIG. **5**, the second conveying device **13** was omitted. Rather, the drawing out of the yarn accumulator **11** can be realized only through the drive of the winding device **6**, which in turn can take place using the drive roller **18** that is shown. For example, it would thereby be possible to vary the rotational speed of the coil **17**, and thus the spooling speed of the rove **1**, by changing its drive speed (or the rotational speed of the drive roller **18**).

[0048] The variation could take place in such a manner, for example, that the rotational speed is selected so high that the draw-off speed of the rove **1** (i.e., the length of the rove **1** spooled per unit of time) is higher than the delivery speed (i.e., the length of the rove **1** produced per unit of time) of the spinning nozzle **3**. The yarn accumulator **11** would be gradually emptied at this stage.

[0049] If the filling level of the yarn accumulator **11** (monitored, for example, using a sensor) reaches a specified minimum value, the rotational speed of the coil **17** would be reduced to the extent that the draw-off speed is less than the delivery speed of the spinning nozzle **3**. As a result, the filling up of the yarn accumulator **11** would once again occur. If the

filling level exceeds a maximum value, the rotational speed of the coil **17** would be increased again to its initial value, such that the emptying of the yarn accumulator **11** would once again occur. Thus, through the corresponding governing of the rotational speed of the coil **17** (or the drive unit), the filling level (even during a cleaner cut, for which the coil **17** would be at a standstill) could always be kept between the specified limits.

[0050] In all other respects, the invention is not limited to the embodiments that are shown. Rather, all combinations of the described individual characteristics, as they are shown or described in the claims, the description and the figures, and to the extent that a corresponding combination appears technically possible or sensible, are included in the subject matter of the invention.

Reference Signs

[0051] **1** Rove
[0052] **2** Fiber web
[0053] **3** Spinning nozzle
[0054] **4** Inlet opening
[0055] **5** Outlet
[0056] **6** Winding device
[0057] **7** Arrangement for the detection and removal of a yarn flaw
[0058] **8** Yarn flaw
[0059] **9** Device for the detection of a yarn flaw
[0060] **10** Device for the removal of a yarn flaw
[0061] **11** Yarn accumulator
[0062] **12** First conveying device
[0063] **13** Second conveying device
[0064] **14** Control unit
[0065] **15** Drive
[0066] **16** Wire
[0067] **17** Coil
[0068] **18** Drive roller
[0069] **19** Drafting system
[0070] **20** Delivery device
[0071] **21** Can
[0072] **22** Guide
[0073] **23** Feeder
[0074] **24** Vacuum chamber
[0075] **25** Screen
[0076] **26** Vacuum line
[0077] **27** Pair of draw-off rollers
[0078] **28** Receiving device
[0079] **29** Recess

1. Slubbing machine for producing a rove (**1**) from a fiber web (**2**),

wherein the slubbing machine has at least one spinning nozzle (**3**) with an inlet opening (**4**) for the fiber web (**2**),

wherein at least one air nozzle is assigned to the spinning nozzle (**3**) through which air nozzle the air can be channeled into the spinning nozzle (**3**) in order to impart a protective rotation to the fiber web (**2**) within the spinning nozzle (**3**),

wherein the spinning nozzle (**3**) has an outlet (**5**) through which the rove (**1**) can be drawn out of the spinning nozzle (**3**),

wherein the slubbing machine comprises at least one receiving device (**28**) arranged downstream of the spinning nozzle (**3**) in the transport direction of the rove (**1**), particularly in the form of a winding device (**6**) to receive the rove (**1**) leaving the spinning nozzle (**3**),

characterized in that

the slubbing machine comprises an arrangement (**7**), to be passed by the rove (**1**), for detecting and removing yarn flaws (**8**), the arrangement (**7**) being placed between the outlet (**5**) of the spinning nozzle (**3**) and the receiving device (**28**).

2-15. (canceled)

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