United States Patent

Stahlecker

[15] **3,662,532**

[45] **May 16, 1972**

[54] SPINNING DEVICE FOR SPINNING THREADS BY THE OPEN-END METHOD

[72] Inventor: **Fritz Stahlecker,** Bad Uberkingen, Germany

[73] Assignee: **Wilhelm Stahlecker GmbH,** Reichenbach, Germany

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[30] **Foreign Application Priority Data**

July 4, 1969 Germany .....P 19 33 930.1

[52] **U.S. Cl.**.....**57/58.89,** 57/80

[51] **Int. Cl.**.....**D01h 1/12,** D01h 13/14, D01h 7/00

[58] **Field of Search**.....57/58.89, 58.95, 56, 80, 81

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Primary Examiner—Donald E. Watkins

Attorney—Craig, Antonelli, Stewart & Hill

[57] **ABSTRACT**

A spinning apparatus for spinning threads by the open-end method having a spinning turbine and guiding elements for the fiber material which are movable in relation to the spinning turbine and render its open side accessible from the outside. Release means and control members are provided so that the relative movements between the spinning turbine and the guiding elements take place automatically. The release means is actuated to open the spinning turbine by thread break detectors or thread sensing devices.

22 Claims, 16 Drawing Figures

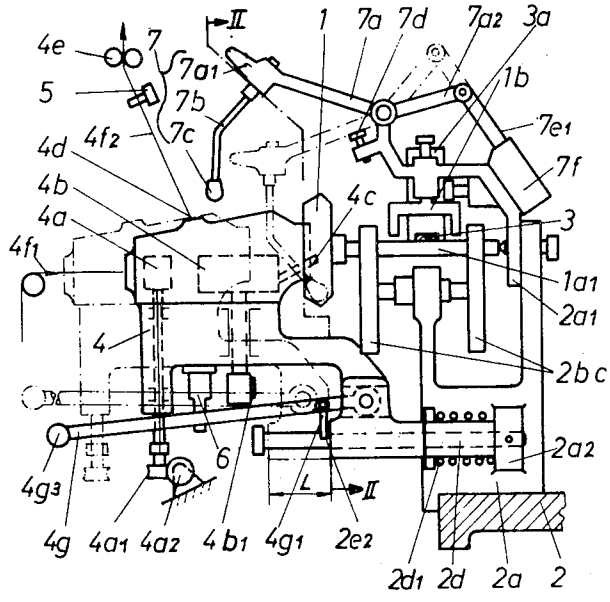

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Fig. 1

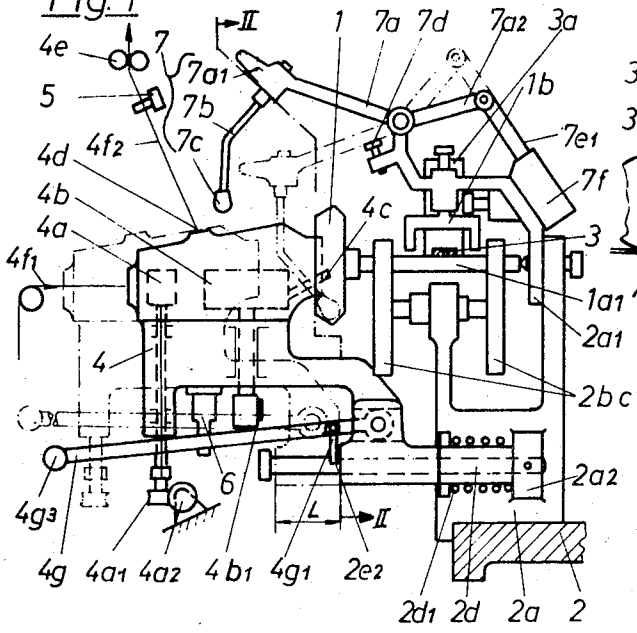


Fig. 2

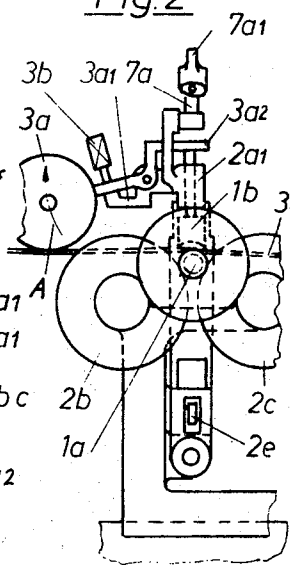


Fig. 4

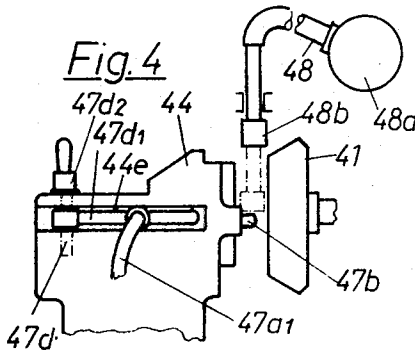


Fig. 3

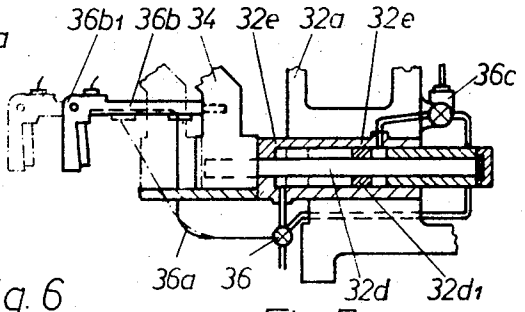
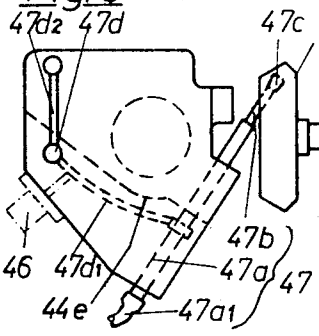


Fig. 5



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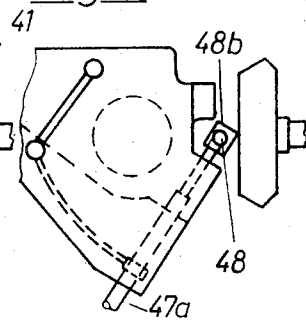

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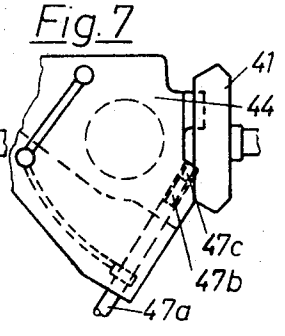


INVENTOR

FRITZ STAHLECKER

BY Craig, Antonelli, Stewart & Hill

ATTORNEYS

Fig. 8

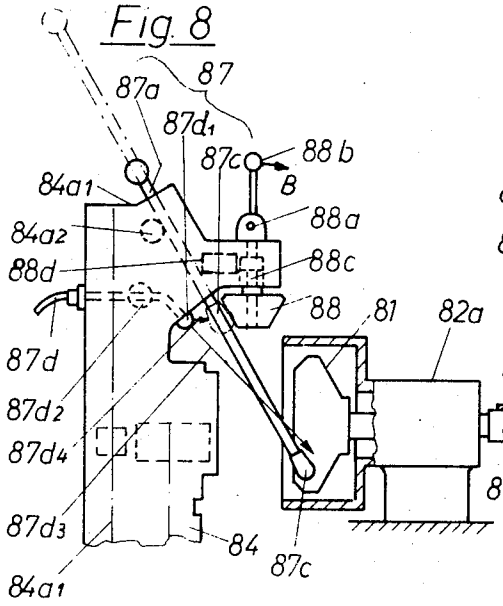


Fig. 9

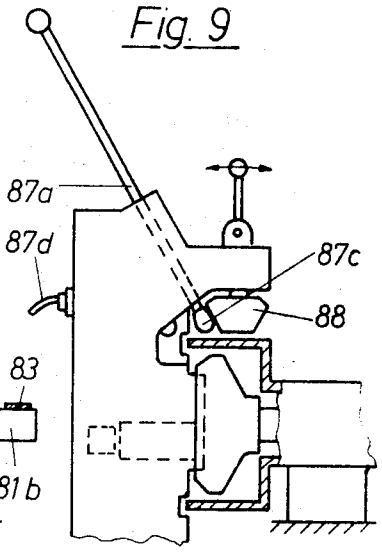


Fig. 10

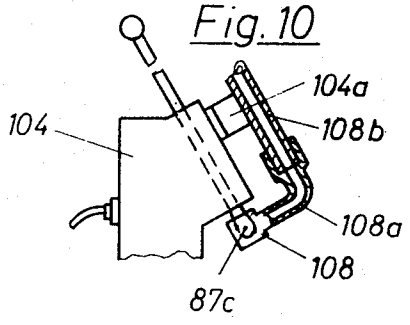


Fig. 11

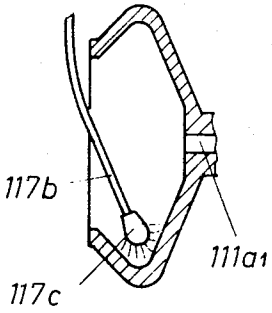


Fig. 12

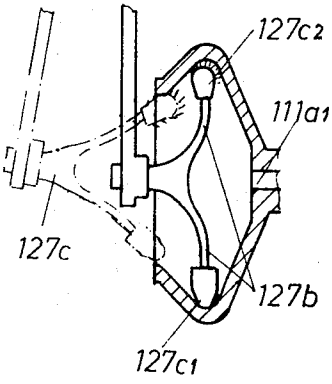
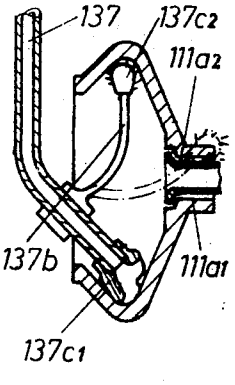


Fig. 13



INVENTOR
FRITZ STAHLECKER

BY Craig, Antonelli, Stewart + Hill
ATTORNEYS

Fig. 14

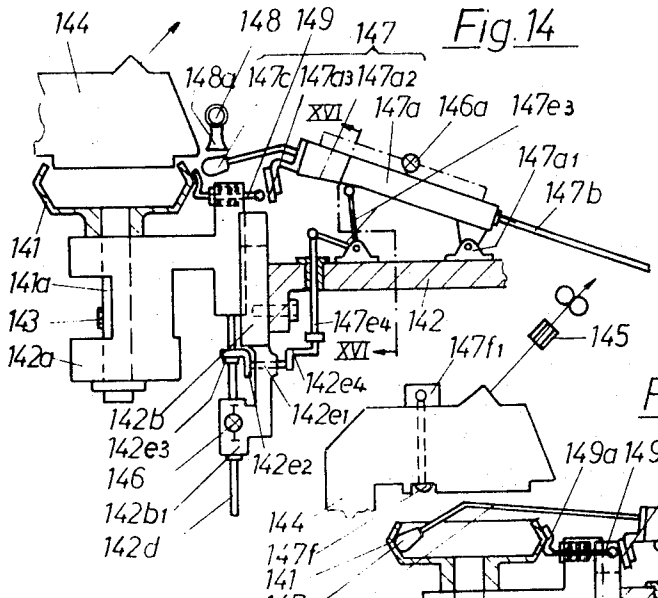


Fig. 15

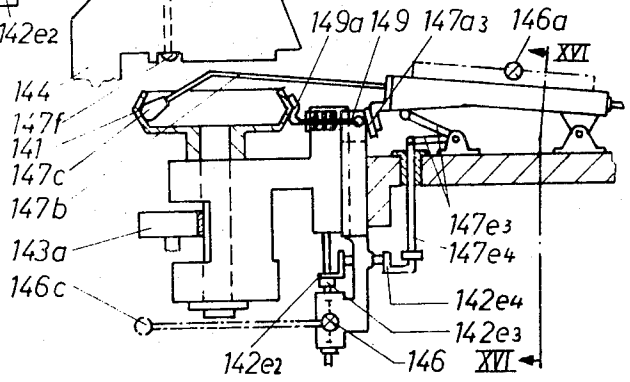
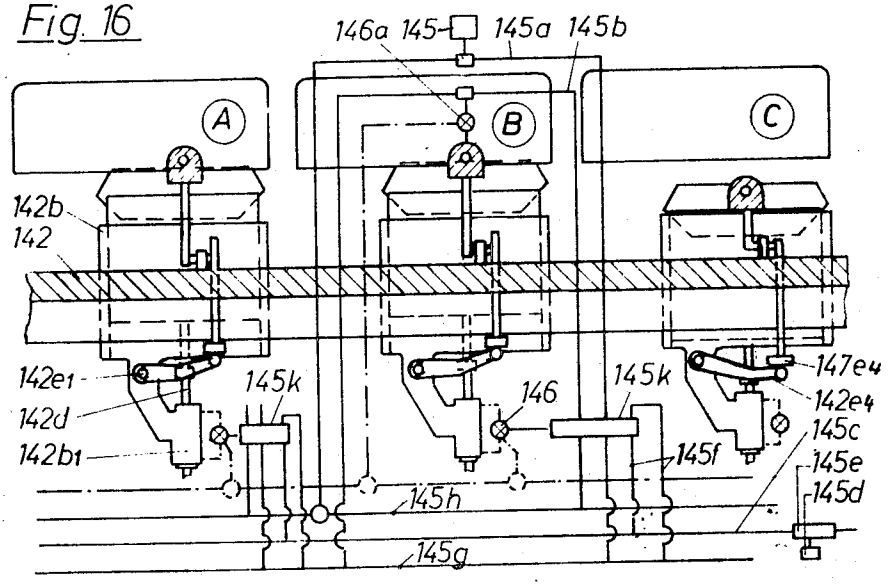


Fig. 16



INVENTOR

FRITZ STAHLECKER

BY Craig, Antonelli, Stewart + Hill

ATTORNEYS

SPINNING DEVICE FOR SPINNING THREADS BY THE OPEN-END METHOD

The invention relates to a spinning device for spinning threads by the open-end method with a spinning turbine and with guiding elements for the fiber material which are movable in relation to the spinning turbine and render its open side accessible from outside.

It is known to remove the guiding elements, which are located on the open side of the spinning turbine and project partly into it, to such a distance from the spinning turbine that the interior of the spinning turbine becomes accessible, for example for the purpose of eliminating blockages due to thread breakages. To this end the guiding elements are accommodated in a swivelling housing which is kept in the operating position by a pawl locking device. To open the spinning turbine the pawl is manually released and the housing, together with the guiding elements, is swung away by hand. To close the turbine it is necessary to swing the housing back again by hand until the pawl drops into position. A pilot light indicates when a thread is broken at a spinning unit. When the spinning operator notices the pilot light she goes to this spinning unit, opens the turbine, takes the remains of the yarn and the dirt out of the spinning turbine by hand, using a hook, and then closes the turbine again. The disadvantage with this known arrangement is that the operator has to be very alert and also that she can only deal with thread breakages by using a relatively large amount of time and energy.

It is similarly disadvantageous when the spinning turbine has to be opened to be cleaned, without a thread break having been indicated. Periodic cleaning of this nature is essential, on account of the unavoidable deposits of pieces of thread and other kinds of dirt, to permit the production of a good thread and to prevent the occurrence of too many thread breakages. Spinning devices are also known on which cleaning devices are fitted which are introduced into the spinning turbine which is closed by the guiding elements or their housing. In these devices the guiding elements for the fiber material which project into the open side of the spinning turbine remain in their operating position during cleaning and thus the spinning turbine is not accessible from the outside. These devices have the disadvantage that the cleaning apparatus can only be accommodated with difficulty as regards space and as a rule its front part can only consist of inserted narrow diameter pipes, or of thin channels formed in the guide chamber. Furthermore it is disadvantageous that no means are provided for the rapid opening of the turbine when it is necessary to deal with trouble in the cleaning apparatus or specially dirty conditions in the turbine without losing too much time.

The object of the invention is the provision of a spinning device which obviates the disadvantages of the known arrangements, facilitates operation, produces a good thread and increases production.

According to the invention there is provided a spinning device for spinning threads by the open-end method having a spinning turbine and guiding elements for the fiber material which are movable in relation to the spinning turbine and render its open side accessible from the outside, wherein release means and control members are provided by means of which the relative movements between the spinning turbine and the guiding elements take place automatically. The actuating means which are used here are conveniently thread break detectors which trip the opening of the turbine when a thread breaks, or thread sensing devices which trip the opening of the turbine even when the quality of the thread drops.

Furthermore it is advantageous if the actuating means of a group of spinning devices can be operated together. It is also advisable to provide supplementary control means for opening the turbine manually. Special advantages result in the case of spinning devices in which the open side of the spinning turbine can be made accessible, if each spinning turbine has associated with it a cleaning arrangement which is introcued into the open side of the spinning turbine.

Embodiments of the invention will now be described in greater detail by way of example and with reference to the accompanying schematic drawings, in which:

FIG. 1 shows the side view of a spinning device in which the guide chamber can be moved away from the spinning turbine in the axial direction and this opening movement is tripped by the release of a spring catch when a thread breaks; a swivelling cleaning device is disposed above the spinning turbine and the position of the guide chamber and the cleaning device in the cleaning position is shown by the dash-dot lines;

FIG. 2 is a front view of the device in FIG. 1 through the line II—II of FIG. 1;

FIG. 3 is a partial section through a device similar to that in FIG. 1 but with pneumatic shifting of the guide chamber;

FIG. 4 is a side view of a spinning device with the spinning turbine opened and a cleaning rod inserted which is disposed in the guide chamber;

FIG. 5 is a plan view of the device in FIG. 4;

FIG. 6 is a plan view of the device in FIG. 4 but with the cleaning rod partly withdrawn and the removal head brought up to the cleaning bowl;

FIG. 7 is a plan view of the device in FIG. 4 but with the guide chamber brought into the spinning position;

FIG. 8 is a side view, in partial section, of a spinning device similar to FIG. 1 with opened spinning turbine, into which a cleaning tool, mounted in the guide chamber, is introduced from above; with a cleaning brush disposed on the guide chamber;

FIG. 9 is a side view of the spinning device in FIG. 8 in the spinning position;

FIG. 10 is a partial section through a spinning device similar to FIG. 9, in which the cleaning tool is cleaned by a suction device;

FIG. 11 shows a longitudinal section through a spinning turbine with the cleaning tool, constructed as a brush, inserted;

FIG. 12 is a longitudinal section through a spinning turbine with the cleaning head consisting of a brushing and a scraping tool inserted,; the cleaning head when it is not inserted being represented by a dash-dot line;

FIG. 13 is a longitudinal section through a spinning turbine with a cleaning head consisting of an aspirating and a brushing tool inserted;

FIG. 14 is a side view, in partial section, of a spinning device in the spinning position, the spinning turbine of which is moved away from the guide chamber in the axial direction by pneumatic means for the purpose of opening; the motion of the cleaning device is coupled with the turbine motion;

FIG. 15 is a side view of the spinning device in FIG. 14 with the spinning turbine opened and the cleaning device introduced; and

FIG. 16 is an elevation of a group of spinning devices A,B,C as in FIG. 14 and 15, taken along the line XVI—XVI, with pneumatic control lines for the automatic opening of one or more spinning turbines; the spinning devices A,B are represented with the turbine closed, the spinning device C with the turbine opened.

In FIGS. 1 and 2 the spinning turbine 1 is mounted by its shaft 1*a* in the nip of two pairs of driving discs 2*b*, 2*c* which in turn are supported in the bearing block 2*a* fixed on the carrying rail 2. The driving belt 3 for the spinning turbine 1 is a tangential belt which is tensioned at each spinning device by an expander roll 3*a*. The expander roll is swingably disposed on the carrier 2*a*1 located on the bearing block 2*a*, on which carrier there is also mounted so as to be displaceable vertically a brake 1*b* which acts on the shaft 1*a* of the spinning turbine. The brake 1*b* is depressed by the lever arm 3*a*2 of the expander roll carrier 3*a*1 when the expander roll is swung upwards in the direction of the arrow A (FIG. 3) in order to take the load off the belt 3. The expander roll 3*a* can be swung upwards by a solenoid 3*b*. In the guide chamber 4 are accommodated the guiding elements for the supply of the fiber material 4*f*1 and the delivery of the spun thread 4*f*2. In the example which is illustrated they consist chiefly of supply rolls 4*a*, comber rolls 4*b*, supply channels 4*c* and delivery members for the thread 4*f*2 which leaves the guide chamber 4 at 4*d* and passes on to the delivery rolls 4*e*. The supply roll 4*a* is driven by a through worm shaft 4*a*2, by means of the gearwheel 4*a*1, the comber roll 4*b* by the belt 4*b*1.

The guide chamber 4 is supported so as to be capable of horizontal displacement on the guide bar 2*d* which is fixed to a flange 2*a*2 of the bearing block 2*a*. In the spinning position the guide chamber 4 is pressed by a spring 2*d*1 against a pawl 4*g*1 of the pawl lever 4*g*. For opening the spinning turbine 1 the pawl lever 4*g* is swung upwards by the control member 6, represented in the example in the illustration as a solenoid, so that the pawl 4*g*1 disengages from the notch 2*e*2 in the bar 2*d*. The guide chamber 4 is then moved by the spring 2*d*1 by the distance L into the position represented by the dash-dot line, as a result of which the space in front of the turbine 1 becomes accessible from the outside. This opening can be operated manually also, in exceptional cases, by moving the lever 4*g* by the knob 4*g*3. As a rule the opening of the spinning turbine is tripped automatically when a thread breaks or the quality of the thread drops beyond a certain standard.

If opening is to be effected automatically on the breaking of a thread a thread feeler is disposed before the delivery roll 4*e* as a tripping agent 5 which operates the solenoid 6, by control means and control devices (which are not illustrated), whereupon the guide chamber is moved into the position shown by the dash-dot line in the manner which has been described already. If there is a deterioration in the quality of the thread, due to the spinning turbine becoming dirty or through any other trouble, it is possible for this also to bring about an interruption in the spinning process by the opening of the spinning turbine. In this case a thread sensing head is used as the tripping agent 5 which, for example, in the event of considerable fluctuations in thread thickness generates control currents which likewise energize the solenoid 6. Instead of one tripping agent 5 it is also possible to fit several tripping agents, for example a thread feeler and a thread sensing head which come into effect selectively through the appropriate electrical circuits.

Provision can also be made, by appropriate electrical circuits, for the opening of groups of spinning devices or all the spinning devices on the machine by way of central switches without a thread breakage or deterioration in the thread quality having to take place. This type of opening of the spinning turbine for cleaning purposes is conveniently carried out after a definite period of time in which arrangement the switch or switches tripping the shut-down can be operated manually or through an automatically acting instrument, for example a timing clock.

After the spinning turbine has been opened by the above described means its interior can be cleaned conveniently and thoroughly by equipment introduced from the outside. It is also possible at the same time to inspect the interior of the spinning turbine and the orifices of the guide channels in the guide chamber and if necessary to clean the channel orifices as well. In the example illustrated in FIGS. 1 and 2 the cleaning apparatus 7 disposed on the carrier 2*a*1 consists of a pivoted lever 7*a*, 7*a*2 with a tool carrier 7*b* and cleaning tool 7*c*. If the tool, constructed for example, as a brush is only required to be brought by hand into the cleaning position shown by the dash-dot line, the lever part 7*a*2 can be dispensed with and the lever is brought by the handle 7*a*1 into the cleaning position, which is reached when the lever 7*a* makes contact with the adjustable stop 7*d* disposed on the carrier 2*a*1. If the cleaning tool has to be introduced into the opened spinning turbine automatically, a control rod linkage 7*e*1 acting on the lever part 7*a*2 is operated by special control means, for example by a solenoid 7*f* which is operated by the movements of the guide chamber 4. In place of a solenoid of this kind it is also possible to use hydraulic or pneumatic means through a control rod linkage coupled with the movable guide chamber by way of bell-crank levers, eccentrics, or the like. The operation of the solenoid 7*f* in dependence upon the movements of the guide chamber can be obtained by appropriate circuits in accordance with the desired degree of automation. A preferred form of construction provides for the automatic introduction of the cleaning tool, the cleaning and the withdrawal of the tool in dependence upon the movements of the guide chamber.

In FIG. 3 the guide chamber 34 is mounted on a piston rod 32*d*, the piston 32*d*1 on both sides of which can be acted upon in the compressed air cylinder 32*e*, which is fixed on the bearing block 32*a*, in which it is guided. The reversing valve 36 is operated by the control lever 36*b* by way of a flexible pipeline 36*a*. A further control valve 36*c* is provided for operating a pneumatically actuated cleaning device. The control head 36*b*1 on the control lever 36*b* can be operated manually or electrically. The switching possibilities of an arrangement such as this are generally the same as has been described for FIGS. 1 and 2. The extended position of the guide chamber 34 is represented by a dash-dot line.

In FIGS. 4 to 7 the guide chamber 44 accommodates a cleaning apparatus 47 consisting of a displaceable guide tube 47*a*, a tool rod 47*b* and a tool 47*c*, also of a driving arm 47*d*1 fixed on the pivot pin 47*d* and accommodated in the recess 44*e* in the guide chamber 44, together with a hand lever 47*d*2 fixed on the pin 47*d*. When the spinning turbine 41, shown closed in FIG. 7, is rendered accessible from the outside by the moving away of the guide chamber 44 into the position shown by broken lines in FIG. 4 to 6, the guide tube 47*a* can be brought into the position shown in FIG. 5 by the lever 47*d*2 by way of the driving arm 47*d*1. At approximately the same time the tool rod 47*b* with the tool 47*c* is pushed fully into the turbine 41 up to the cleaning position by compressed air which is supplied by means of the hose 47*a*1. After cleaning, the guide tube 47*a* is swung back into the position shown in FIG. 6, the tool 47*c* still projecting a little from the guide chamber 44. The tool 47*c* is now accessible to such an extent that the particles of dirt and fiber adhering to it can be removed. This can be performed by hand with a simple, hook-shaped scraper, or with a motor-driven hand tool with a rotating needle (the so-called fly catcher), which cleans a little more efficiently but is difficult to manipulate.

In the example illustrated the removal of dirt and fly is effected by means of a removal head 48*b* which is connected by way of a vacuum line 48 to a reservoir 48*a* and is associated with each of the spinning devices and can be moved by hand or mechanically and automatically from its rest position into the position shown by the dash-dot line on the tool 47*b*, (FIG. 4). After quite a short time the removal of the dirt is completed and the removal head 48*b* is lifted up again. At the same time the supply of compressed air is disconnected from the guiding tube 47*a* and as shown in FIG. 7, so the tool 47*b* is again withdrawn fully into the guide chamber 44 under the action of a restoring spring, (not shown). During and/or after this withdrawal the turbine 41 is closed again by bringing up the guide chamber 44. Instead of using the hand lever 47*d*2 the arm 47*d*1 can also be swung automatically by special control means, for example by a solenoid 46 which is represented by the dash-dot line in FIG. 5.

In FIGS. 8 and 9 the spinning turbine 81 is mounted in a closed bearing housing 82*a* and is driven by a belt 83 by way of a driving pulley 81*b*. A cleaning device 87 is accommodated in the guide chamber 84 which consists of a guide rod 87*a* and a tool 87*c* and also of a supply line 87*d* for cleaning fluid which leads to a spray nozzle 87*d*1. On and after the opening of the spinning turbine the cleaning tool 87*c* is brought into the cleaning position shown in FIG. 8 by the shifting of the guide rod 87*a* from the rest position shown in FIG. 9. This shifting can be done by hand or by mechanical means, for example by a rack gearing 84*a*2 which is operated by a rotating shaft in the guide chamber in a manner which is not illustrated in greater detail. This drive is controlled by way of clutches, or the like, in such a way that the movement of the guide rod 87*a* is conveniently adapted to the series of movements of the spinning device. The supply of the cleaning fluid is regulated by a controlled valve 87*d*2. The jet of cleaning fluid indicated by the line 87*d*3 can be injected or sprayed directly into the opened turbine 81, it is also possible for the jet of fluid 87*d*4 to be sprinkled or sprayed on to the cleaning tool prior to its introduction into the open turbine.

Also disposed on the guide chamber **84** is a removal tool **88** which swings round a pin **88***a* and which cleans the dirt and fiber particles from the cleaning tool **87***c* when it has been withdrawn from the spinning turbine. The removal tool **88** can be constructed as illustrated, in the form of a removal roller, the outer surface of which is matched to the shape of the cleaning tool and is provided with a removal fitting, of small hooks or the like. If, beside the axle of the removal roller, there is disposed a driving wheel **88***d* which is driven, in a manner not shown in detail, by rotating parts of the guide chamber, it is possible, by swinging the lever **88***b* slightly in the direction of the arrow B, to obtain friction contact between the axle of the removal wheel **88** and the driving wheel **88***d* with the result that the removal wheel **88** rotates. Simultaneously it is thereby also possible to cause the tool **87***c* to rotate if it is rotatably disposed on the guide rod **87***a*.

Instead of a cleaning roller **88** it is also possible to use a pneumatically operating removal tool **108**, see FIG. **10**. The removal tool may be a suction or a blast head. It is situated on the resilient tubular part **108***a* which is connected to the rigid guide tube **108***b*. The bearing part **104***a* disposed on the guide chamber **104** is used as a bearing support in the case of a movable removal device and as a support for the guide tube **108***b* in the case of a fixed removal device.

FIGS. **11**, **12** and **13** illustrate various cleaning tools. In FIG. **11** the cleaning tool **117***c* is a brush which is fixed on to a thin and resiliently flexible carrier **117***b*. The brush certainly has a good coarse cleaning action but it only picks up adhering dust particles if cleaning is carried on for a very long time. The cleaning head **127***c* illustrated in FIG. **12** consists of a scraping tool **127***c***1** and a brushing tool **127***c***2**. Both tools are fitted on resilient tool arms **127***b* which are so shaped that the distance of the two tools from one another in the released, withdrawn state corresponds roughly to the turbine opening; this position being indicated by the dash-dot line. After being inserted, the tools strike the bottom of the turbine and the arms flex outwardly until the tools have reached the cleaning position shown.

In FIG. **13** a bowl **137***c***1** is disposed on the carrier tube **137** through which compressed air or a cleaning fluid is ejected. A second brushing tool **137***c***2** is fixed on the tube **137** by a resilient carrier **137***b*. Outside the spinning turbine the carrier **137***b* takes the relaxed shape shown by the dash-dot line. In all three forms of construction shown in FIGS. **11**, **12** and **13** it may be convenient to suck, or blow the particles of dirt and fiber through the bore **111***a***1** of the turbine shaft or through a tube **111***a***2** inserted therein (FIG. **13**), provided this bore is not being used for leading off the thread. The tool **137***c***1** in FIG. **13**, which also has a scraping action, reinforces the sucking off of the dirt particles through the bore **111***a***1** or **111***a***2**.

In FIGS. **14**, **15** and **16** the spinning turbine **141** is mounted in a bearing block **142***a* and driven by means of the belt **143** on the free part of its drive shaft **141***a* between the bearings. The bearing block **142***a* is guided so as to be vertically displaceable in the guide plate **142***b* fixed on the supporting bench **142**. In the example shown in the drawing the displacement is effected pneumatically by means of the piston rod **142***d* which is connected with the bearing block **142***a* and is guided in the compressed air cylinder **142***b***1** disposed on the guide plate **142***b*, the guide chamber **144** being fixed immovably to the machine frame. Associated with each spinning device is a pneumatically moved cleaning device **147**, the compressed air cylinder **147***a* of which is pivotally mounted in the bearing **147***a***1** on the supporting bench **142** and is supported by its face**147***a***2** on the lifting rod linkage **147***e***3** and **147***e***4**, which is represented diagrammatically in a simplified form. Rotatably mounted on the guide plate **142***b* is an axle **142***e***1** on which rests a lever **142** *e***2** which is operated by way of the stop ring **142***e***3** by the piston rod **142***d*. Fixed on the other side of the axle **142***e***1** is a lever **142***e***4** against which the rod **147***e***4** is braced.

The cleaning tool **147***c* is disposed on a bent-over extension of the piston rod **147***b*. Fixed to the cylinder **147***a* is a gliding runner **147***a***3** which co-operates with the brake rod **149**. When a thread breaks the spinning turbine **141** is opened by the thread feeler **145** (FIG. **15**) operating the control valve **146** for the compressed air cylinder **142***b***1**, through a control pipeline **145***a* shown in FIG. **16**, as a result of which the spinning turbine is lowered into the position represented in FIG. **15**. The valve **146** can also be actuated by the hand lever **146***c* shown by the dash-dot line in FIG. **15**. During the lowering, the cylinder **147***a* of the cleaning apparatus **147** is swung by the control rod linkage **147***e***3**, represented diagrammatically, so that the piston rod **147***b* controlled by the valve **146***a* pushes the cleaning tool **147***c* into the cleaning position, (FIG. **15**). In this process a certain time lag is effected for this inserting in relation to the lowering of the spinning turbine by means of the appropriately constructed valve **146**, the delay period of which is adjustable. Towards the end of the swinging movement of the cylinder **147***a*, the runner **147***a***3** presses against the brake rod **149** so that the brake shoe **149***a* fixed thereto lightly brakes the turbine.

To obtain a more powerful cleaning action it is possible to provide a sprinkler nozzle **147***f* disposed in the guide chamber **144**, to sprinkle or spray a cleaning fluid into the turbine **141**, or on to the tool **147***c* (FIG. **15**). The supply line to this sprinkler nozzle is connected to a common line **147***f***1** for a group of spinning devices. The dirt can be removed from the withdrawn tool **147***c* by a hand tool, mechanically or by suction or blowing. It is also possible, however, as shown in FIG. **14**, to carry out this removal automatically by a suction nozzle **148***a* associated with each spinning device and connected to a common suction tube **148**. Further suction nozzles, not shown in the drawing, can be disposed on this suction tube for the purpose of cleaning other parts of the spinning device.

The diagrammatic switch system for fully automatic opening, cleaning and thread joining in FIG. **16** shows the principal circuitry. Associated with each spinning device is a switch box **145***k*. The compressed air pipelines are shown by dash-dot lines. By way of the electric lead **145***a*, to which current is conducted from the lead **145***h*, the thread feeler **145** trips the operation of the valve **146**, whereupon the turbine descends. At the same time, through the electric lead **145***b* which is controlled by the valve **146**, the valve **146***a* is operated as a result of which the cleaning apparatus is moved into the turbine. As soon as the turbine descends the expander roll **143***a* (see FIG. **15**) is raised a little from the belt **143** (FIG. **14**) by means which are not illustrated, so that the turbine is partially or completely stopped. In addition the turbine is braked by the brake shoe **149***a*. The rotating parts accommodated in the guide chamber **144** are also stopped, by means which are not illustrated. After a definite period of time, as required for the cleaning, the valve **146** is reversed automatically so that the turbine is moved upwards and the cleaning apparatus is returned to its rest position. As the turbine is closed, the parts which had been stopped in the guide chamber and the turbine are started up again. A returning device, which is not illustrated, automatically inserts the end of the thread in the guide chamber, or the spinning chamber, as a result of which the thread is joined on again. The suction mechanism **148**, **148***a* cleans the withdrawn cleaning tool **147***c*.

To make it possible to open a group of spinning devices at the same time, individual leads **145***f* run from the central control lead **145***c* which is operated by a central switch **145***d*, for example by way of a timing clock **145***e*; the lead **145***g* acts as the current return line. When the switch **145***d* is operated the current pulses needed for the opening of the turbine pass along these leads to the valves **146**.

What we claim is:

1. A spinning device for spinning threads from fiber material by the open-end method comprising a spinning turbine having an open side for spinning said threads, guiding elements for supplying said fiber material to said open side of said spinning turbine, said guiding elements being movable relative

to said spinning turbine to render said open side of said spinning turbine accessible from the outside, displacement means for effecting the relative movement of said guide elements and said spinning turbine, and control members for actuating said displacement means responsive to a predetermined event or time.

2. A spinning device according to claim 1 wherein said control members include a device for monitoring the due spinning process.

3. A spinning device according to claim 2 wherein said control members include a thread break sensor.

4. A spinning device according to claim 2 wherein said control members include a thread testing head.

5. A spinning device according to claim 1 wherein the control members of a group of spinning devices are concurrently actuatable.

6. A spinning apparatus according to claim 1 which further comprises manually operable control means for actuating said displacement means.

7. A spinning device according to claim 1 which further comprises cleaning means for cleaning said spinning turbine, said cleaning means adapted to be inserted into said open side of said spinning turbine when said spinning turbine is displaced from said guiding elements.

8. A spinning device according to claim 7 which further comprises drive means responsive to the relative movement between said spinning turbine and said guiding elements for actuating said cleaning means.

9. A spinning device according to claim 7 which further comprises a guide chamber which accommodates said guiding elements, said cleaning means being disposed on said guide chamber.

10. A spinning device according to claim 7 which further comprises a bearing body for accommodating the mounting of said spinning turbine, said cleaning device being disposed on said bearing body.

11. A spinning device according to claim 7 further comprising fluid supply means for wetting said cleaning means with a cleaning fluid.

12. A spinning device according to claim 11 wherein a plurality of fluid supply means for a plurality of spinning devices are connected to a common fluid containing means.

13. A spinning device according to claim 7 further comprising fluid supply means for directly feeding cleaning fluid to said spinning turbine.

14. A spinning device according to claim 13 wherein a plurality of said fluid supply means for a plurality of spinning devices are connected to a common fluid containing means.

15. A spinning device according to claim 7 further comprising deceleration means for braking said spinning turbine, said deceleration means being operatively associated with said cleaning means.

16. A spinning device according to claim 7 further comprising removal means for removing dirt and fiber particles collected by said cleaning means, said removal means being operatively associated with said cleaning means.

17. A spinning device according to claim 16 wherein a plurality of said removal means for a plurality of spinning devices are connected to a common discharge line.

18. A spinning device according to claim 16 further comprising driving means for actuating said removal means, driving means for actuating said cleaning means and control elements for synchronously operating both of said driving means.

19. A spinning device according to claim 18 wherein said control elements are adjustable to determine the duration of the operation of both of said driving means.

20. A spinning device according to claim 7 further comprising thread detection means for sensing an interruption in the spinning process and a thread returning means for returning thread to said thread detection means, and wherein said control members are operatively associated with said thread detection means, said thread returning means, said spinning turbine, said guiding elements and said cleaning means so that upon interruption of said spinning process, said control members actuate said displacement means to separate said spinning turbine and said guiding elements, at least partially stop said spinning turbine and said guiding elements, actuate said cleaning means causing the same to be introduced into said spinning turbine and activate said thread returning means to return thread to said thread detection means, which is sensed by said control members to cause the withdrawal of said cleaning means from said spinning turbine, the closure of said spinning turbine and the restarting of said spinning turbine and said guiding elements.

21. A spinning device according to claim 7 further comprising thread detection means for sensing an interruption in the spinning process and a thread returning means for returning thread to said thread detection means, and wherein said control members are operatively associated with said thread detection means, said thread returning means, said spinning turbine, said guiding elements and said cleaning means so that upon interruption of said spinning process, said control members actuate said displacement means to open said spinning turbine, at least partially stop said spinning turbine and said guiding elements, actuate said cleaning means for cleaning said spinning turbine, withdraw said cleaning means, close said spinning turbine and actuate said thread returning means to return said thread to said thread detection means, which, in turn, is sensed by said control members which restart said spinning turbine and said guiding elements.

22. A spinning device according to claim 7 further comprising thread returning means for returning thread to said guide elements or said spinning turbine, and wherein said control members are operatively associated with said thread returning means, said spinning turbine, said guiding elements and said cleaning means so that upon interruption of said spinning process, said control members actuate said displacement means to open said spinning turbine, at least partially stop said spinning turbine and said guiding elements, actuate said cleaning means to clean said spinning turbine and withdraw the same thereafter, actuate said displacement means to close said spinning turbine, restart said spinning turbine, actuate said thread returning means to return thread to said guide elements or said spinning turbine, and start said guiding elements.

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