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(54) A method of weft picking on a weaving machine and a picking device for carrying out the method

(57) The invention relates to a method of weft (2) picking on a weaving machine comprising the shaping of the weft (2) to a U-shaped loop with two straight sections and a bend (20) situated transversely to the pick direction and to the directing of the weft (2) into pick means whereupon the weft (2) is set in motion in the pick direction and during its motion through the pick channel (30) one of its straight sections is stopped and the U-shaped loop weft (2) is continuously evolved due to the shortening of the other of its straight sections while the weft (2) in the shed (41) gets straighter and straighter until it is completely straight and its free end is situated outside the shed (41) whereupon the straightened weft (2) is beaten-up to the edge of the fabric being produced. The weft (2) adapted to a U-loop shape is acted upon by at least one stream of a picking medium oriented into the pick channel (30) and acting in particular on the bend (20) of the U-loop shaped weft (2) which is under this action carried through the pick channel (30) and carries with itself also the two straight sections of the U-loop shaped weft (2) as far as the stop of one of the straight sections of the U-loop shaped weft (2) whereupon the bend (20) of the U-loop shaped weft (2) shifts along the other, free straight section of the U-loop shaped weft (2) in the direction of (towards) the free end of the U-loop shaped weft (2), thus obtaining the increase in the weft (2) pick speed and improving the acceleration stage of the weft (2) pick.

The invention relates also to a picking device for carrying out the method on a jet loom comprising a chief picking jet (1) and related thereto a weft (2) metering member (6) with a weft supply (60) for the weft thread, the pick outlet (10) of the chief picking jet (1) being oriented in the pick direction. In parallel with the chief picking jet (1) there is arranged an auxiliary picking jet (7) with reversible operation and the picking device contains a reversing member (71) for the weft (2) whose weft (2) reversing channel (710) is adapted to be related with one of its ends to the pick outlet (10) of the chief picking jet (1), and with the other of its ends, to the suction inlet - pick outlet (70) of the auxiliary picking jet (7).

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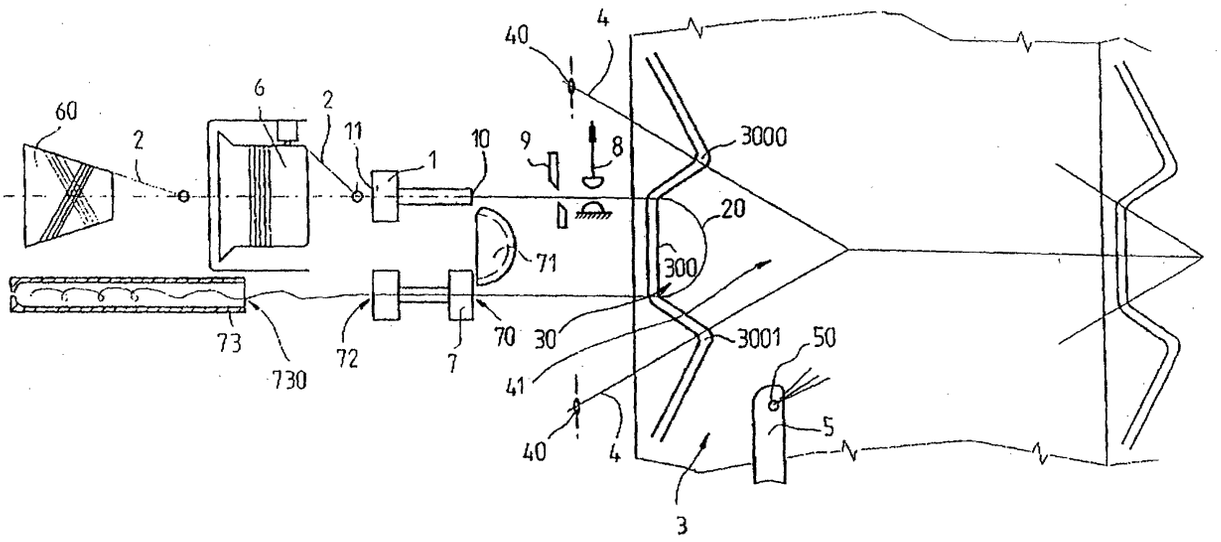
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Fig. 1a

Description

Technical field

[0001] The invention relates to a method of weft picking on a weaving machine comprising the shaping of the weft to a U-shaped loop with two straight sections and a bend situated transversely to the pick direction and to the directing of the weft into pick means whereupon the weft is set in motion in the pick direction and during its motion through the pick channel one of its straight sections stops and the U-shaped loop is continuously evolved due to the shortening of the other of its straight sections while the weft in the shed gets straighter and straighter until it is completely straight and its free end is situated outside the shed whereupon the straightened weft is beaten-up to the edge of the fabric being produced.

[0002] The invention relates also to a picking device for carrying out the method on a jet loom comprising a chief picking jet and related thereto a weft metering member with a weft supply for a weft thread in which the pick outlet of the chief picking jet is oriented in the pick direction.

Background of the invention

[0003] In the weft pick through the shed of a jet loom, the pick speed is an important parameter influencing the resulting weaving speed. The speed of the weft pick through the shed depends among others on the size of the weft surface surrounded by the streaming medium and on the coefficient of streaming.

[0004] In the practice, the size of the weft surface surrounded by the streaming medium is increased by the series arrangement of ejector picking jets through which the whole weft passes step by step. However, the series arrangement of the ejector picking jets is unfavourable especially because of the high expenditure of work required for the manufacture of such jets and also because the pick speed of the weft passing through such arranged jets is inferior to the sum of the speeds at which the weft pick passes through the jets.

[0005] The coefficient of the surrounding streaming depends in particular on the weft material and dimensions, i.e., on parameters that for a given weft (weaving material) cannot be influenced. The present-day picking devices of the jet looms use the weft shaped as a straight line coaxially introduced into an ejector picking jet. However, the coefficient of streaming of the streaming medium along the straight weft is very small. The efficiency and speed of the weft pick on jet looms can be increased by applying a number of auxiliary jets intended to bring pressure air into the pick channel. In spite of this, both the weft pick speed and the acceleration stages of the weft pick on present-day jet looms are limited and thus limiting the top weaving speed obtainable.

[0006] The patents GB 981 280, CH 503 134, and GB 1 221 523 disclose the pick of a U-loop shaped weft by mechanical picking means in which the weft preparation for the pick includes the steps of providing a sufficient weft supply, imparting the U-loop shape to the weft, and directing the weft into mechanical picking means. The mechanical picking means move then towards the open shed and thus impart the required energy to the weft which then moves further through the shed and at the same time evolves form the U-loop shape into a straight line shape in which it is beaten-up against the edge of the fabric in process of formation.

[0007] The chief drawback of these solutions consists in the mechanical picking means which are considerably complicated, highly exacting on the precision and quality of make, and accordingly expensive. Their complicatedness results in high requirements put on their maintenance and repairs. Another drawback consists in the relatively high weight of the moving sections of the mechanical picking means generating inertia forces and adding to the generation of machine oscillations and to the increased strain exerted on the machine. The mechanical picking means impart to the weft a relatively low speed and have due to their weight only a limited acceleration capacity leading to their relatively low efficiency and considerably limiting the top obtainable performance of the whole machine. Besides, it does not permit to pick heavy and/or long wefts and limits the application of weaving machines equipped with such picking device with relatively heavy and/or considerably wide fabrics.

[0008] The invention aims at increasing the weft pick speed and improving the acceleration stage of the weft pick so as to permit to increase the weaving speed and/or to improve the pick parameters or at all to permit to pick heavy and/or long wefts.

Principle of the invention

[0009] The goal of the invention has been reached by a method of weft pick on a weaving machine whose principle consists in that the weft adapted to a U-loop shape is acted upon by at least one stream of a picking medium oriented into a pick channel and acting in particular on the bend of the U-loop shaped weft which is under this action carried through the pick channel and carries with itself also the two straight sections of the U-loop shaped weft as far as the stop of one of the straight sections of the U-loop shaped weft whereupon the bend of the U-loop shaped weft shifts along the other, free straight section of the U-loop shaped weft in the direction of (towards) the free end of the U-loop shaped weft, thus obtaining the increase in the weft pick speed and improving the acceleration stage of the weft pick.

[0010] The advantage of this increase in the speed of the weft pick through the shed of the weaving machine and of the improvement in the acceleration stage of the weft pick consists in that it permits to increase the weav-

ing speed and/or to improve the parameters of the weft pick through the shed and/or permits the pick of heavy and/or long wefts on jet looms.

[0011] To improve the weft pick through the pick channel, the stream of the picking medium acts on at least one straight section of the U-loop shaped weft, thus brings this U-loop shaped weft section in motion while at the same time the stream of of the picking medium streaming along this straight section of the U-loop shaped weft acts on the bend of the U-loop shaped weft.

[0012] To increase still more the effect of the stream of the picking medium on the bend of the U-loop shaped weft, the stream of the picking medium acts simultaneously on both straight sections of the U-loop shaped weft.

[0013] If the weft pick on a jet loom is carried out on a pneumatic loom, it is advantageous for the further improvement in the pick parameters in the U-loop shaped weft if the U-loop shaped weft, while passing through the pick channel, is acted upon by pressure air streams coming from supporting jets arranged along the pick channel.

[0014] It is also advantageous if the stream of the picking medium acts directly on the bend of the U-loop shaped weft.

[0015] For the formation of the U-loop shaped weft it is advantageous if the U-loop shaped weft is arranged by the introduction of the free front end of the weft from the weft metering member from behind into a unidirectional chief picking jet which transports the weft into the area in front of the pick outlet of said unidirectional chief picking jet. From there, the free front end of the weft thread is introduced from the front side into a reverse auxiliary picking jet, and the U-loop shaped weft ready to be picked is thus created.

[0016] To reach a sufficient weaving speed depending on the speed of the weft preparation for the pick, it is advantageous if after the stop of one straight section of the U-loop shaped weft the weft thread is gripped (clamped) in the sub-section between the pick channel and the unidirectional chief picking jet and then trimmed between the gripping point and the unidirectional chief picking jet whereupon the newly created free front end of the weft thread whose supply is simultaneously set free is introduced by the unidirectional chief picking jet from the front side into the reverse auxiliary jet thus forming a new U-loop shaped weft ready to be picked.

[0017] The principle of the picking device for carrying out the method on a jet loom consists in that in parallel with the chief picking jet there is arranged an auxiliary picking jet with reversible operation and that the picking device contains a weft reversing member whose weft reversing channel is adapted to be related with one of its ends to the pick outlet of the chief picking jet, and with the other of its ends, to the suction inlet - pick outlet of the auxiliary picking jet.

[0018] The picking device of a jet loom arranged in this manner is sufficiently productive, reliable, and easy to manufacture.

[0019] The weft reversing member preferably consists of a stationary and a moving part, the moving part serving as a wall of the weft reversing channel on the side adjacent to the reed, and is coupled with a shifting device, while the stationary part of the weft reversing member comprises a system of supporting jets oriented with their supporting medium outlets in the direction of the weft reversing channel from the chief picking jet to the auxiliary picking jet.

[0020] This construction of the weft reversing member is reliable and easy to manufacture, operate and maintain.

[0021] To eliminate any problems with the weft supply behind the auxiliary picking jet, it is advantageous if an auxiliary weft container is situated behind the auxiliary picking jet.

Description of the drawings

[0022] The invention is schematically shown in the drawing in which Fig. 1a is one of the possible embodiments of the picking device of a pneumatic weaving machine as viewed from the front side of the reed at the stage shortly after the pick start, Fig. 1b the device of Fig. 1 at the stage shortly before the pick end with the full evolution of the U-loop shaped weft, Fig. 2a one of the possible specific embodiments of the weft reversing member, Fig. 2b a section of the weft reversing member of Fig. 2a in the direction A, and Fig. 3 the force of the picking medium acting on the weft during the weft pick according to the invention.

Examples of embodiment of the invention

[0023] The invention will be described on a pneumatic weaving machine. It can be applied analogically also to hydraulic weaving machines.

[0024] The picking device of the pneumatic weaving machine comprises a chief picking jet **1**. Situated in front of a sucking inlet **11** of the chief picking jet **1** is a metering member **6** of a weft **2** preceded by a weft supply **60** for producing the weft **2**. The chief picking jet **1** is with its pick outlet **10** situated in the pick direction of the weft **2** through a pick channel **30** of a reed **3** of the weaving machine.

[0025] The reed **3** consists of a number of dents **300** situated next to each other. On the front side of the reed **3**, each dent **300** contains an upper nose **3000** and a lower nose **3001**, and these upper noses **3000** and lower noses **3001** of the dents **300** constitute a pick channel **30** along the length of the reed **3**. Between the neighbouring dents **300** there are provided gaps for letting pass warp threads **4** from the rear side of the reed **3** to the front side of the reed **3** . The warp threads **4** pass behind the reed **3** through eyes **40** of well-known not represented healds seated in well-known not represented healdframes. The up and down movement of the

healdframes separates the warp threads **4** involved into an upper and a lower part of a shed **41**. The pneumatic weaving machine can be equipped with a number of supporting jets **5** that can be adapted to move between their pick position in which their outlet apertures are directed into the pick channel **30** and (between) their beat-up position in which they are arranged out of contact both with the other parts of the weaving machine and with the fabric in process of formation.

[0026] Situated under, and in parallel with, the chief picking jet **1,** is an auxiliary picking jet **7** whose sucking inlet - pick outlet **70** is directed into the pick channel **30.** The auxiliary picking jet **7** is a reverse jet adapted both to pick the weft **2** in the same direction as the chief picking jet **1** and to transport the weft **2** in the direction opposite the pick direction. The auxiliary picking jet **7** can, for instance, contain a pair of ejector jets situated opposite each other, or a combination of opposite each other situated ejector jet and sucking off jet with the application of the wall phenomenon, or it can be made in another suitable manner. The auxiliary picking jet **7** can be connected to a pressure air source variantly so as to control the direction of the feed of the weft **2** in the auxiliary picking jet **7** either in the pick direction or opposite the pick direction. On the side of the auxiliary picking jet **7** opposite its sucking inlet-pick outlet **70** there is provided its sucking outlet - pick inlet **72** having related thereto an inlet **730** of an auxiliary container **73** of the weft **2.**

[0027] Between the pick outlet **10** of the chief picking jet **1** and the sucking inlet - pick outlet **70** of the auxiliary picking jet **7** there is situated a reversing member **71** for the weft **2.** The reversing member **71** for the weft **2** contains a reversing channel **710** for the weft **2** whose ends are adapted to be located in relation to the pick outlet **10** of the chief picking jet **1** and to the sucking inlet - pick outlet **70** of the auxiliary picking jet **7.**

[0028] In the example of embodiment shown in Figs. 2a, 2b, the reversing member **71** for the weft **2** consists of a stationary part **711** and a moving part **712** which together form the reversing channel **710** for the weft **2,** the moving part **712** of the reversing member **71** for the weft **2** serving as the lateral wall of the reversing channel **710** for the weft **2** on the side of the reed **3** by which the reversing channel **710** for the weft **2** opens and closes on the side of the reed **3**. A first end **7100** of the reversing channel **710** for the weft **2** is in the closed position of the moving part **712** of the reversing member **71** for the weft **2** situated in the area of the pick outlet **10** of the chief picking jet **1** while the other end **7101** of the reversing channel **710** for the weft **2** is in this position situated in the area of the sucking inlet - pick outlet **70** of the auxiliary picking jet **7**.

[0029] Before the pick of the weft **2**, the moving part **712** of the reversing member **71** for the weft **2** moves downwards as shown by the dash line in Fig. 2a and thus opens the reversing channel **710** for the weft **2** on the side adjacent to the reed **3** and permits the passage of the bend **20** of the weft **2** from the up to then closed reversing channel **710** for the weft **2** into the pick channel **30**. The reversing member **71** for the weft **2** is fitted with supporting jets **713** whose outlets of the supporting medium, represented in pneumatic weaving machines by pressure air, are directed in the direction of the reversing channel **710** for the weft **2** from the chief picking jet **1** to the auxiliary picking jet **7**. In the shown example of embodiment, the lateral wall of the reversing channel **710** on the side remote from the reed **3** is hollow and this cavity works as an inlet channel **714** for the pressure air whose wall between the inlet channel **714** for pressure air and the reversing channel **710** for the weft **2** is fitted with apertures slanting from the chief picking jet **1** to the auxiliary picking jet **7** as shown in Fig. 2b. These apertures work as the supporting jets **713**. The inlet channel **714** for pressure air is coupled with a well-known not represented pressure air source by means of an inlet tube **715**.

[0030] The weaving machine is also equipped with a clamp **8** for gripping one straight section of the U-loop shaped weft **2** and with scissors **9** for trimming the weft thread between the clamp **8** and the metering member **6** for the weft **2.** In the shown example of embodiment, the clamp **8** is situated between the pick outlet **10** of the chief picking jet **1** and the pick channel **30** of the reed **3,** and the scissors **9** are situated between between the pick outlet **10** of the chief picking jet **1** and the clamp **8.**

The device operates as follows:

[0031] The weft thread wound on the weft supply **60** in a well-known manner undergoes rewinding on the metering member **6** of the weft **2**, and the front end of the weft **2** is directed into the sucking inlet **11** of the chief picking jet **1**.

[0032] Between the pick outlet **10** of the chief picking jet **1** and the sucking inlet - pick outlet **70** of the auxiliary picking jet **7** there is situated the reversing member **71** for the weft **2**. The chief picking jet **1** receives pressure air whose speed is adapted to the required transport speed of the weft **2** at the stage of the U-loop shaped weft preparation. Said speed can be inferior to the pick speed of the pressure air. Due to this, the front end of the weft **2** is fed into the reversing channel **710** for the weft **2** through which it is fed further in front of the sucking inlet - pick outlet **70** of the auxiliary picking jet **7** and thus forms the U-loop shaped weft **2.** In the shown example of embodiment of the device, the motion of the weft **2** through the reversing channel **710** for the weft **2** is assisted by pressure air stream coming from the supporting jets **713**. As early as at this stage, pressure air of suitable speed coming from the auxiliary picking jet **7** sucks the bent section **2** and transports it into the auxiliary container **73** for the weft **2.** It is self-evident that not the whole weft **2** but approximately one half or another suitable portion of its length will pass through the reversing member **71** for the weft **2**. The weft **2** is now

with one of its ends situated on the metering member **6** for the weft **2** and passes through the chief picking jet **1**, and via the reversing member **71** for the weft **2** through the auxiliary picking jet **7** into the auxiliary container **73** for the weft **2** where its other end is situated. In this way, the reversing channel **710** has produced the U-loop shaped weft **2**.

[0033] The bend **20** of the weft **2** is then released in such a way that the weft **2** is set free to move towards the shed **41**. Also, the area in front of the pick outlets **10**, **70** of the two jets **1**, **7** is cleared so as to permit free motion of the two straight sections of the U-loop shaped weft **2**. In the shown device, this is achieved by that the moving section **712** of the reversing member **71** for the weft **2** is displaced downwards by the shifting device and thus opens the reversing channel **710** for the weft **2** in the direction of (towards) the reed **3** and thus sets free, on the one hand, the bend **20** of the weft **2** in the direction of the shed **41** and, on the other hand, the area in front of the pick outlets **10, 70** of the two jets **1, 7.**

[0034] After this setting free of the bend **20** of the weft **2** and of the area in front of the pick outlets **10, 70** of the two jets **1, 7,** the U-loop shaped weft **2,** and in particular its bend **20,** begins to be exposed to the action of the pick medium and thus set in motion in the direction of the shed **41.** In the shown device, the U-loop shaped weft **2** is set in motion in the direction of the shed **41** by introducing pressure air of pick speed into the chief picking jet **1** as well as into the auxiliary picking jet **7** in which latter the streaming direction has been in the meantime reversed as compared with that existing during the sucking in of the weft **2**. Due to this, each of the two jets **1**, **7** acts simultaneously on each of the two straight sections of the U-loop shaped weft **2** which both are thus thrown in the direction into the open shed **41**. A part of the pressure air stream coming from the two picking jets **1**, **7** is thus transmitted along the straight sections of the U-loop shaped weft **2** onto the bend **20** of the U-loop shaped weft **2** which shows a much more favourable coefficient of streaming along and in contact with the weft **2** so that the momentum transmission onto the weft **2** is much better, thus improving the initial stage of the pick by improving the acceleration stage of the pick and by reaching in a shorter time interval the pick speed of the weft **2** which pick speed itself also can be increased. After the short initial stage of motion of the U-loop shaped weft **2**, the bend **20** of the U-loop shaped weft **2** gets directly into the streams of the pick medium coming from the two jets **1**, **7** which, in addition to this, get mixed with each other at a given distance from the two jets. In this manner, the bend **20** of the U-loop shaped weft **2** is directly exposed to the two streams of the pick medium and the parameters of the pick of the weft **2** are thus further improved because the bend **20** of the U-loop shaped weft **2** is situated across the two pressure air streams coming from the two jets **1**, **7** with the ensuing increase in the energy transmission of the two pressure air streams on the weft **2** as a whole, increase in the pick speed of the weft **2** through the shed **41,** and reduction in the length of the time interval required for the acceleration of the weft **2** from the rest state to the pick speed. Fig. 3 shows the action of the pressure air streams coming from the jets **1, 7,** each on each of the two straight sections of the U-loop shaped weft **2** by one of the axial forces $\mathbf{F_1}$, $\mathbf{F_2}$, and the joint action of the pressure air streams coming from the two jets **1, 7** on the bend **20** of the U-loop shaped weft **2** by a third force $\mathbf{F_3}$ which depends on the aerodynamic action of the pressure air stream on the transverse surface of the weft **2** defined by the distance **D** between the two straight sections of the weft **2** and the thickness **d** of the weft **2.**

[0035] It is also possible to set the U-loop shaped weft **2** in motion by exposing to the pick medium stream for instance only one straight section of the U-loop shaped weft **2** or by exposing to it directly the bend **20** of the U-loop shaped weft **2**, or by combining the variants.

[0036] The start of the U-loop shaped weft **2** motion involves the simultaneous consumption of the supply of the weft **2** both on the metering member **6** of the weft **2** and in the auxiliary container **73** of the weft **2**. As soon as the supply of the weft **2** on the metering member **6** of the weft **2** is consumed the straight section of the U-loop shaped weft **2** wound from the metering member **6** of the weft **2** is stopped and clamped, in the shown example of embodiment with the clamp **8**, and then trimmed by the scissors **9** between the clamp **8** and the chief picking jet **1**. Due to its having been stopped, said straight section of the U-loop shaped weft **2** gets increased in length by the continuing motion of the bend **20** of the U-loop shaped weft **2** in the direction of the end of the shed **41** while the free straight section of the U-loop shaped weft **2**, picked by the auxiliary pick jet **7**, is shortened as shown in Figs. 1a and 1b. The whole U-loop shaped weft **2** completely evolves at the end of the shed **41** and thus straightens in a position in which the end of the weft **2** is situated behind the shed **41** outside the area in process of the fabric formation. During the pick, the motion of the weft **2** can be further supported by pressure air streams coming from the supporting jets **5,** likewise acting especially on the bend **20** of the U-loop shaped weft **2** and thus improving the pick of the weft **2.**

[0037] The trimming of the straight section of the U-loop shaped weft **2** with the scissors **9** in the area between the clamp **8** and the chief picking jet **1** creates a new weft thread situated between the scissors **9** and the pick outlet **10** of the chief picking jet **1** which is at the same time the front end of the new weft **2**. As soon as during the continuing motion of the weft just being picked through the shed **41**, the new weft **2** receives the form of the U-loop shaped weft **2**, in the shown device due to the above described action of the chief picking jet **1**, of the in the meantime again closed reversing channel **710** for the weft **2**, and of the auxiliary pick jet **7**. The U-loop shaped weft **2** prepared in this way is then ready for picking. During the preparation of the new weft

2, the weaving machine carries out the beat-up of the (first) weft **2** into the face of the fabric in process of formation. The completion of said beat-up operation is followed by the pick of the new U-loop shaped weft **2**.

Claims

1. A method of weft picking on a weaving machine comprising the shaping of the weft to a U-shaped loop with two straight sections and a bend situated transversely to the pick direction and to the directing of the weft into pick means whereupon the weft is set in motion in the pick direction and during its motion through the pick channel one of its straight sections is stopped and the U-shaped loop is continuously evolved due to the shortening of the other of its straight sections while the weft in the shed gets straighter and straighter until it is completely straight and its free end is situated outside the shed whereupon the straightened weft is beaten-up to the edge of the fabric being produced, **characterized by** that the weft (2) adapted to a U-loop shape is acted upon by at least one stream of a picking medium oriented into the pick channel (30) and acting in particular on the bend (20) of the U-loop shaped weft (2) which is under this action carried through the pick channel (30) and carries with itself also the two straight sections of the U-loop shaped weft (2) as far as the stop of one of the straight sections of the U-loop shaped weft (2) whereupon the bend (20) of the U-loop shaped weft (2) shifts along the other, free straight section of the U-loop shaped weft (2) in the direction of (towards) the free end of the U-loop shaped weft (2), thus obtaining the increase in the weft (2) pick speed and improving the acceleration stage of the weft (2) pick.

2. A method as claimed in Claim 1, **characterized by** that the stream of the picking medium acts on at least one straight section of the U-loop shaped weft (2), thus brings this U-loop shaped weft (2) section in motion while at the same time the stream of of the picking medium streaming along this straight section of the U-loop shaped weft (2) acts on the bend (2) of the U-loop shaped weft (2) thus improving the weft (2) pick through the pick channel (30).

3. A method as claimed in Claim 2, **characterized by** that the stream of the picking medium acts simultaneously on both straight sections of the U-loop shaped weft (2) thus increasing still more the effect of the stream of the pick medium on the bend (2) of the U-loop shaped weft (2).

4. A method as claimed in any of Claims 1 to 3 in which the pick medium consists of pressure air, **characterized by** that the U-loop shaped weft (2), while passing through the pick channel (30), is acted upon by supporting pressure air streams coming from supporting jets (5) arranged along the pick channel (30), thus still more improving the pick parameters of the U-loop shaped weft (2).

5. A method as claimed in any of Claims 1 to 4, **characterized by** that the stream of the picking medium acts directly on the bend od the U-loop shaped weft.

6. A method as claimed in any of Claims 1 to 5, **characterized by** that the U-loop shaped weft (2) is arranged by the introduction of the free front end of the weft from the weft (2) metering member (6) from behind into a unidirectional chief picking jet (1) which transports the weft (2) into the area in front of the pick outlet (10) of said unidirectional chief picking jet (1) from where the free front end of the weft thread is introduced from the front side into a reverse auxiliary picking jet (7) and the U-loop shaped weft (2) ready to be picked is thus created.

7. A method as claimed in any of Claims 1 to 6, **characterized by** that after the stop of one straight section of the U-loop shaped weft (2) the weft thread is gripped (clamped) in the sub-section between the pick channel (30) and the unidirectional chief picking jet (1) and then trimmed between the gripping point and the unidirectional chief picking jet (1) whereupon the newly created free front end of the weft thread whose supply is simultaneously set free is introduced by the unidirectional chief picking jet (1) from the front side into the reverse auxiliary jet (7) thus forming a new U-loop shaped weft (2) ready to be picked.

8. A picking device for carrying out the method as claimed in Claims 1 to 7 on a jet loom comprising a chief picking jet and related thereto a weft metering member with a weft supply for the weft thread, the pick outlet of the chief picking jet being oriented in the pick direction, **characterized by** that in parallel with the chief picking jet (1) there is arranged an auxiliary picking jet (7) with reversible operation and that the picking device contains a weft reversing member (71) for the weft (2) whose weft (2) reversing channel (710) is adapted to be related with one of its ends to the pick outlet (10) of the chief picking jet (1), and with the other of its ends, to the suction inlet-pick outlet (70) of the auxiliary picking jet (7).

9. A picking device as claimed in Claim 8, **characterized by** that the weft (2) reversing member (71) consists of a stationary part (711) and of a moving part (712), the moving part (712) of the weft (2) reversing member (71) serving as a wall of the weft (2) reversing channel (710) on the side adjacent to the reed (3) and coupled with a shifting device, while the sta-

tionary part (711) of the weft (2) reversing member (6) comprises a system of supporting jets (713) oriented with their supporting medium outlets in the direction of the weft (2) reversing channel (710) from the chief picking jet (1) to the auxiliary picking jet (7).

10. A picking device as claimed in any of Claims 8 and 9, **characterized by** that an auxiliary weft (2) container (73) is situated behind the auxiliary picking jet (7).

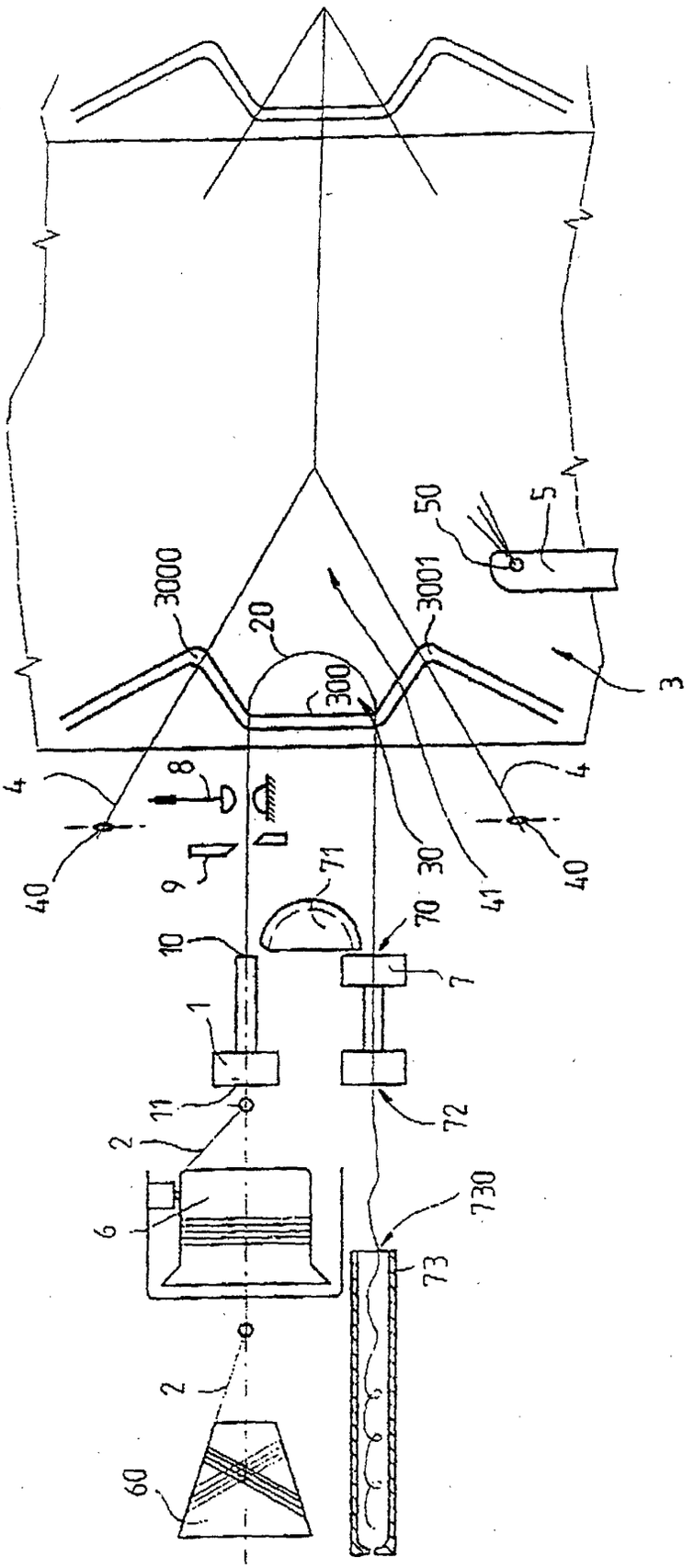

Fig. 1a

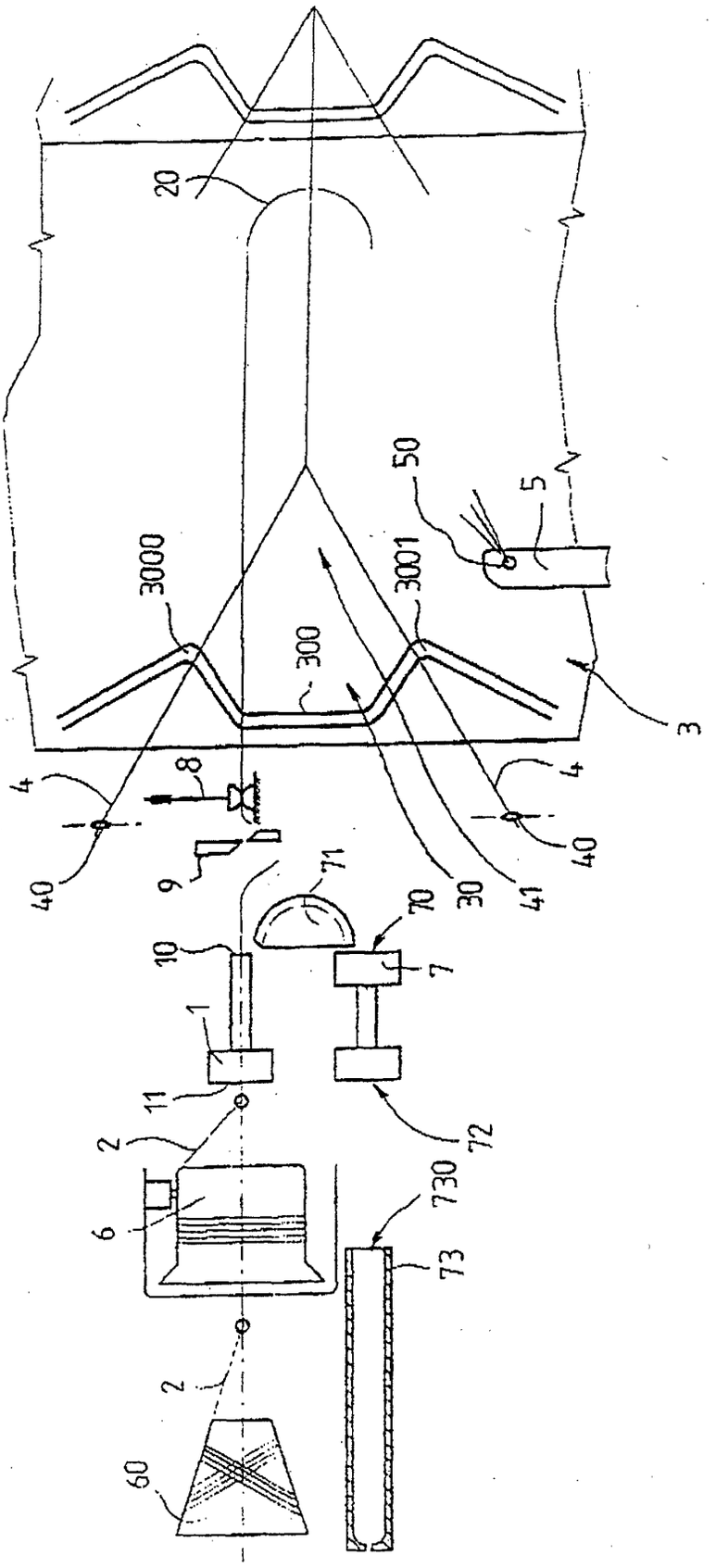

Fig. 1b

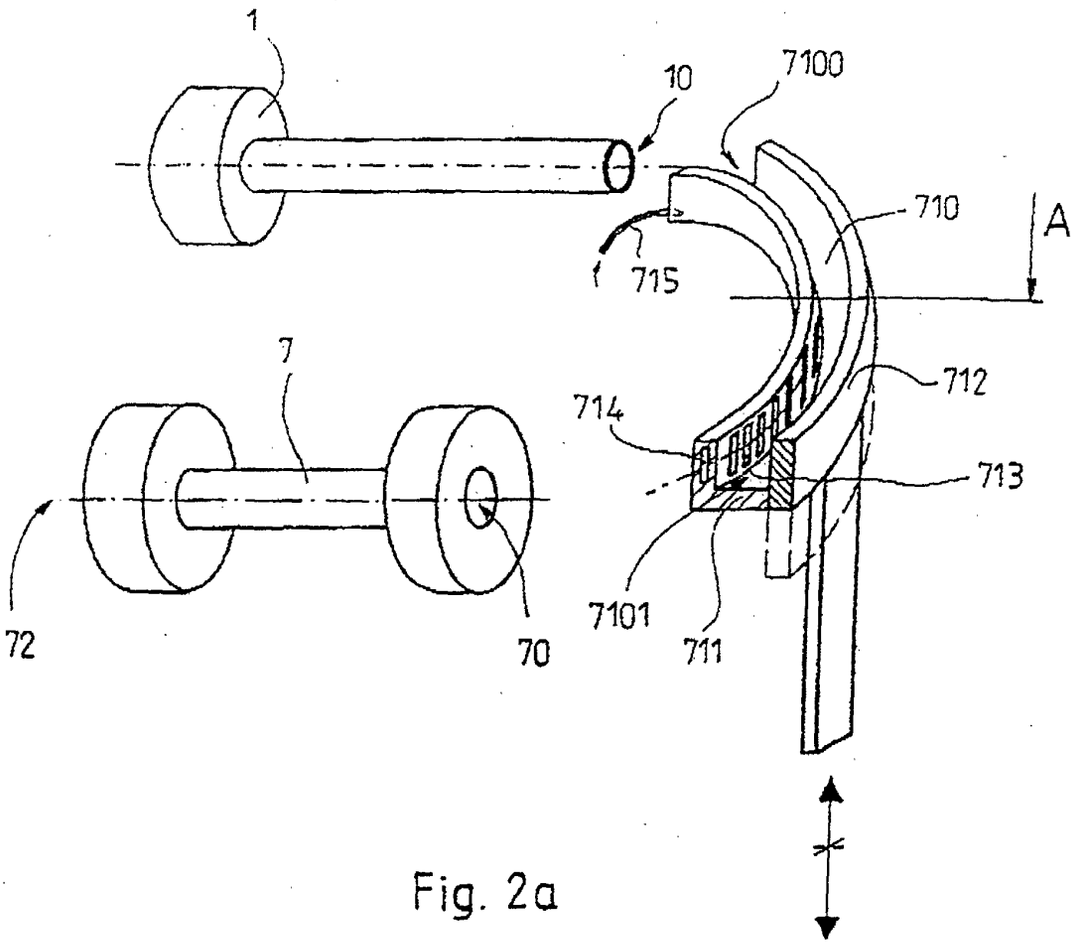

Fig. 2a

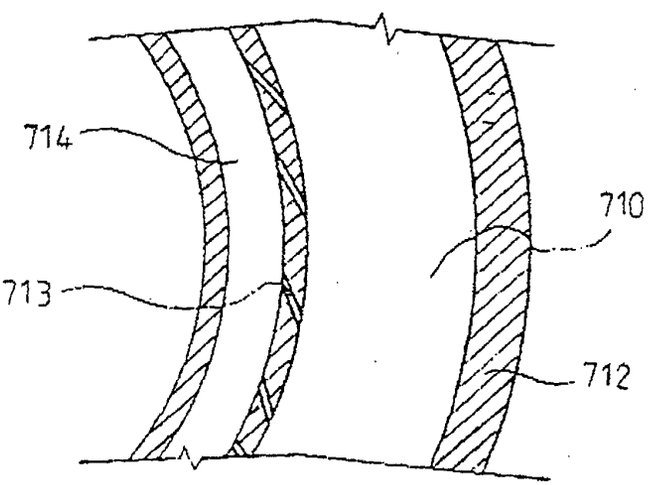

Fig. 2b

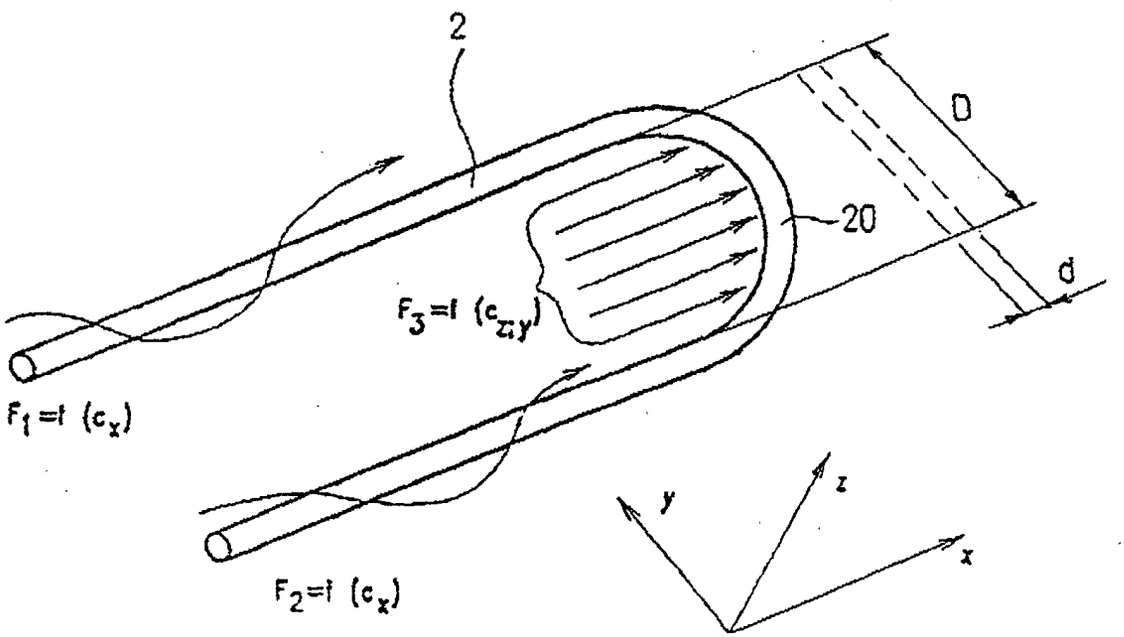

Fig. 3