

Search history

Search 1: PN=(WO/2016/066573) (Results 1)
Search 2: fn=(53328488 or 30053990 or 36887062 or 19778979 or 686897 or 26576351 or 30053990) (Results 6)
Search 3: PA=(LONATI SPA) (Results 156)
Search 4: heel (Results 185681)
Search 5: 3 and 4 (Results 39)

1) Family number: 1647170 (US4233823A)

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Title: Double-cylinder circular knitting machine

Abstract: A double-cylinder circular knitting machine with latch needles and a device for automatically causing the latches of the needles operating in the upper needle cylinder to open before knitting. The device comprises cams defining a path for the needle-free sliders of the lower needle cylinder which lies constantly all around the cam box at a level corresponding to that at which the tips of the sliders engage the latches of the rib needles to open them. The needle-free sliders are selectively passed into this path and are subsequently returned into the normal knitting path when knitting plain fabric. The arrangement of the continuous path at a constant level all around the needle cylinder allows a more simple configuration of the latchguard cams and less wear and stresses in the needle latches.

Classifications:

International (IPC 8-9): D04B15/32 D04B9/00

D04B9/10 (Advanced/Invention);

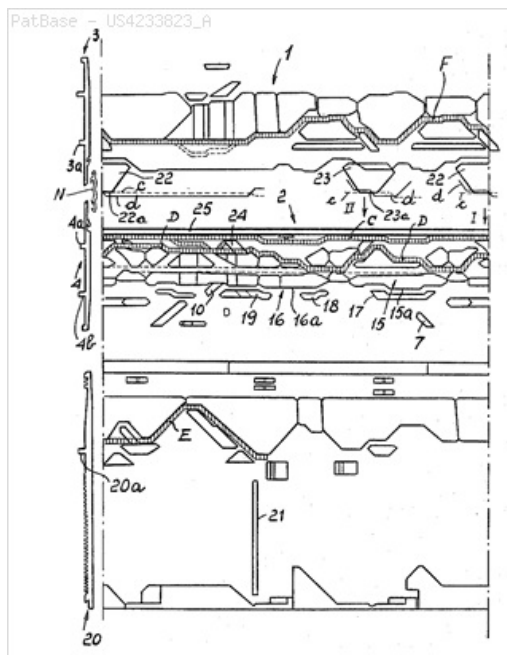
D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/08 D04B15/32 D04B9/00 D04B9/10

CPC: D04B9/10 D04B15/325

European: D04B15/32C D04B9/10

US: 66/111 66/14



Family:

Publication number	Publication date	Application number	Application date
DE2816738 A1	19781026	DE19782816738	19780418
GB1597862 A	19810916	GB19780015746	19780420
IT1113564 A	19860120	IT19770022714	19770421
JP53134955 A2	19781125	JP19780046738	19780421
US4233823 A	19801118	US19780894883	19780410

Priority:

IT19770022714 19770421

Probable Assignee: LONATI COST MECC

Assignee(s): (std): KOSUTORUTSUIONI MEKANIICHIERON ; LONATI COST MECC

Assignee(s): COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO AND FIGL ; COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI SPA

Inventor(s): (std): FURANSESUKO RONAATEI ; LONATI FRANCESCO

2) Family number: 1659347 (US4407145A)

© PatBase

Title: KNITWORK DRAWING DEVICE IN A DOUBLE CYLINDER CIRCULAR KNITTING MACHINE

Abstract: A knitwork drawing device which has a hollow piston rod movable axially through one of the needle cylinders in a double cylinder circular knitting machine, and a knitwork retaining member arranged at the height of the stitch-formation area and rotatable with the needle cylinders. The hollow piston rod is secured to a fluid-operated piston slidable in a cylindrical chamber coaxial with the needle cylinders. Tensioning of the knitwork is effected by leaving the hollow piston rod to rest on the knitwork being knitted, which is held at its initial portion by the retaining member internally of the hollow piston rod and by the needles which continue to knit externally of the hollow piston rod. The whole stroke of the piston and hollow piston rod is thus the half of the whole length of the knitwork and the axial dimension of the knitting machine is considerably reduced.

Classifications:

International (IPC 8-9): D04B15/78 D04B15/88

D04B15/92 (Advanced/Invention);

D04B15/00 D04B15/66 (Core/Invention);

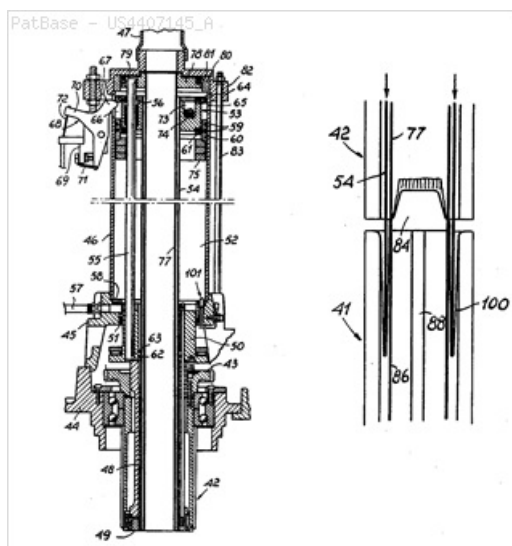
D04B (Subclass/Invention)

International (IPC 1-7): D04B15/88 D04B15/92 D04B9/10 D04B9/46

CPC: D04B15/92

European: D04B15/88

US: 66/14 66/149R 66/149S



Family:

Publication number	Publication date	Application number	Application date
CS216182 B2	19821029	CS19780004646	19780711
DE2829180 A1	19790125	DE19782829180	19780703
DE2829180 C2	19870625	DE19782829180	19780703
FR2397478 A1	19790209	FR19780020470	19780710
FR2397478 B1	19820219	FR19780020470	19780710
GB2001112 A1	19790124	GB19780029717	19780713
GB2001112 B2	19820512	GB19780029717	19780713
IT1084343 A	19850525	IT19770025773	19770714
IT1108735 A	19851209	IT19780021614	19780324
IT7821614 A0	19780324	IT19780021614	19780324
JP1432388 C3	19880324	JP19780084611	19780713
JP54023767 A2	19790222	JP19780084611	19780713
JP62033340 B4	19870720	JP19780084611	19780713
US4407145 A	19831004	US19780923416	19780710
US4516410 A	19850514	US19830463792	19830204

Priority:

IT19770025773 19770714 IT19780021614 19780324 US19780923416 19780710

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI COST MECC ; LONATI SPA ; KOSUTORUTSUIONI MEKANIICHIE RO

Assignee(s): LONATI S P A ; COSTRUZIONI MECCANICHE LONATI SPA ; RONAATEI SPA ; COSTRUZIONI MECCANICHE LONATI S P A IT ; LONATI A CORP OF ITALY SPA ; COSTRUZIONI MECCANICHE LONATI ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO AND FIGL ; COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI S P A BRESCIA IT

Inventor(s): (std): LONATI FRANCESCO ; FURANSESUKO RONAATEI

Inventor(s): LONATI FRANCESCO IT ; LONATI FRANCESCO BRESCIA IT

3) Family number: 18996573 (US4269044A)

© PatBase

Title: Circular knitting machine

Abstract: A circular knitting machine in which for switching from continuous rotary motion to reciprocating motion and vice versa there is provided a coupling member rotatively rigid with a shaft and axially displaceable between two pinions, idly arranged on the shaft. One pinion is constantly reciprocated by a reciprocable toothed sector, while the other pinion is constantly rotated. The coupling member is alternately engageable with a respective one of the pinions, so as to cause the shaft, which is operatively connected to the needle cylinder(s), to reciprocate or rotate. A control lever is pivoted to the stationary structure of the machine and has one end slideably engaging the coupling member and the other end slideably engaging two rotatable cams, which provide angular displacement of the control lever to cause axial displacement of the coupling member. The cams can be uncoupled from a cam driving shaft rotated by the main drive of the machine.

Classifications:

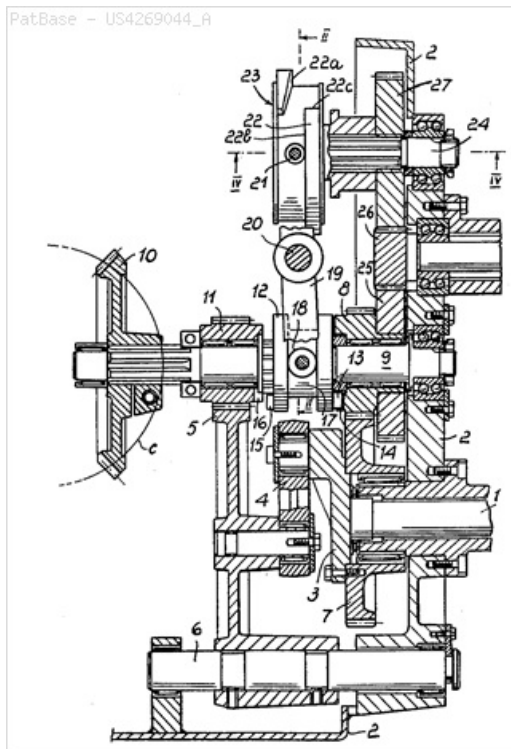
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International (IPC 1-7): D04B15/16 D04B15/32 D04B9/20 D04B9/46

CPC: D04B9/20

European: D04B9/20

US: 66/56

**Family:**

Publication number	Publication date	Application number	Application date
CS209808 B2	19811231	CS19790001857	19790321
DE2910552 A1	19790927	DE19792910552	19790317
DE2910552 C2	19860807	DE19792910552	19790317
FR2420586 A1	19791019	FR19790007316	19790322
FR2420586 B1	19840622	FR19790007316	19790322
GB2017161 A1	19791003	GB19790008921	19790314
GB2017161 B2	19820818	GB19790008921	19790314
IT1093488 A	19850719	IT19780021504	19780322
IT7821504 A0	19780322	IT19780021504	19780322
JP1480005 C3	19890210	JP19790031827	19790320
JP54142363 A2	19791106	JP19790031827	19790320
JP63017940 B4	19880415	JP19790031827	19790320
US4269044 A	19810526	US19790021536	19790319

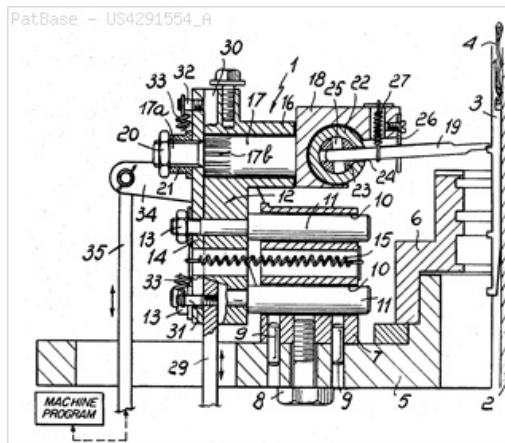
Priority:

IT19780021504 19780322

Probable Assignee: LONATI COST MECC**Assignee(s):** (std): COSTRUZIONI MECCANICHE LONATI ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO ; LONATI SPA ; LONATI COST MECC ; KOSUTORUTSUIOONI METSUKANIKE RONAATEI SPA**Assignee(s):** COSTRUZIONI MECCANICHE LONATI S P A IT ; COSTRUZIONI MECCANICHE LONATI SPA ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO AND FIGL ; COSTRUZIONI MECCANICHE LONATI DI LONATI FRANCESCO AND FIGLI ETTORE ; COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI S P A BRESCIA IT**Inventor(s):** (std): FRANCESCO LONATI ; FURANCHIESUKO RONAATEI ; LONATI FRANCESCO**Inventor(s):** LONATI FRANCESCO IT ; LONATI FRANCESCO BRESCIA IT**4) Family number: 1706299 (US4291554A)**

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Title: Device for changing the number of the needles at work in a circular knitting machine for stockings and like articles**Abstract:** The device for changing the number of the needles knitting in a circular knitting machine for stockings and like articles, comprises a single picker configured for operation in either directions of reciprocation of the needle cylinder or cylinders and arranged at that area where a conventional needle lowering picker is arranged. The single picker is rotatable through 180 DEG substantially about the longitudinal axis thereof for assuming respectively a position in which it operates as a needle raising picker and a position in which it operates as a needle lowering picker.**Classifications:****International (IPC 8-9):** D04B9/20 D04B9/46 (Advanced/Invention); D04B9/00 (Core/Invention)**International (IPC 1-7):** D04B1/26 D04B15/32 D04B9/20 D04B9/46 D05B**CPC:** D04B9/20**European:** D04B9/20**US:** 66/53

**Family:**

Publication number	Publication date	Application number	Application date
DE2912543 A1	19791004	DE19792912543	19790329
FR2421974 A1	19791102	FR19790008252	19790402
GB2018306 A1	19791017	GB19790011269	19790330
GB2018306 B2	19820915	GB19790011269	19790330
IT1093517 A	19850719	IT19780021923	19780403
IT7821923 A0	19780403	IT19780021923	19780403
JP54142361 A2	19791106	JP19790039398	19790403
US4291554 A	19810929	US19790024291	19790327

Priority:

IT19780021923 19780403

Probable Assignee: LONATI COST MECC**Assignee(s):** (std): KOSUTORUTSUIOONI METSUKANIKE R ; LONATI COST MECC ; LONATI SPA**Assignee(s):** LONATI S P A ; COSTRUZIONI MECCANICHE LONATI ; COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI SPA**Inventor(s):** (std): FURANCHIESUKO RONAATEI ; LONATI FRANCESCO**5) Family number: 2479022 (EP0026425A2)**

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Title: CONTROL DEVICE FOR A CIRCULAR KNITTING MACHINE, IN PARTICULAR A HOSE KNITTING MACHINE.

Abstract: The invention provides a circular knitting machine, in particular a single or double cylinder hose knitting machine, wherein various operations, such as the advancement of the main drum (2), speed changing, needle selection, movement of the stitch-adjusting unit (3), etc. are controlled by an electronic programming unit instead of the traditional main chain. The electronic programming unit programmatically controls a series of electro-mechanical transducers, preferably solenoid valves and pneumatic or hydraulic cylinders (12, 23), which determine the required movements of the machine operational members (2, 3). The programming unit is operative at each revolution of the machine to receive drive pulses from a revolution transducer. A considerable constructional simplification and adaptability of the machine to different knitting programs is thus achieved.

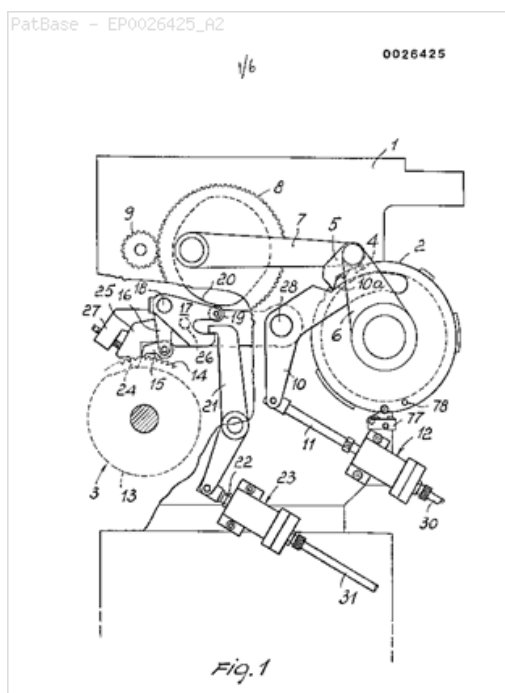
Classifications:**International (IPC 8-9):** D04B15/66 D04B15/74 D04B15/78

D04B15/99 D04B9/46 (Advanced/Invention);

D04B15/00 D04B15/66 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/78 D04B15/99 D04B9/46**CPC:** D04B15/66 D04B15/78**European:** D04B15/66 D04B15/78

0026425

**Family:**

Publication number	Publication date	Application number	Application date
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EP0026425 A2	19810408	EP19800105686	19800922
EP0026425 A3	19810513	EP19800105686	19800922
IT1123396 A	19860430	IT19790026157	19791001
IT7926157 A0	19791001	IT19790026157	19791001
JP56079745 A2	19810630	JP19800135369	19800930

Priority:

IT19790026157 19791001

Probable Assignee: COSTRUZIONI MECCANICHE LONATI SPA

Assignee(s): (std): KOSUTORUTSUIOONI METSUKANIKE R ; LONATI COST MECC

Assignee(s): COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI S P A ; COSTRUZIONI MECCANICHE LONATI SPA

Inventor(s): (std): FRANCESCO LONATI ; FURANCHIESUKO RONAATEI ; LONATI FRANCESCO

Designated states: DE FR GB

6) Family number: 18007389 (EP0129828A2)

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Title: DEVICE FOR PREVENTING SINKERS FROM PICKING UP YARN IN A DOUBLE CYLINDER CIRCULAR KNITTING MACHINE.

Abstract: To avoid yarn picking up by the sinkers associated with sliders being progressively deactivated while knitting the heel portion of a stocking article, the sliders (1), at the end thereof far from the needle engaging end, are formed with a notch (10). This notch is designed to engage the yarn (11) and raise it as the sliders (1) are lifted by the slider lifting pickers upon removal from knitting of the associated needles (9). The sliders (1) may be lifted to a position such that the notch (10) is brought above the hook (7) of the respective sinkers (6) which, accordingly, cannot engage with the yarn during the withdrawal phase. Thus, the bluff sinkers and related ears on the sliders for lifting the bluff sinkers can be eliminated, and the machine made simpler and less expensive to build, as well as less liable to give trouble from breakage of the ears and bluff sinkers.

Classifications:

International (IPC 8-9): D04B15/08 D04B9/10

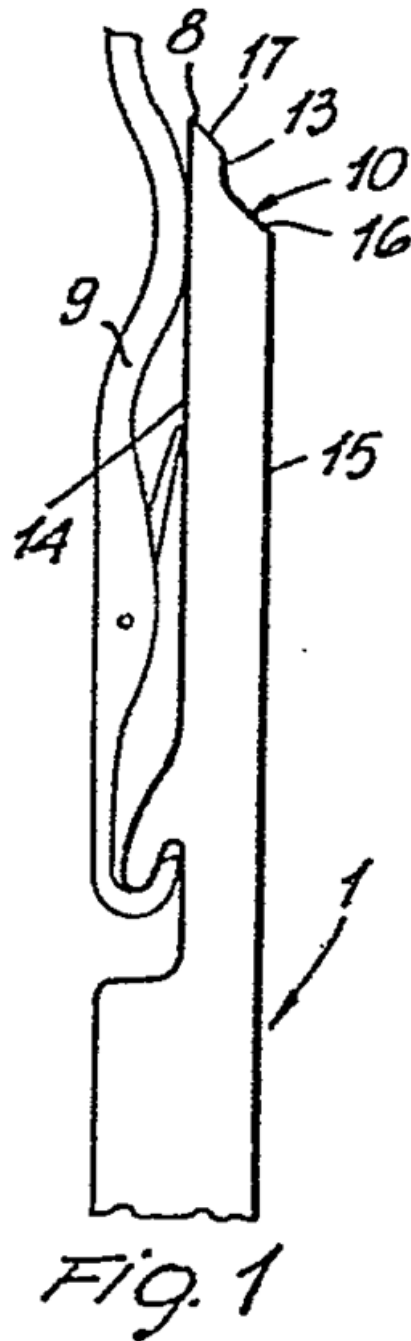
D04B9/56 (Advanced/Invention);

D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B9/10 D04B9/56

CPC: D04B9/10 D04B15/08

European: D04B15/08 D04B9/10

**Family:**

Publication number	Publication date	Application number	Application date
EP0129828 A2	19850102	EP19840107008	19840620
EP0129828 A3	19861015	EP19840107008	19840620
IT1163577 A	19870408	IT19830021749	19830622
IT8321749 A0	19830622	IT19830021749	19830622
JP60021948 A2	19850204	JP19840126549	19840621

Priority:

IT19830021749 19830622

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** RONAATEI SPA ; LONATI S P A**Inventor(s):** (std): FURANCHIESUKO RONAATEI ; LONATI FRANCESCO**Inventor(s):** FRANCESCO LONATI**Designated states:** DE FR GB

Abstract: The device comprises a plurality of superimposed selecting levers, individually pivoted in an intermediate portion thereof to a supporting structure and oscillatable in a plane substantially parallel to the extension of the plurality of selecting levers. The selecting levers are oscillatable from a first position, in which one of their ends is at a level which is intermediate between the heels of the selectors so as to avoid interfering therewith, to a second position, in which this end is at the level of the heels of the selectors, so as to interfere therewith and push the related selectors to an inoperative position. The other end of the selecting levers is shaped, at least for a portion, like a flat blade which extends in a plane substantially perpendicular to the extension of the plurality of selecting levers, the blade-like portion having its two opposite faces engaged with actuating levers for the oscillation of the selecting levers.

Classifications:

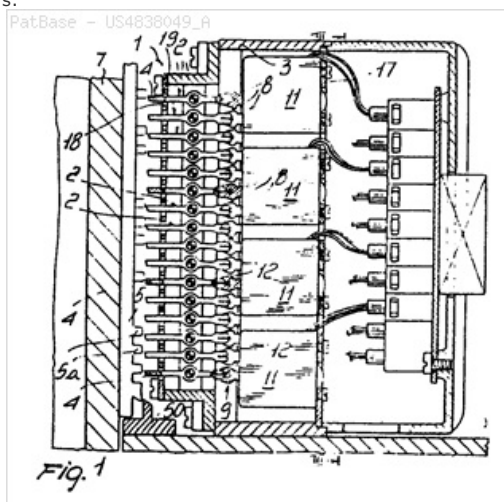
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International (IPC 1-7): D04B15/78

CPC: D04B15/78

European: D04B15/78

US: 66/221 66/222



Family:

Publication number	Publication date	Application number	Application date
CS266595 B2	19900112	CS19860007391	19861013
CS8607391 A2	19890414	CS19860007391	19861013
DE3670314 D1	19900517	DE19863670314	19861006
EP0219029 A1	19870422	EP19860113816	19861006
EP0219029 B1	19900411	EP19860113816	19861006
IT1185431 A	19871112	IT19850022465	19851014
IT8522465 A0	19851014	IT19850022465	19851014
JP62090357 A2	19870424	JP19860242169	19861014
US4838049 A	19890613	US19880188768	19880504

Priority:

IT19850022465 19851014 US19860916904 19861007

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA

Assignee(s): RONAAT SPA ; LONATI S P A ; LONATI S P A BRESCIA IT ; LONATI S P A IT

Inventor(s): (std): FURANCHIESUKO RONAATEI ; LONATI FRANCESCO

Inventor(s): LONATI FRANCESCO IT ; LONATI FRANCESCO I 25123 BRESCIA IT ; FRANCESCO LONATI

Designated states: DE FR GB

8) Family number: 6552537 (EP0224765A2)

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Title: CAM ASSEMBLY FOR CONTROLLING THE NEEDLES IN A CIRCULAR KNITTING MACHINE AND THE LIKE.

Abstract: The present invention relates to a cam assembly for controlling the needles in a circular knitting machine and the like, with at least one casting-off cam (6) at one feed of the machine. The cam assembly according to the invention has the peculiarity of comprising an auxiliary descent cam (13) arranged upstream of the casting-off cam (6) according to the direction of rotation of the machine and a descending portion (13a) which is engageable with an element (8) for controlling the needles which are not operating at said feed to carry the needle control element (8) below the descending portion (7) of the casting-off cam (6).

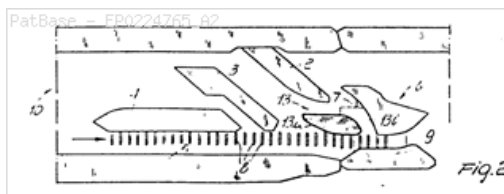
Classifications:

International (IPC 8-9): D04B15/32 (Advanced/Invention); D04B15/00 (Core/Invention)

International (IPC 1-7): D04B15/32

CPC: D04B15/32

European: D04B15/32



Family:

Publication number	Publication date	Application number	Application date
EP0224765 A2	19870610	EP19860115689	19861112
EP0224765 A3	19871021	EP19860115689	19861112
IT1186224 A	19871118	IT19850023048	19851202
IT8523048 A0	19851202	IT19850023048	19851202
JP62133159 A2	19870616	JP19860286106	19861202

Priority:

IT19850023048 19851202

Probable Assignee: LONATI SPA

Assignee(s): (std): BRESCIA A ; LONATI SPA
Assignee(s): LONATI S P A ; RONAAT SPA ; A BRESCIA
Inventor(s): (std): FURANCHIESUKO RONAATEI ; LONATI FRANCESCO
Inventor(s): FRANCESCO LONATI
Designated states: DE FR GB

9) Family number: 6557599 (US4718254A)

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Title: Twin-cylinder circular knitting machine with a perfected device for actuating the transfer sinker

Abstract: The machine comprises a plurality of selectors which are slideably accommodated in the grooves of the lower needle-bearing cylinder and act each with its upper end on a transfer sinker, or slider, for moving the matching needle. The machine has the peculiarity that in a same groove of the lower needle-bearing cylinder is accommodated, proximate to the upper end of the selector, a pusher element, controllably engageable with the lower end of the matching transfer sinker. The pusher element has the possibility of being operated independently from the selector accommodated in the same groove, since it is provided with a heel which is engageable in suitably defined tracks on the skirt of the cams of the lower needle-bearing cylinder.

Classifications:

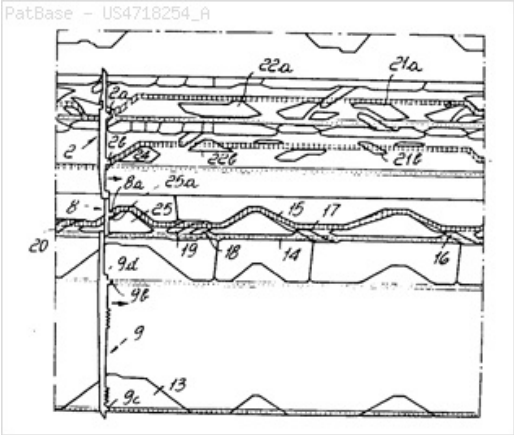
International (IPC 8-9): D04B15/32 D04B9/10 (Advanced/Invention)

International (IPC 1-7): D04B15/32 D04B9/10

CPC: D04B15/325

European: D04B15/32C

US: 66/14 66/222



Family:

Publication number	Publication date	Application number	Application date
CS8608840 A2	19880315	CS19860008840	19861202
CZ279052 B6	19941215	CS19860008840	19861202
DE3673964 D1	19901011	DE19863673964	19861112
EP0225502 A2	19870616	EP19860115688	19861112
EP0225502 A3	19871028	EP19860115688	19861112
EP0225502 B1	19900905	EP19860115688	19861112
IT1186223 A	19871118	IT19850023047	19851202
IT8523047 A0	19851202	IT19850023047	19851202
JP2531947 B2	19960904	JP19860286105	19861202
JP62133158 A2	19870616	JP19860286105	19861202
US4718254 A	19880112	US19860935920	19861128

Priority:

IT19850023047 19851202

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA

Assignee(s): RONAAT SPA ; LONATI S P A ; LONATI S P A BRESCIA IT ; LONATI S P A IT

Inventor(s): (std): FURANCHIESUKO RONAATEI ; LONATI FRANCESCO

Inventor(s): FRANCESCO LONATI ; LONATI FRANCESCO IT ; LONATI FRANCESCO I 25123 BRESCIA IT ; FURANCHIESUKO RONAATEI

Designated states: DE FR GB

10) Family number: 8416862 (EP0290897A2)

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Title: DEVICE FOR CONTROLLING THE SELECTORS IN A FOUR-FEED CIRCULAR KNITTING MACHINE FOR SOCKS AND STOCKINGS.

Abstract: The device comprises a ring cam (2) arranged around the needle cylinder at the lower ends of the selectors (4) and having an upper profile with rises (8) defining an ascending section (9) upstream of each machine feed and a descending section (10) downstream of each feed, according to the rotational direction of the needle cylinder with respect to the ring cam (2). Located upstream of each ascending section (9) is an extraction cam (12), which acts on the selectors (4) to extract their heels (4a) from the grooves of the needle cylinder so as to be selected by the selection levers (14). The extraction cam (12) is positioned so as to cause commencement of the exit of the heels (4a) from the relative grooves before the end of the descending section (10) of the ring cam (2) which has a recess (16) on its inner side to permit commencement of the extraction of the heels (4a).

Classifications:

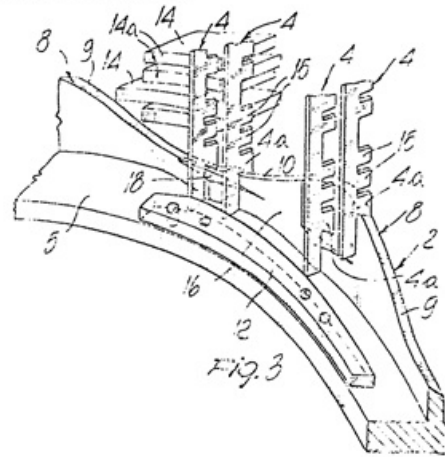
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D04B15/66 (Core/Invention)

International (IPC 1-7): D04B15/68 D04B15/82

CPC: D04B15/68

European: D04B15/68

**Family:**

Publication number	Publication date	Application number	Application date
EP0290897 A2	19881117	EP19880106992	19880501
EP0290897 A3	19900411	EP19880106992	19880501
IT1207078 A	19890517	IT19870020505	19870513
IT8720505 A0	19870513	IT19870020505	19870513
JP63288256 A2	19881125	JP19880113733	19880512

Priority:

IT19870020505 19870513

Probable Assignee:

LONATI SPA

Assignee(s): (std):

LONATI SPA

Assignee(s):

LONATI S P A

Inventor(s): (std):

LONATI FRANCESCO

Inventor(s):

FRANCESCO LONATI

Designated states:

DE FR GB IT

11) Family number: 19223943 (US4932226A)

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Title: Device for locking selectors on the bottom of needle cylinder grooves in circular knitting machines

Abstract: The device for locking selectors on the bottom of the needle cylinder grooves in circular knitting machines has a locking element which extends around the needle cylinder of the machine proximate to the lower end of the selectors, accommodated in the grooves of the needle cylinder. The locking element is controllably movable in a direction substantially parallel to the axis of the needle cylinder from an inoperative position, wherein the locking element is arranged substantially below the lower end of the selectors to allow the lower end of the selectors to perform an extraction movement from the related groove in a radial direction with respect to the needle cylinder, to an operative position, wherein at least one portion of the locking element is arranged above the lower end of the selectors for their retention in an inserted position in the related grooves, and vice versa.

Classifications:

International (IPC 8-9): D04B15/68 D04B15/82 (Advanced/Invention); D04B15/66 (Core/Invention)

International (IPC 1-7): D04B15/14 D04B15/66 D04B15/68 D04B15/82 D04B9/46

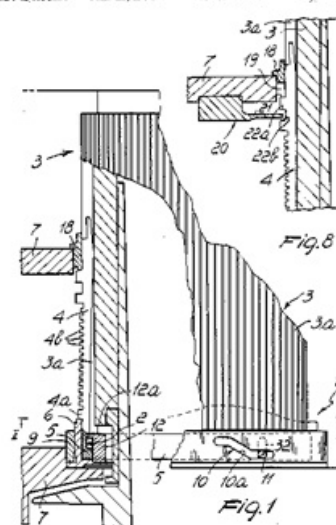
CPC: D04B15/68

European: D04B15/68

US: 66/222 66/8

PatBase - US4932226_A

U.S. Patent Jun. 12, 1990 Sheet 1 of 3 4,932,226



Family:

Publication number	Publication date	Application number	Application date
CS268200 B2	19900314	CS19880005649	19880817
CS8805649 A2	19890712	CS19880005649	19880817
DE3852240 D1	19950112	DE19883852240	19880808
DE3852240 T2	19950406	DE19883852240T	19880808
EP0303926 A2	19890222	EP19880112865	19880808
EP0303926 A3	19910807	EP19880112865	19880808
EP0303926 B1	19941130	EP19880112865	19880808
IT1222523 A	19900905	IT19870021684	19870820
IT8721684 A0	19870820	IT19870021684	19870820
JP1068549 A2	19890314	JP19880204875	19880819
JP2789471 B2	19980820	JP19880204875	19880819
JP64068549 A2	19890314	JP19880204875	19880819
US4932226 A	19900612	US19880230541	19880810

Priority:

IT19870021684 19870820

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI S P A IT ; LONATI SPA**Assignee(s):** RONAATEI SPA ; LONATI S P A MONZA MAILAND MILANO IT ; LONATI S P A**Inventor(s):** (std): LONATI FRANCESCO IT ; FRANCESCO LONATI ; LONATI FRANCESCO**Inventor(s):** LONATI FRANCESCO I 25100 BRESCIA IT ; FURANCHESUKO RONAATEI**Designated states:** DE FR GB**12) Family number: 23452189 (US5056339A)**

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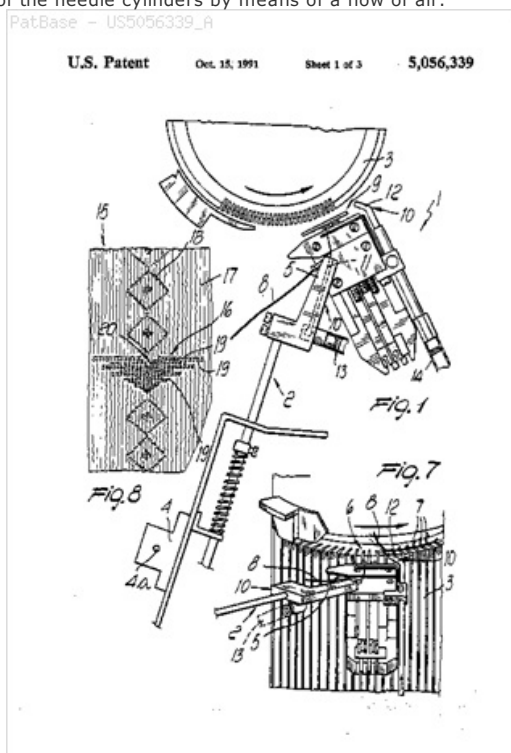
Title: PROCESS AND DEVICE FOR PRODUCING DESIGNS ON STOCKING IN TWIN-CYLINDER CIRCULAR KNITTING MACHINE

Abstract: In the process a first thread differing in color with respect to a second thread which constitutes the stocking is fed by a thread guide alternatively to the second thread to a preset number of needles during the formation of a row of stitches. The first thread, which constitutes the design, is cut proximate to the ends of the portion of the row knit by the preset number of needles and the ends of the thread are moved towards the inside of the needle cylinders by means of a flow of air.

Classifications:**International (IPC 8-9):** D04B15/80 D04B9/36

D04B9/46 (Advanced/Invention);

D04B15/66 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/60 D04B15/80 D04B9/36 D04B9/46**CPC:** D04B9/10 D04B15/80**European:** D04B15/80**US:** 66/133 66/134 66/222**Family:**

Publication number	Publication date	Application number	Application date
CS275683 B6	19920318	CS19890003014	19890518
CS8903014 A3	19920318	CS19890003014	19890518
EP0342424 A2	19891123	EP19890107845	19890429
EP0342424 A3	19910410	EP19890107845	19890429
IT1217642 A	19900330	IT19880020632	19880518
IT8820632 A0	19880518	IT19880020632	19880518
JP2014051 A2	19900118	JP19890121662	19890517
US5056339 A	19911015	US19890349541	19890509

Priority:

IT19880020632 19880518

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA
Assignee(s): LONATI A CORP OF ITALY SPA ; LONATI S P A
Inventor(s): (std): LONATI FRANCESCO
Inventor(s): FRANCESCO LONATI
Designated states: DE FR GB

13) Family number: 29342388 (US5018369A)

© PatBase

Title: Device for activating knitting cams in circular knitting machines

Abstract: The device has a box-like supporting structure which slidably accommodates at least one slider arranged laterally facing the needle cylinder of the machine and is movable, by virtue of the action of a linear motor, along a direction which is radial to the needle cylinder. The slider is rigidly associated, with its end which protrudes out of the box-like structure, with a knitting cam which is selectively engageable with needle actuation elements by moving the slider. The slider is constituted by a shaft which is slidably supported, along its axis, by the box-like structure by means of a first bearing which is arranged inside the box-like structure and has balls partially accommodated in longitudinal seats defined on the outer surface of the shaft and in seats correspondingly defined on the inner surface of a bush which extends around the shaft and is prevented from rotating about its axis.

Classifications:

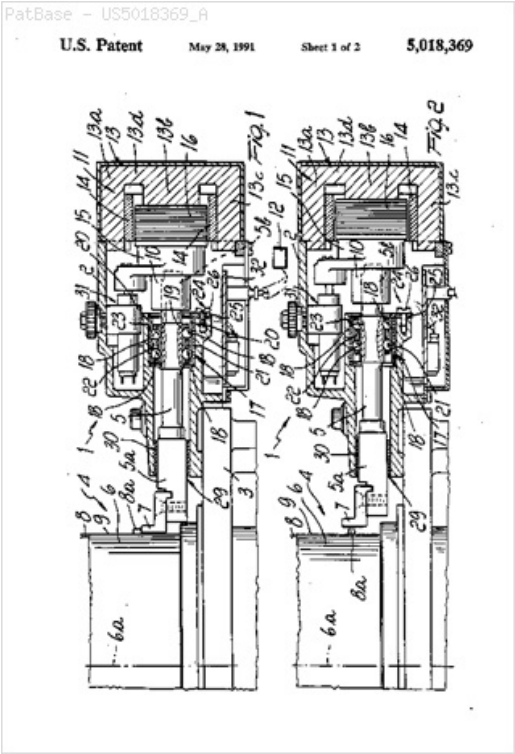
International (IPC 8-9): D04B15/32 (Advanced/Invention);
D04B15/00 (Core/Invention)

International (IPC 1-7): D04B15/32 D04B15/82

CPC: D04B15/32

European: D04B15/32

US: 310/13 310/14 66/219 66/40



Family:

Publication number	Publication date	Application number	Application date
CS276142 B6	19920415	CS19890007596	19891229
CS8907596 A3	19920415	CS19890007596	19891229
EP0376073 A2	19900704	EP19890123129	19891214
EP0376073 A3	19910904	EP19890123129	19891214
IT1227753 A	19910506	IT19880023170	19881230
IT8823170 A0	19881230	IT19880023170	19881230
JP1690372 C3	19920827	JP19890336806	19891227
JP2221446 A2	19900904	JP19890336806	19891227
JP3059183 B4	19910909	JP19890336806	19891227
US5018369 A	19910528	US19890450501	19891214

Priority:

IT19880023170 19881230

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA

Assignee(s): VIA S POLO ; VIA S POLO A CORP ; LONATI S P A

Inventor(s): (std): LONATI FRANCESCO ; FRANCESCO LONATI

Designated states: DE FR GB

14) Family number: 3104247 (US5142886A)

© PatBase

Title: CIRCULAR KNITTING MACHINE WITH A DEVICE FOR REPREATING THE SELECTION OF THE NEEDLES AT LEAST AT ONE THREAD FEED

Abstract: The present machine has a device for repeating the selection of the needles at least at one thread feed, which includes a memory element arranged proximate to the lower end of the selectors, which can oscillate in a plane radial to the needle cylinder by virtue of the action of selection levers arranged upstream of a thread feed of the machine, according to

the direction of the rotation imparted to the needle cylinder about its own axis. The selectors can individually oscillate in a radial plane with respect to the needle cylinder from an extraction position, whereat they protrude from the needle cylinder with a main heel so as to engage actuation cams arranged about the needle cylinder, to a sunk position, whereat they do not engage the cams. The memory element is controllably movable from an inoperative position, whereat it does not interfere with the oscillation of the selectors, to an operative position whereat, between two feeds of the machine, it maintains the position of the selectors imparted by the selection levers upstream of the first feed so that the performed selection is maintained at the second feed as well without requiring a new selection.

Classifications:

International (IPC 8-9): D04B15/68 D04B15/82

D04B9/02 (Advanced/Invention);

D04B15/66 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B D04B15/06 D04B15/34 D04B15/68

D04B15/82 D04B9/02 D04B9/06 D04B9/26

CPC: D04B15/68

European: D04B15/68

US: 66/215 66/222 66/8

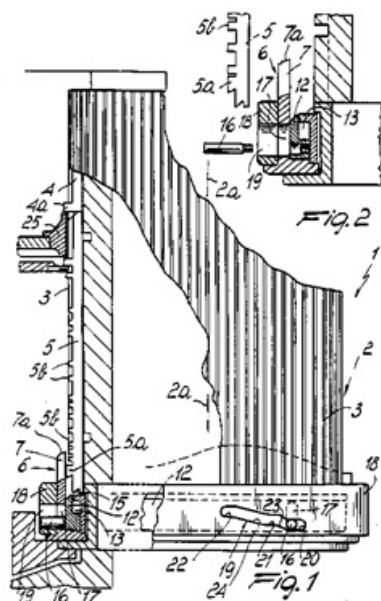
PatBase - US5142886_A

U.S. Patent

Sep. 1, 1992

Sheet 1 of 4

5,142,886



Family:

Publication number	Publication date	Application number	Application date
CZ283267 B6	19980218	CS19900005167	19901023
CZ9005167 A3	19931117	CS19900005167	19901023
DE69027178 D1	19960704	DE19906027178	19901024
DE69027178 T2	19970123	DE19906027178T	19901024
EP0425996 A2	19910508	EP19900120404	19901024
EP0425996 A3	19920115	EP19900120404	19901024
EP0425996 B1	19960529	EP19900120404	19901024
IT1236639 A	19930325	IT19890022205	19891031
IT8922205 A0	19891031	IT19890022205	19891031
JP1828273 C3	19940315	JP19900290959	19901030
JP3152251 A2	19910628	JP19900290959	19901030
JP5004458 B4	19930120	JP19900290959	19901030
US5142886 A	19920901	US19900599552	19901019

Priority:

IT19890022205 19891031

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA ; LONATI SRL

Assignee(s): LONATI S P A ; LONATI S P A MONZA MAILAND MILANO IT ; LONATI S R L

Inventor(s): (std): LONATI FRANCESCO

Inventor(s): LONATI FRANCESCO I 25100 BRESCIA IT ; FRANCESCO LONATI

Designated states: DE FR GB

15) Family number: 2917623 (US5152157A)

© PatBase

Title: CIRCULAR KNITTING MACHINE WITH CASTING-OFF SINKER ACTUATION DEVICE

Abstract: The machine has a rotatable needle cylinder and a casting-off sinker actuation device including a coaxial sinker ring supporting a cam and an external countercam. The needle cylinder supports a plurality of casting-off sinkers each having a heel which follows a path, extending around the needle cylinder axis, which is partially defined by the cam and the countercam. A pin is connected to the countercam and is engaged by an actuation element associated with the sinker ring and bilaterally engaging the pin. The actuation element is controllably activatable for bilaterally moving the countercam with respect to the needle cylinder along a direction having a radial component, toward or away from the axis of the needle cylinder.

Classifications:

International (IPC 8-9): D04B15/06 D04B15/34

D04B9/46 (Advanced/Invention);

D04B15/00 D04B9/00 (Core/Invention);

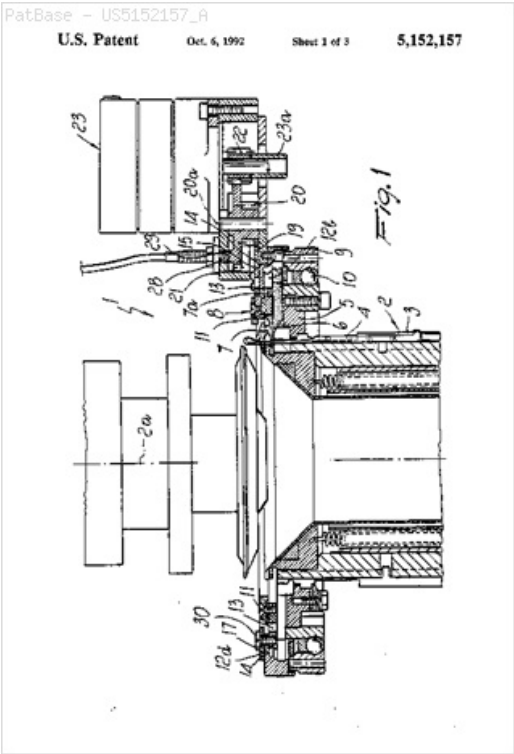
D04B (Subclass/Invention)

International (IPC 1-7): D04B15/06 D04B15/24 D04B15/34

D04B9/46

CPC: D04B9/46 D04B15/34

European: D04B15/34 D04B9/46



Family:

Publication number	Publication date	Application number	Application date
CS9101207 A2	19911217	CS19910001207	19910426
EP0454023 A2	19911030	EP19910106433	19910422
EP0454023 A3	19920219	EP19910106433	19910422
IT1240008 B	19931127	IT19900020152	19900427
IT9020152 A0	19900427	IT19900020152	19900427
IT9020152 A1	19911028	IT19900020152	19900427
JP4222258 A2	19920812	JP19910090944	19910423
US5152157 A	19921006	US19910685348	19910415

Priority:

IT19900020152 19900427

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA ; LONATI SRL

Assignee(s): LONATI S P A IT ; LONATI S R L ; LONATI SOCIETA A RESPONSABILITA LIMITATA

Inventor(s): (std): FRANCESCO LONATI ; LONATI FRANCESCO

Inventor(s): LONATI FRANCESCO IT

Designated states: DE FR GB

16) Family number: 18973532 (US5170649A) © PatBase

Title: CIRCULAR KNITTING MACHINE FOR SOCKS, STOCKINGS OR THE LIKE, IN PARTICULAR FOR PRODUCING KNITTING WITH TOWELLING STITCHES

Abstract: The circular knitting machine for socks, stockings or the like, in particular for producing knitting with towelling stitches, comprises, at the set of knitting-forming cams which actuate the motion of the needles during the engagement of the thread or threads at one feed of the machine, an additional cam. The additional cam is arranged above the central cam and defines a descending portion which is engageable with the heel of the needles, excluded from knitting at that feed and raised with respect to the needles which knit at that feed. The controlled lowering of the needles which do not knit at the feed facilitates the positioning of the thread or threads fed at the feed and the correct forming of the loops by the needles which knit at that feed.

Classifications:

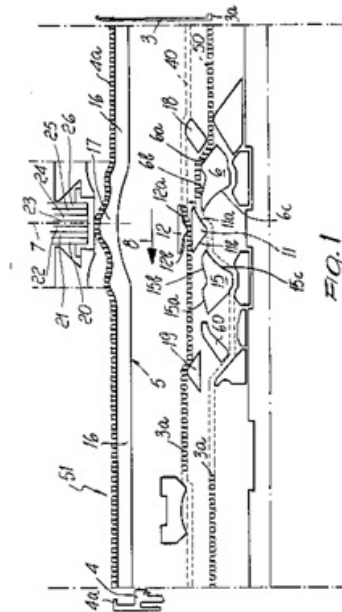
International (IPC 8-9): D03D39/22 D04B1/26 D04B15/32 D04B9/12 D04B9/46 (Advanced/Invention); D03D39/00 D04B1/22 D04B15/00 D04B9/00 (Core/Invention); D04B (Subclass/Invention)

International (IPC 1-7): D03D39/22 D04B1/26 D04B15/32 D04B9/12 D04B9/20 D04B9/56

CPC: D04B9/12 D04B9/46 D04B15/32

European: D04B15/32 D04B9/12 D04B9/46

US: 66/217 66/9R

**Family:**

Publication number	Publication date	Application number	Application date
CS9102170 A3	19920115	CS19910002170	19910712
EP0466072 A2	19920115	EP19910111340	19910708
EP0466072 A3	19920219	EP19910111340	19910708
IT1246361 B	19941117	IT19900020928	19900713
IT9020928 A0	19900713	IT19900020928	19900713
IT9020928 A1	19920114	IT19900020928	19900713
JP4272258 A2	19920929	JP19910170849	19910711
US5170649 A	19921215	US19910723115	19910628

Priority:

IT19900020928 19900713

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA ; LONATI SRL**Assignee(s):** LONATI SRL A CORP ; LONATI S R L ; LONATI SOCIETA A RESPONSABILITA LIMITATA**Inventor(s):** (std): FRANCESCO LONATI ; LONATI FRANCESCO**Designated states:** DE FR GB**17) Family number: 4399551** (US5222380A)

© PatBase

Title: PNEUMATIC SERVICE CIRCUIT FOR CIRCULAR KNITTING MACHINE SERVICE DEVICES

Abstract: The circular knitting machine has a pneumatic service circuit with pneumatically actuated service devices arranged around the needle cylinder. An annular body surrounds the needle cylinder, and a main duct is defined in the annular body. The main duct is supplied with pressurized air and is connected to the supply ducts of pneumatic actuators which actuate the service devices. Valve for operating the actuators are arranged between the actuator supply ducts and the main duct.

Classifications:**International (IPC 8-9):** D04B15/00 D04B15/16

D04B9/46 (Advanced/Invention);

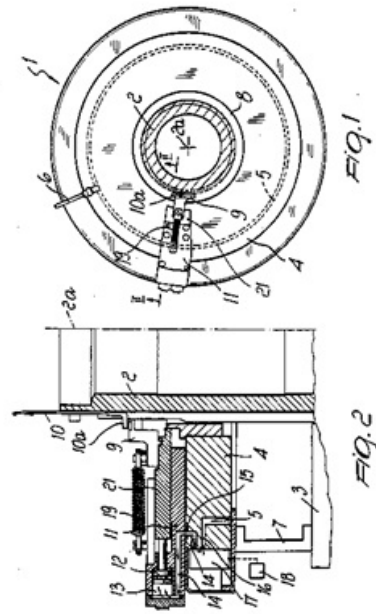
D04B15/00 D04B9/00 (Core/Invention);

D04B (Subclass/Invention)

International (IPC 1-7): D04B D04B15/00 D04B15/16 D04B15/94

D04B9/46

CPC: D04B15/00**European:** D04B15/00**US:** 66/134 66/216 66/8

**Family:**

Publication number	Publication date	Application number	Application date
CS9201604 A3	19921216	CS19920001604	19920527
EP0516048 A1	19921202	EP19920108852	19920526
IT1250422 B	19950407	IT1991MI01492	19910531
ITMI911492 A0	19910531	IT1991MI01492	19910531
ITMI911492 A1	19921201	IT1991MI01492	19910531
JP5171547 A2	19930709	JP19920136510	19920528
US5222380 A	19930629	US19920885781	19920520

Priority:

IT1991MI01492 19910531

Probable Assignee: LONATI**Assignee(s):** (std): LONATI ; LONATI SPA ; LONATI SRL**Assignee(s):** LONATI SRL A CORP ; LONATI S R L ; LONATI SOCIETA A RESPONSABILITA LIMITATA**Inventor(s):** (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO ; LONATI TIBERIO**Inventor(s):** TIBERIO LONATI ; ETTORE LONATI ; FAUSTO LONATI ; FRANCESCO LONATI**Designated states:** DE FR GB IT**18) Family number: 9394588 (EP0567880A2)**

© PatBase

Title: CIRCULAR KNITTING MACHINE FOR MANUFACTURING SOCKS, STOCKINGS OR THE LIKE, WITH AN IMPROVED KNITTING FORMING CAM SET.

Abstract: The present invention relates to a circular knitting machine with improved knitting forming cam set. The knitting forming cam set comprises, proximate to a feed (5) of the machine, a knitting forming cam (6) with a lower profile (7) forming a descending portion (7) immediately after the feed (5), which can engage the heel (3a) of the needles (3) which are raised to take up the thread so as to lower them and cause the forming of the loops of knitting. A countercam (8) is provided proximate to the end of the descending portion (7) of the knitting forming cam (6) and faces the knitting forming cam (6) in a downward region; the countercam (8) delimits the lowering of the needles (3) after taking up the thread. The countercam (8) is slidably supported with respect to the knitting forming cam (6) along a sliding direction in which a component is parallel to the needle cylinder axis. The machine is provided with a pneumatic cylinder for controllably actuating the countercam (8) to move the countercam (8) along the sliding direction toward or away from the knitting forming cam (6).

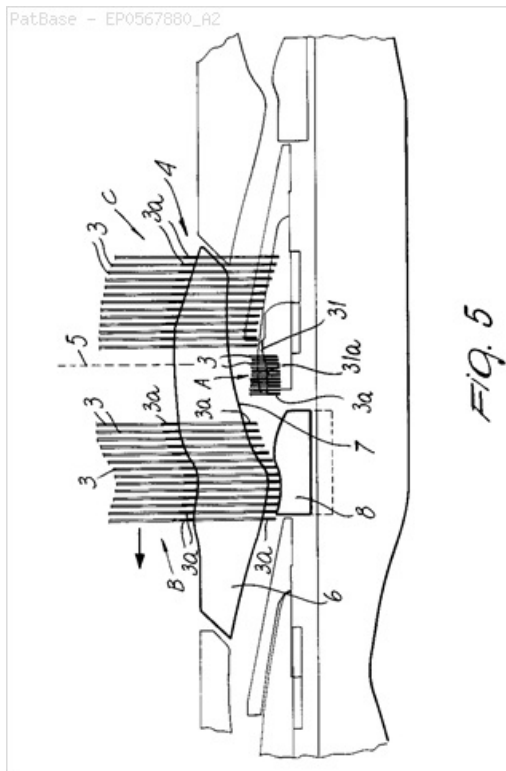
Classifications:**International (IPC 8-9):** D04B15/32 D04B15/82

D04B9/46 (Advanced/Invention);

D04B15/00 D04B15/66 D04B9/00 (Core/Invention);

D04B (Subclass/Invention)

International (IPC 1-7): D04B15/32 D04B15/82 D04B9/46**CPC:** D04B15/32**European:** D04B15/32

**Family:**

Publication number	Publication date	Application number	Application date
EP0567880 A2	19931103	EP19930106294	19930419
EP0567880 A3	19931124	EP19930106294	19930419
IT1254951 B	19951011	IT1992MI01020	19920429
ITMI921020 A0	19920429	IT1992MI01020	19920429
ITMI921020 A1	19931030	IT1992MI01020	19920429
JP6010245 A2	19940118	JP19930102469	19930428

Priority:

IT1992MI01020 19920429

Probable Assignee: LONATI**Assignee(s):** (std): LONATI ; LONATI SPA ; LONATI SRL**Assignee(s):** LONATI TIBERIO ; LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO ; LONATI S R L ; LONATI SOCIETA A RESPONSABILITA LIMITATA**Inventor(s):** (std): LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE**Inventor(s):** ETTORE LONATI ; FAUSTO LONATI ; FRANCESCO LONATI ; TIBERIO LONATI**Designated states:** DE FR GB**19) Family number: 30151673** (US5520024A)

© PatBase

Title: SELECTION DEVICE FOR AN ELASTIC SELECTOR FOR NEEDLES IN A CIRCULAR KNITTING MACHINE

Abstract: A selection device for an elastic selector for needles in a circular knitting machine which includes, in an upward region, an elastic portion that is adapted to move the lower portion towards the outside of the cylinder and has a lower heel that is adapted to move outward into a position for engagement on the part of a lifting cam; the selector continues, in a downward region, with a tab that is adapted to be attracted and retained by a fixed annular permanent magnet which is arranged towards the inside of a cylinder and at which one or more electromagnets are mounted; the activation of the electromagnets is adapted to selectively release the selectors which are otherwise retained by the permanent magnet during the rotation of the cylinder.

Classifications:**International (IPC 8-9):** D04B15/06 D04B15/24 D04B15/68

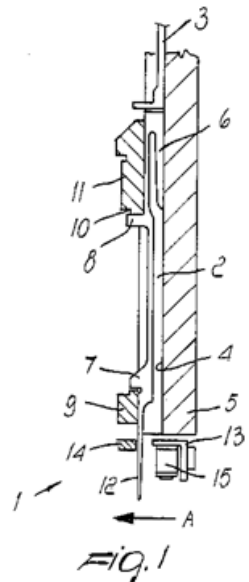
D04B15/78 D04B15/82 D04B9/00 (Advanced/Invention);

D04B15/00 D04B15/66 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B D04B15/06 D04B15/24 D04B15/78

D04B9/00

CPC: D04B15/68 D04B15/78**European:** D04B15/68 D04B15/78**US:** 66/219 66/220 66/75.2 66/752

**Family:**

Publication number	Publication date	Application number	Application date
CZ285308 B6	19990714	CZ19950000948	19950413
CZ9500948 A3	19951115	CZ19950000948	19950413
DE69507364 D1	19990304	DE19956007364	19950404
DE69507364 T2	19990902	DE19956007364T	19950404
DE69507364 T3	20050512	DE19956007364T	19950404
EP0677605 A1	19951018	EP19950105016	19950404
EP0677605 B1	19990120	EP19950105016	19950404
EP0677605 B2	20041201	EP19950105016	19950404
HK1013857 A1	20000804	HK19980115219	19981223
ITBO940161 A0	19940415	IT1994BO00161	19940415
ITBO940161 A1	19951016	IT1994BO00161	19940415
JP8003843 A2	19960109	JP19950088010	19950413
RU2104350 C1	19980210	RU19950105529	19950414
RU95105529 A	19961127	RU19950105529	19950414
US5520024 A	19960528	US19950415623	19950403

Priority:

IT1994BO00161 19940415

Probable Assignee: LONATI SPA**Assignee(s):** (std): MATEC SRL ; MATEC SPA ; MATEK S R L**Assignee(s):** MATEK SRL ; MATEC SRL VIA DELLE NAZIONI UNITE ; MATETSUKU SARL ; MATEC S R L ; LONATI SPA ; MATEC S P A ; MATEC S P A SCANDICCI ; MATEC S P A SCANDICCI IT**Inventor(s):** (std): ANDO JAN ; IYAN ANDO ; JAN ANDO**Inventor(s):** ANDO JAN I 50018 SCANDICCI PROV OF FIRENZE IT**Designated states:** DE FR GB**20) Family number: 11172178 (US5816075A)**

© PatBase

Title: Single-cylinder circular hosiery machine with pivotable dial sections

Abstract: A single-cylinder circular hosiery-making or knitting machine particularly for manufacturing tubular items closed at one of their axial ends, having a needle cylinder and a circular plate which coaxially faces the needle cylinder in an upward region. The circular plate is composed of two halves, a first half of which is pivoted to a first supporting structure about a diametrical axis which is substantially parallel to the diametrical connecting plane of the two halves of the circular plate. The first half of the circular plate is also provided with radial grooves which accommodate pairs of hooks which can be actuated along the corresponding groove so as to engage or release loops or portions of loops of knitting formed by the needles of the needle cylinder. Elements are provided for overturning the first half of the circular plate about the diametrical axis to transfer it from a first position, which is co-planar with respect to a second half of the circular plate, to a second position, which is overturned below the second half of the circular plate, and viceversa. The first half of the circular plate is rotatable, in the second position, rigidly with the needle cylinder about the axis of the needle cylinder with respect to the second half of the circular plate.

Classifications:

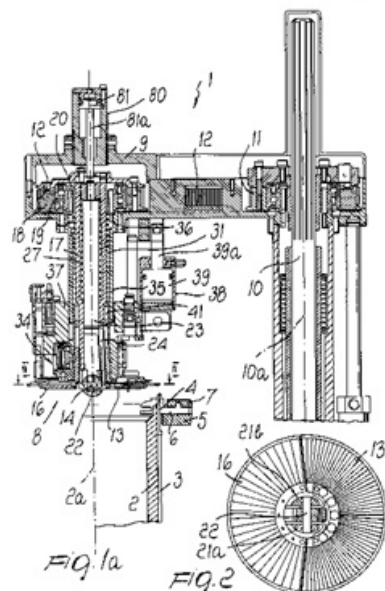
International (IPC 8-9): D04B15/18 D04B15/96 D04B9/06 D04B9/46
D04B9/56 (Advanced/Invention);
D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B9/06 D04B9/46 D04B9/56

CPC: D04B9/56 D04B15/18 D04B15/96

European: D04B15/18 D04B15/96 D04B9/56

US: 66/148 66/16 66/187 66/28 66/280

**Family:**

Publication number	Publication date	Application number	Application date
CZ294243 B6	20041110	CZ19970001223	19970422
CZ9701223 A3	19971112	CZ19970001223	19970422
DE69709224 D1	20020131	DE19976009224	19970318
DE69709224 T2	20020725	DE19976009224T	19970318
EP0803599 A1	19971029	EP19970104620	19970318
EP0803599 B1	20011219	EP19970104620	19970318
IT1284002 B1	19980508	IT1996MI00789	19960422
ITMI960789 A0	19960422	IT1996MI00789	19960422
ITMI960789 A1	19971022	IT1996MI00789	19960422
JP10037049 A2	19980210	JP19970100218	19970417
JP3883249 B2	20070221	JP19970100218	19970417
US5816075 A	19981006	US19970820629	19970319

Priority:

IT1996MI00789 19960422

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A ; LONATI S P A MONZA**Inventor(s):** (std): FAUSTO LONATI ; FRANCESCO LONATI ; LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE**Designated states:** DE FR GB**21) Family number: 11123887 (US5855122A)**

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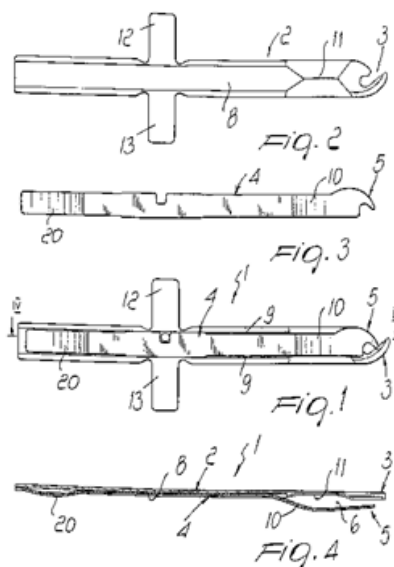
Title: Hook for single-cylinder circular knitting or stocking machines with cylinder and circular or semicircular plate

Abstract: A hook for single-cylinder circular knitting or stocking machines with cylinder and circular or semicircular plate. The hook comprises an elongated and flat hook body which has a claw-shaped longitudinal tip. The hook also comprises an elastic-lamina element which is associated with a lateral face of the hook body and has a claw-shaped tip which faces the claw-shaped tip of the hook body. A passage is formed between the lamina element and the hook body and is suitable to be crossed by a needle of the knitting or stocking machine; the claw-shaped tip of the lamina element can flex elastically towards and away from the hook body, respectively to close the claw-shaped tip of the hook body and to allow the extraction of the needle inserted in the passage towards the claw-shaped tip of the hook body.

Classifications:**International (IPC 8-9):** D04B15/02 D04B15/06 D04B9/46 D04B9/56 (Advanced/Invention);

D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/02 D04B15/06 D04B9/46 D04B9/56**CPC:** D04B9/56 D04B15/02**European:** D04B15/02 D04B9/56**US:** 66/95 66/950

**Family:**

Publication number	Publication date	Application number	Application date
CZ292983 B6	20040114	CZ19970001800	19970611
CZ9701800 A3	19980114	CZ19970001800	19970611
DE69710129 D1	20020314	DE19976010129	19970606
DE69710129 T2	20020718	DE19976010129T	19970606
EP0814186 A2	19971229	EP19970109199	19970606
EP0814186 A3	19981028	EP19970109199	19970606
EP0814186 B1	20020130	EP19970109199	19970606
IT1284058 B1	19980508	IT1996MI01272	19960621
ITMI961272 A0	19960621	IT1996MI01272	19960621
ITMI961272 A1	19971222	IT1996MI01272	19960621
JP10053945 A2	19980224	JP19970164066	19970620
JP4149012 B2	20080910	JP19970164066	19970620
US5855122 A	19990105	US19970871377	19970609

Priority:

IT1996MI01272 19960621

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A ; LONATI S P A MONZA**Inventor(s):** (std): TEIBERIO RONATEI ; FURANCHIESUKO RONATEI ; FUAUSUTO RONATEI ; ETSUTOORE RONATEI ; LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE**Designated states:** AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**22) Family number: 30152624 (US5907960A)**

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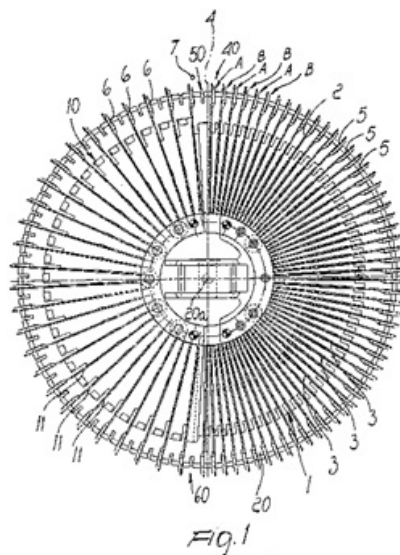
Title: Closed toe method on a single-cylinder knitting machine

Abstract: Method for manufacturing a tubular hosiery item with a closed end, with a single-cylinder circular knitting machine having a pivoting semicircular plate having radially sliding hooks, including alternately rotating the needle cylinder for moving the needles of a first half of the needle cylinder and the hooks of the overlying semicircular plate to pass in front of a feed of the machine; the extracted hooks forming a support for a thread dispensed at the feed, actuated needles being actuated so as to take up the thread and be alternated with inactive needles, subsequently swapping the actuated needles with the inactive needle when the motion of the needle cylinder is reversed; a first needle of the needles of a second half of the needle cylinder is also made to pass in front of the feed to take up the thread, in order to allow both end hooks of the hooks of the semicircular plate to engage the thread; retracting the hooks of the semicircular plate so as to retain the engaged thread; forming heel knitting with the needles of the first half of the needle cylinder that have taken up the thread; folding over the semicircular plate so that the hooks which have retained the thread face the needles of the second half of the needle cylinder; extracting the hooks from the semicircular plate and actuating the needles of the second half of the needle cylinder while the cylinder is rotated continuously about its own axis so as to form loops of knitting by the needles of the second half of the needle cylinder, the loops meshing with the thread carried by the hooks of the semicircular plate, which are then retracted into the semicircular plate in order to release the previously held and transferred thread; and actuating the machine in order to complete the item.

Classifications:**International (IPC 8-9):** D04B1/26 D04B15/02 D04B9/46 D04B9/56 (Advanced/Invention);

D04B1/22 D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B1/26 D04B9/46 D04B9/56**CPC:** D04B9/56 D04B15/02**European:** D04B15/02 D04B9/56**US:** 66/148 66/16 66/187 66/28 66/280 66/58

**Family:**

Publication number	Publication date	Application number	Application date
CZ298025 B6	20070530	CZ19970004064	19971217
CZ9704064 A3	19980715	CZ19970004064	19971217
DE69720695 D1	20030515	DE19976020695	19971208
DE69720695 T2	20040318	DE19976020695T	19971208
EP0882826 A1	19981209	EP19970121550	19971208
EP0882826 B1	20030409	EP19970121550	19971208
IT1289504 B1	19981015	IT1996MI02712	19961220
ITMI962712 A1	19980622	IT1996MI02712	19961220
JP11117151 A2	19990427	JP19970353729	19971222
JP4038262 B2	20080123	JP19970353729	19971222
US5907960 A	19990601	US19970985190	19971204

Priority:

IT1996MI02712 19961220

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI S P A ; LONATI SPA**Assignee(s):** LONATI S P A BRESCIA ; LONATI S P A MONZA**Inventor(s):** (std): LONATO FRANCESCO ; LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE**Designated states:** DE ES FR GB**23) Family number: 30226615** (US5966968A)

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Title: Single-cylinder circular knitting machine with device for actuating the cutter mounted on the dial

Abstract: A single-cylinder circular machine for knitting, hosiery or the like, with a device for actuating the cutter mounted on the dial comprises: a needle cylinder, which can be rotationally actuated about its own axis; a dial, which is arranged above the needle cylinder and is supported so that it can rotate about its own axis; and a cutter for cutting the yarns, which is mounted coaxially on the dial and is provided with cutting teeth arranged around its own axis. The machine has a device which comprises an actuation for the cutter with a rotary motion about its own axis with a rotation rate which can be diversified from the rotation rate of the needle cylinder, in order to vary the length of the trailing portion of yarn that lies between the last needle of the machine taking up the yarn and the blade cooperating with the cutter in cutting the yarn.

Classifications:

International (IPC 8-9): D04B15/00 D04B15/14 D04B15/18
D04B15/60 D04B9/46 (Advanced/Invention);

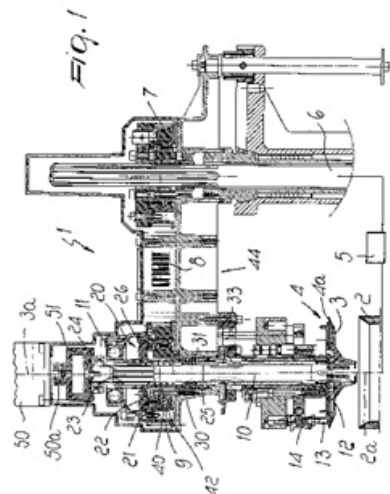
D04B15/00 D04B15/38 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/00 D04B15/14 D04B15/18
D04B15/60 D04B15/61 D04B9/46

CPC: D04B15/60

European: D04B15/60

US: 66/140R 66/145R

**Family:**

Publication number	Publication date	Application number	Application date
CZ9802273 A3	19990217	CZ19980002273	19980720
EP0893526 A2	19990127	EP19980112161	19980701
EP0893526 A3	19991215	EP19980112161	19980701
IT1293753 B1	19990310	IT1997MI01733	19970722
ITMI971733 A1	19990122	IT1997MI01733	19970722
JP11093047 A2	19990406	JP19980206381	19980722
JP4117067 B2	20080709	JP19980206381	19980722
US5966968 A	19991019	US19980112297	19980709

Priority:

IT1997MI01733 19970722

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI S P A ; LONATI SPA**Inventor(s):** (std): TEIBERIO RONATEI ; LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE ; FURANCHIESUKO RONATEI ; FUAUSUTO RONATEI ; ETSUTOORE RONATEI**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**24) Family number: 30165331 (EP0960966A2)**

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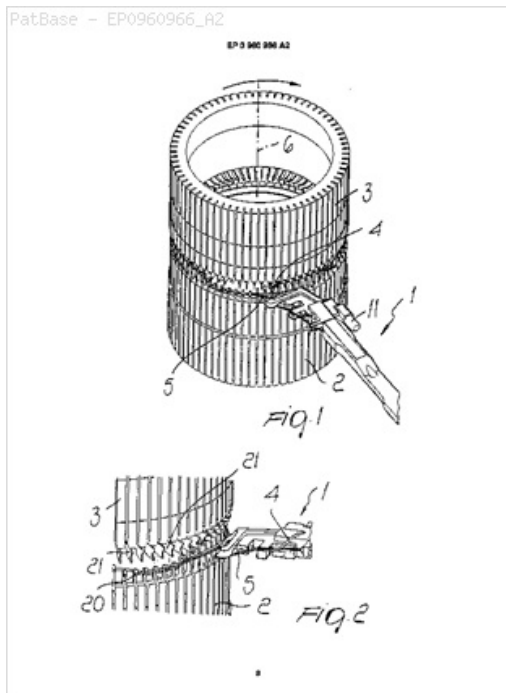
Title: METHOD AND APPARATUS FOR SIMULTANEOUSLY FEEDING AT LEAST TWO YARNS IN DOUBLE-CYLINDER CIRCULAR KNITTING MACHINES

Abstract: A method and an apparatus for simultaneously feeding at least two yarns in double-cylinder circular knitting machines. The method comprises a step for feeding the needles (20) of the machine, by way of a yarn finger unit (1) having at least two dispensing points (10,15) for at least two yarns (4,5), with at least two yarns, with yarn dispensing points (10,15) located at substantially mutually identical vertical elevations; and a step for taking up the excess portion of the two yarns (4,5) at the end of the engagement of the yarns by the needles (20) of the machine. At the end of the feeding step and before the beginning of the take-up step, the yarn dispensing point (10) of one (5) of the two yarns is vertically staggered with respect to the dispensing point (15) of the other yarn (4) in order to vertically space one of the yarns (5) with respect to the other (4).

Classifications:**International (IPC 8-9):** D04B15/58 D04B9/04 D04B9/10 D04B9/46 (Advanced/Invention);

D04B15/38 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/58 D04B9/04 D04B9/10 D04B9/46**CPC:** D04B15/58**European:** D04B15/58

**Family:**

Publication number	Publication date	Application number	Application date
DE69907318 D1	20030605	DE19996007318	19990521
DE69907318 T2	20040429	DE19996007318T	19990521
EP0960966 A2	19991201	EP19990109216	19990521
EP0960966 A3	20000712	EP19990109216	19990521
EP0960966 B1	20030502	EP19990109216	19990521
ITMI981178 A1	19991129	IT1998MI01178	19980527
JP11350315 A2	19991221	JP19990148929	19990527
KR100580435 B1	20060515	KR19990018966	19990526
KR19990088550 A	19991227	KR19990018966	19990526

Priority:

IT1998MI01178 19980527 KR19990018966 19990526

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A ; LONATI S P A BRESCIA ; LONATI S P A MONZA**Inventor(s):** (std): LONATI TIBERIO ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI ETTORE**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**25) Family number: 14949133 (US6176106B)**

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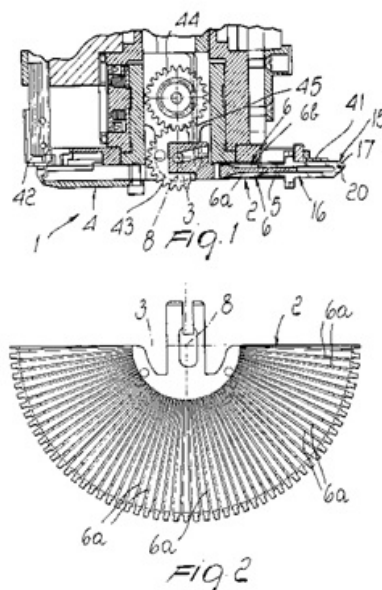
Title: DIAL OR HALF-DIAL FOR SINGLE-CYLINDER CIRCULAR HOSIERY KNITTING MACHINES, PARTICULARLY FOR PRODUCING TUBULAR ITEMS CLOSED AT ONE LONGITUDINAL END

Abstract: A dial or half-dial for single-cylinder circular hosiery knitting machines, particularly for producing tubular items closed at one longitudinal end, which comprises a dial or half-dial body which is substantially shaped like a disk or half-disk and is provided, on at least one of its two faces, with a plurality of radial slots, each of which slideably accommodates at least one hook. The hooks have a longitudinal slit which is open in the direction of the axis of the dial or half-dial body. The slit gives a portion of the body of the hooks a bifurcated shape which engages the two opposite faces of the dial or half-dial body.

Classifications:

International (IPC 8-9): D04B15/02 D04B15/18 D04B9/42 D04B9/46
D04B9/56 (Advanced/Invention);
D04B15/00 D04B9/00 (Core/Invention);
D04B (Subclass/Invention)

International (IPC 1-7): D04B15/02 D04B15/18 D04B9/42 D04B9/56**CPC:** D04B9/56 D04B15/02 D04B15/18**European:** D04B15/02 D04B15/18 D04B9/56**US:** 66/147 66/95 66/950

**Family:**

Publication number	Publication date	Application number	Application date
CZ298714 B6	20080109	CZ19990003796	19991025
CZ9903796 A3	20000517	CZ19990003796	19991025
DE69934382 D1	20070125	DE19996034382	19991011
DE69934382 T2	20071031	DE19996034382T	19991011
EP0997564 A2	20000503	EP19990119936	19991011
EP0997564 A3	20010816	EP19990119936	19991011
EP0997564 B1	20061213	EP19990119936	19991011
EP0997564 B9	20070801	EP19990119936	19991011
IT1303265 B1	20001106	IT1998MI02312	19981028
ITMI982312 A0	19981028	IT1998MI02312	19981028
ITMI982312 A1	20000429	IT1998MI02312	19981028
JP2000136473 A2	20000516	JP19990307723	19991028
JP4106166 B2	20080625	JP19990307723	19991028
US6176106 BA	20010123	US19990419624	19991018

Priority:

IT1998MI02312 19981028

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A**Inventor(s):** (std): LONATI ETTORE ; LONATI FRANCESCO ; LONATI FAUSTO ; LONATI TIBERIO**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**26) Family number: 15037697 (US6223564B)**

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Title: Method for manufacturing tubular items, such as hosiery items or the like, which are closed at an axial end, using a single-cylinder circular machine

Abstract: A method for producing tubular items, such as hosiery items and the like, which are closed at an axial end, using a single-cylinder circular knitting machine provided with a half-dial which faces, in an upward region, a first half of the needle cylinder and has hooks which can move in a radial direction with respect to the axis of the needle cylinder, each hook being arranged between two contiguous needles of the half of the needle cylinder that it faces. The half-dial can turn over about a diametrical axis of the needle cylinder so that its hooks face the needles of the second half of the needle cylinder. The hooks can move in a radial direction with respect to the axis of the needle cylinder in order to engage portions of loops of knitting formed by the needles of the first half of the needle cylinder before the half-dial turns over and in order to release the portions of loops of knitting to the needles of the second half of the needle cylinder after the half-dial has turned over. After the half-dial has turned over, the loops of knitting formed by the needles of the first half of the needle cylinder and belonging to a row of knitting that follows the one engaged by the hooks are arranged above the needles of the second half of the needle cylinder. The needles of the second half of the needle cylinder are raised to knit in order to pass through the loops of the subsequent row of knitting and knit new loops in, with the loops of the subsequent row of knitting in the subsequent knitting of the item.

Classifications:

International (IPC 8-9): D04B15/02 D04B15/18 D04B9/46
D04B9/56 (Advanced/Invention);

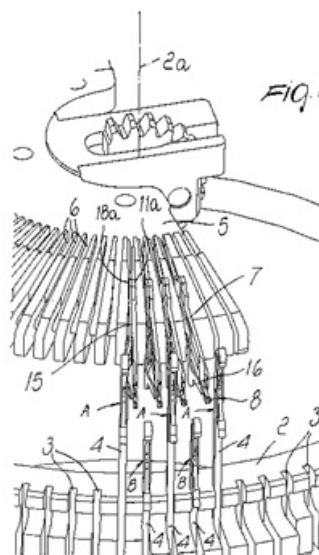
D04B15/00 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B15/18 D04B9/46 D04B9/56

CPC: D04B9/56 D04B15/02

European: D04B15/02 D04B9/56

US: 66/107 66/148 66/58 66/8 66/95

**Family:**

Publication number	Publication date	Application number	Application date
CZ20001767 A3	20010117	CZ20000001767	20000512
CZ301612 B6	20100505	CZ20000001767	20000512
DE60011707 D1	20040729	DE20006011707	20000508
DE60011707 T2	20050630	DE20006011707T	20000508
EP1054089 A2	20001122	EP20000109156	20000508
EP1054089 A3	20001129	EP20000109156	20000508
EP1054089 B1	20040623	EP20000109156	20000508
IT1312444 B1	20020417	IT1999MI01068	19990514
ITMI991068 A1	20001114	IT1999MI01068	19990514
JP2000355860 A2	20001226	JP20000142480	20000515
JP4293711 B2	20090708	JP20000142480	20000515
US6223564 BA	20010501	US20000570448	20000512

Priority:

IT1999MI01068 19990514

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A ; LONATI S P A BRESCIA**Inventor(s):** (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO ; LONATI TIBERIO**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE**27) Family number: 28886530 (US2001017047A)**

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Title: METHOD FOR MANUFACTURING CLOSED END TUBULAR ITEMS, IN PARTICULAR HOSIERY, ON A CIRCULAR KNITTING MACHINE

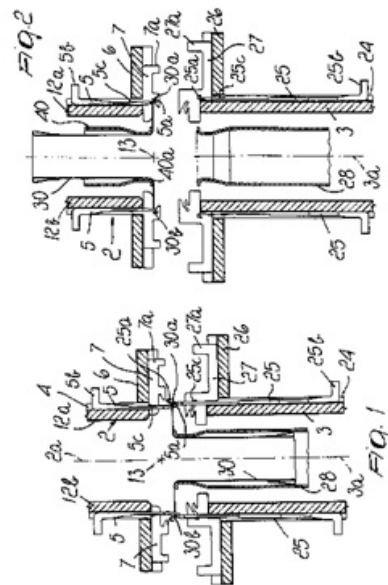
Abstract: The method consists in forming a tubular item on a circular machine by means of the needles of the needle cylinder, starting from the opposite axial end of the item with respect to the axial end to be closed and retaining on the needles of the needle cylinder the last formed row of knitting. The loops of the last row of knitting are then transferred individually to an auxiliary element provided with supporting elements for individually supporting the loops, and the supporting elements of at least one first half-row of the last row are suitable to receive two loops and to pass one of the two loops in the other loop. The item is furthermore reversed before and after the transfer. In a subsequent step, the loops of the second half-row are transferred from the corresponding supporting elements to the supporting elements engaged with the loops of the first half-row, and the loops of the second half-row are knitted in with the loops of the first half-row by passing the loops of the second half-row through the loops of the first half-row, thus closing the axial end of the item. Finally, an additional operation is performed in order to stabilize the closure of the item.

Classifications:

International (IPC 8-9): D04B9/46 D04B9/56 (Advanced/Invention);
D04B9/00 (Core/Invention)

International (IPC 1-7): D04B1/22 D04B1/26 D04B35/00 D04B9/40
D04B9/46 D04B9/56 D04H9/10 D04H9/40

CPC: D04B9/40 D04B1/108 D04B15/02 D04B15/92**European:** D04B9/56**US:** 66/147 66/148 66/17 66/170 66/58

**Family:**

Publication number	Publication date	Application number	Application date
CZ20010685 A3	20030115	CZ20010000685	20010222
EP1127972 A2	20010829	EP20010102724	20010206
EP1127972 A3	20020703	EP20010102724	20010206
IT1316679 B1	20030424	IT2000MI00374	20000228
ITMI20000374 A0	20000228	IT2000MI00374	20000228
ITMI20000374 A1	20010828	IT2000MI00374	20000228
JP2001262449 A2	20010926	JP20010052169	20010227
JP2001262450 A2	20010926	JP20010052231	20010227
US2001017047 AA	20010830	US20010778128	20010206
US6282925 BA	20010904	US20010778128	20010206

Priority:

IT2000MI00374 20000228

Probable Assignee: MATEC SPA**Assignee(s):** (std): MATEC SPA**Assignee(s):** ANDO JAN ; LONATI S P A ; LONATI SPA ; MATEC S P A**Inventor(s):** (std): ANDO JAN ; YAN ANDOO**Agent(s):** NAGAI HIROSHI**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR**28) Family number: 29081298** (US2003172684A)

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Title: METHOD FOR MANUFACTURING SOCKS WITH A CIRCULAR KNITTING MACHINE HAVING AT LEAST TWO FEEDS OR DROPS

Abstract: A method for manufacturing socks with a circular knitting machine having at least two feeds or drops, consisting in producing the sock starting from its opposite end with respect to the toe. The toe is produced by using at least two feeds simultaneously and by actuating the needle cylinder with an alternating rotary motion so that two sets of needles, arranged on mutually opposite sides, are made to knit respectively at one of the at least two feeds and at the other one of the at least two feeds, forming stitches simultaneously, and gradually decreasing, for a preset number of rows of stitches, the needles of the two sets that are made to knit.

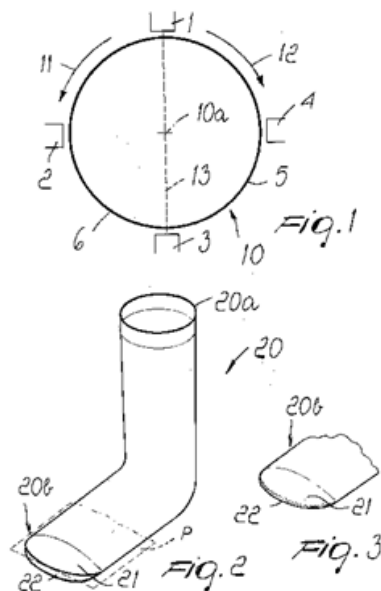
Classifications:**International (IPC 8-9):** D04B1/26 D04B9/46

D04B9/56 (Advanced/Invention);

D04B9/56 (Advanced/Non-invention);

D04B1/22 D04B9/00 (Core/Invention)

International (IPC 1-7): D04B9/00 D04B9/46 D04B9/56**CPC:** D04B1/26 D04B9/56 D04B1/108**European:** D04B1/26 D04B9/56**US:** 66/185 66/8

**Family:**

Publication number	Publication date	Application number	Application date
CN100420782 C	20080924	CN20031021642	20030312
CN1446967 A	20031008	CN20031021642	20030312
CZ20030706 A3	20031015	CZ20030000706	20030311
ITMI20020525 A0	20020312	IT2002MI00525	20020312
ITMI20020525 A1	20030912	IT2002MI00525	20020312
KR20030074229 A	20030919	KR20030013696	20030305
US2003172684 AA	20030918	US20030385788	20030311
US7047767 BB	20060523	US20030385788	20030311

Priority:

IT2002MI00525 20020312

Probable Assignee: LONATI SPA**Assignee(s):** (std): MATEC SPA ; ANDO JAN ; MATEC SRL**Assignee(s):** LONATI SPA ; MATEC SR L ; MATEC S P A ; MATEC S R L**Inventor(s):** (std): ANDO J ; ANDO JAN**Inventor(s):** J ANDO ; ANDO AND 8242 JAN**Agent(s):** WELSH AND KATZ LTD**29) Family number: 29092078 (US2003182974A)**

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Title: METHOD FOR FORMING A POUCH IN A TUBULAR KNITTED ARTICLE WITH A CIRCULAR KNITTING MACHINE

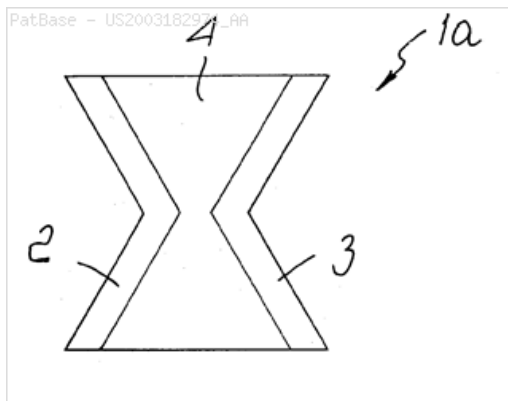
Abstract: The method comprises using a set of contiguous needles of the needle cylinder; actuating the needle cylinder with an alternating rotary motion about its own axis, through a rotation angle making the knitting needles to pass in front of n feeds or drops of the machine which are used to form the pouch; gradually decreasing the needles made to knit at at least one of the n feeds, excluding every time needles located at the lateral ends of the set in at least one step of the knitting process; and gradually increasing, at the lateral ends of the set, the needles that are made to knit at at least one of the n feeds in at least one other step of the knitting process.

Classifications:**International (ipc 8-9):** D04B1/26 D04B15/48

D04B9/56 (Advanced/Invention);

D04B9/56 (Advanced/Non-invention);

D04B1/22 D04B15/38 D04B9/00 (Core/Invention)

International (ipc 1-7): D04B1/26 D04B15/48 D04B9/00 D04B9/46 D04B9/56**CPC:** D04B1/108 D04B1/26 D10B2403/033**European:** D04B1/10B3 D04B1/26**US:** 66/187 66/51 66/510 66/8 66/8P**Family:**

Publication number	Publication date	Application number	Application date
CN100420783 C	20080924	CN20031008833	20030326
CN1446968 A	20031008	CN20031008833	20030326
CZ20030823 A3	20031112	CZ20030000823	20030325
ITMI20020630 A0	20020326	IT2002MI00630	20020326
ITMI20020630 A1	20030926	IT2002MI00630	20020326
KR20030077971 A	20031004	KR20030016200	20030314
US2003182974 AA	20031002	US20030392005	20030319
US6722163 BB	20040420	US20030392005	20030319

Priority:

IT2002MI00630 20020326

Probable Assignee: LONATI SPA

Assignee(s): (std): MATEC SPA ; MATEC SRL

Assignee(s): LONATI SPA ; MATEC S P A ; MATEC S R L

Inventor(s): (std): ANDO J ; ANDO JAN

Inventor(s): J ANDO

30) Family number: 31829498 (US2005081569A)

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Title: SINKER SELECTION DEVICE IN A CIRCULAR KNITTING MACHINE

Abstract: A sinker selection device in a circular knitting machine, comprising for each radial slot of the sinker ring in which sinkers are accommodated, a selector facing the end of the corresponding radial slot directed away from the axis of the sinker ring, the selector being oscillatable on a radial plane with respect to the sinker ring to pass from active to inactive positions, and connected to the corresponding sinker, arranged in the corresponding radial slot, to induce different actuation of the corresponding sinker along the corresponding radial slot, depending on whether the selector is in the inactive position or in the active position. A selection actuator is provided which laterally faces the sinker ring and can engage on command the selector for transfer from inactive to active positions.

Classifications:

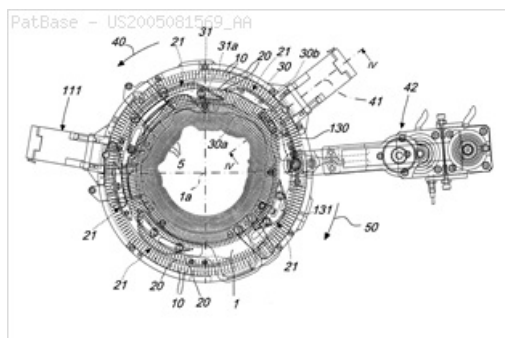
International (IPC 8-9): D04B15/06 D04B15/78 D04B35/00 D04B9/12 D04B9/26 D04B9/46 (Advanced/Invention); D04B15/00 D04B15/66 D04B35/00 D04B9/00 (Core/Invention); D04B (Subclass/Invention)

International (IPC 1-7): D04B15/06 D04B9/46

CPC: D04B15/14 D04B15/06 D04B9/26 D04B15/78

European: D04B15/06 D04B15/78 D04B9/26

US: 66/104 66/107 66/93 66/930



Family:

Publication number	Publication date	Application number	Application date
EP1524348 A1	20050420	EP20040021033	20040903
EP1524348 B1	20091111	EP20040021033	20040903
ITMI20031995 A1	20050416	IT2003MI01995	20031015
JP2005120567 A2	20050512	JP20040300367	20041014
JP4628063 B2	20110209	JP20040300367	20041014
US2005081569 AA	20050421	US20040935758	20040908
US7065989 BB	20060627	US20040935758	20040908

Priority:

IT2003MI01995 20031015

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA

Assignee(s): LONATI S P A

Inventor(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI TIBERIO

Agent(s): MODIANO MICAELA NADIA; MODIANO AND ASSOCIATI; ALBERT; DANIEL; GUIDO

Designated states: CZ FR PL TR

31) Family number: 39345678 (US2009165503A)

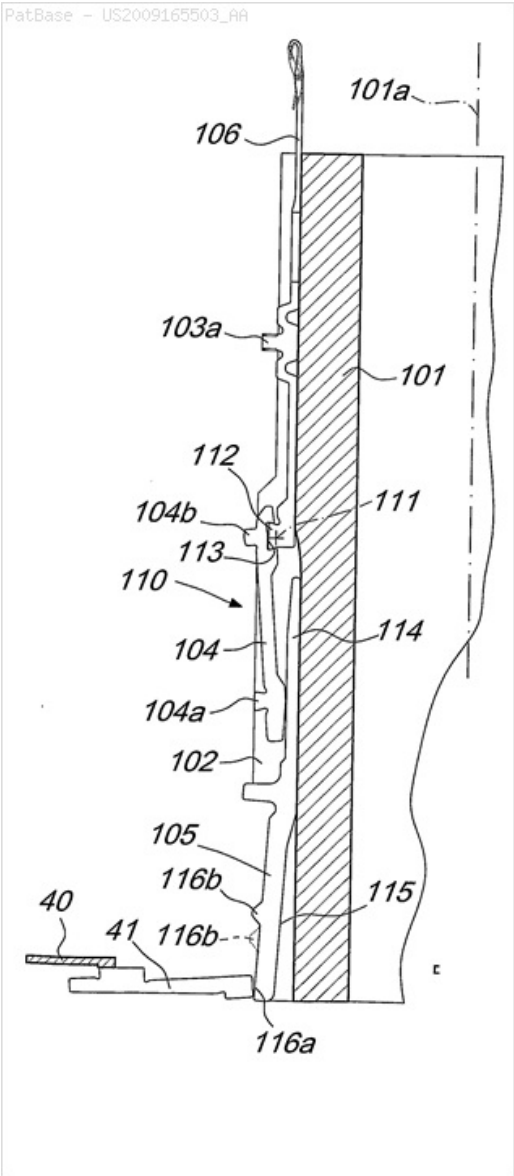
© PatBase

Title: CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE

Abstract: A circular knitting machine for hosiery or the like, comprises at least one needle cylinder with vertical axis and has, on its lateral surface, a plurality of axial slots, each of which accommodates a needle and an element for actuating the needle. The actuation element comprises at least one connecting element and a selector. The connecting element is provided with a radially actuatable movable heel, and the selector protrudes with a portion between the bottom of the axial slot and the connecting element in any operative position of the machine. The selector is oscillatable on a radial plane of the needle cylinder to produce oscillation of the connecting element and extract its movable heel from the axial slot to achieve engagement with connecting element actuation cams facing the lateral surface of the needle cylinder.

Classifications:

International (IPC 8-9): D04B1/16 D04B1/26 D04B15/00 D04B15/14 D04B15/32 D04B15/34 D04B15/82 D04B35/10 D04B9/00 D04B9/08 D04B9/10 D04B9/22 D04B9/46 (Advanced/Invention); D04B1/14 D04B1/22 D04B15/00 D04B15/66 D04B35/00 D04B9/00 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN101415870 A	20090422	CN200780012063	20070327
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CN101415871 A	20090422	CN200780012100	20070327
CN101415871 B	20130313	CN200780012100	20070327
CN101415872 A	20090422	CN200780012480	20070327
CN101415872 B	20110824	CN200780012480	20070327
DE602007005996 D1	20100602	DE200760005996T	20070327
DE602007007741 D1	20100826	DE200760007741T	20070327
DE602007036996 D1	20140717	DE200760036996T	20070327
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EP2002040 B1	20140604	EP20070734185	20070327
EP2002041 A2	20081217	EP20070734204	20070327
EP2002041 B1	20100714	EP20070734204	20070327
EP2002042 A2	20081217	EP20070734212	20070327
EP2002042 B1	20100421	EP20070734212	20070327
ITMI20060628 A1	20071001	IT2006MI00628	20060331
ITMI20060637 A1	20071001	IT2006MI00637	20060331
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JP2009531557 T2	20090903	JP20090502248T	20070327
JP2009531558 T2	20090903	JP20090502249T	20070327
JP2009531559 T2	20090903	JP20090502250T	20070327
JP2014139362 A2	20140731	JP20140022362	20140207
JP5010674 B2	20120829	JP20090502248T	20070327
JP5450050 B2	20140326	JP20090502249T	20070327
JP5511371 B2	20140604	JP20090502250T	20070327
JP5883893 B2	20160315	JP20140022362	20140207
KR101320959 B1	20131023	KR20087026624	20070327
KR101346049 B1	20131231	KR20087026626	20070327
KR101368302 B1	20140226	KR20087026623	20070327
KR20090005115 A	20090112	KR20087026623	20070327
KR20090005116 A	20090112	KR20087026624	20070327
KR20090007379 A	20090116	KR20087026626	20070327

US2009165503 AA	20090702	US20070225914	20070327
US2009301137 AA	20091210	US20070225911	20070327
US2010011816 AA	20100121	US20070225912	20070327
US7685845 BB	20100330	US20070225914	20070327
US7739889 BB	20100622	US20070225911	20070327
US7765836 BB	20100803	US20070225912	20070327
WO07113649 A1	20071011	WO20071B00864	20070327
WO07113649 C2	20080403	WO20071B00864	20070327
WO07113659 A2	20071011	WO20071B00883	20070327
WO07113659 A3	20080214	WO20071B00883	20070327
WO07113659 C2	20080424	WO20071B00883	20070327
WO07113662 A2	20071011	WO20071B00891	20070327
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WO07113662 C1	20080424	WO20071B00891	20070327

Priority:

IT2006MI00628	20060331	IT2006MI00637	20060331	IT2006MI01378	20060714
EP20070734185	20070327	JP20090502250	20070327	JP20090502250T	20070327
WO20071B00864	20070327	WO20071B00883	20070327	WO20071B00891	20070327

Probable Assignee: LONATI SPA

Assignee(s): (std): ANDO JAN ; LONATI ETTORE ; LONATI FAUSTO ; LONATI SPA ; LONATI TIBERIO ; MATEC SPA

Assignee(s): MATEC S P A ; LONATI S P A

Inventor(s): (std): ETTORE LONATI ; FAUSTO LONATI ; JAN ANDO ; TIBERIO LONATI ; LONATI TIBERIO ; LONATI FAUSTO ; LONATI ETTORE ; ANDO JAN

Agent(s): GRAMM LINS AND PARTNER PATENT U RECHTSANWAELTE PARTGMBB; MODIANO MICAELA NADIA ET AL; MODIANO MICAELA NADIA; KOHNO TAKAO; HUSCH BLACKWELL SANDERS LLP HUSCH BLACKWELL SANDERS LLP WELSH AND KATZ; HUSCH BLACKWELL SANDERS WELSH AND KATZ; HUSCH BLACKWELL SANDERS LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

32) Family number: 39601992 (US2009205376A)

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Title: DOUBLE-CYLINDER CIRCULAR KNITTING MACHINE FOR HOSIERY OR OTHER KNITTED ARTICLES

Abstract: A double-cylinder circular knitting machine for hosiery or other knitted articles comprises a lower needle cylinder with a vertical axis and an upper needle cylinder arranged above and coaxially to the lower needle cylinder. Aligned axial slots are formed on the lateral surface of the lower and upper needle cylinders. Each of the axial slots of the lower and upper needle cylinders accommodates an actuation element which can engage a needle to be actuated and is provided with a fixed heel, and with a heel which can be extracted radially on command from the axial slot. The transfer of a needle from one needle cylinder to the other is performed by fixed cams and by a selection device producing transition into the extracted position of the movable heel exclusively of the actuation elements that correspond to the needles to be moved to the lower needle cylinder.

Classifications:

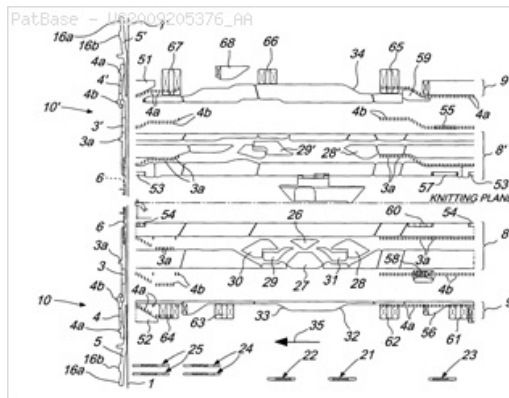
International (IPC 8-9): D04B15/32 D04B15/82 D04B9/00 D04B9/10 D04B9/46 (Advanced/Invention);

D04B15/00 D04B15/66 D04B9/00 (Core/Invention)

CPC: D04B15/325 D04B15/68 D04B9/10

European: D04B15/32C D04B15/68 D04B9/10

US: 66/14 66/17 66/222



Family:

Publication number	Publication date	Application number	Application date
CN101415873 A	20090422	CN200780012129	20070328
CN101415873 B	20110914	CN200780012129	20070328
DE602007044452 D1	20160218	DE200760044452T	20070328
EP2002043 A1	20081217	EP20070723711	20070328
EP2002043 B1	20160106	EP20070723711	20070328
ITMI20060636 A1	20071001	IT2006MI00636	20060331
JP2009531555 T2	20090903	JP20090501946T	20070328
JP4996677 B2	20120808	JP20090501946T	20070328
KR101368303 B1	20140312	KR20087026627	20070328
KR20090005117 A	20090112	KR20087026627	20070328
US2009205376 AA	20090820	US20070225913	20070328
US7765834 BB	20100803	US20070225913	20070328
WO07112915 A1	20071011	WO2007EP02766	20070328
WO07112915 C1	20071227	WO2007EP02766	20070328

Priority:

IT2006MI00636	20060331	EP20070723711	20070328	WO2007EP02766	20070328
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Probable Assignee: LONATI SPA

Assignee(s): (std): ANDO JAN ; LONATI SPA ; MATEC SPA

Assignee(s): MATEC S P A ; LONATI S P A

Inventor(s): (std): ANDO JAN ; JAN ANDO

Agent(s): GRAMM LINS AND PARTNER PATENT U RECHTSANWAELTE PARTGMBB; MODIANO MICAELA NADIA ET AL; MODIANO MICAELA NADIA; HUSCH BLACKWELL SANDERS LLP HUSCH BLACKWELL SANDERS LLP WELSH AND KATZ; HUSCH BLACKWELL SANDERS LLP WELSH AND KATZ

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

33) Family number: 42931825 (US2010319408A)

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Title: PICK-UP DEVICE FOR PICKING UP A TUBULAR KNITTED ARTICLE FROM A CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE AND FOR TRANSFERRING IT TO A UNIT ADAPTED TO PERFORM ADDITIONAL WORK ON THE ARTICLE

Abstract: A pick-up device for picking up a tubular knitted article from a circular knitting machine for hosiery and for transferring the article to a unit adapted to perform additional work thereon. The device comprises an annular pick-up body that supports pick-up members that can slide with respect to the pick-up body along radial directions. The pick-up body can be arranged coaxially around the needle cylinder of a circular knitting machine for hosiery so that each one of the pick-up members faces laterally a needle of the machine. The end of each one of the pick-up members that is directed toward the axis of the pick-up body has a seat that can engage a region of the stem of the needle that is arranged proximate to the latch of the needle on the opposite side with respect to the head of the needle. The device comprises actuation elements formed by elastic elements that act on the pick-up members for their sliding toward the axis of the pick-up body and radial pushers that act on the pick-up members for their sliding away from the axis of the pick-up body in contrast with the action of the elastic elements.

Classifications:

International (IPC 8-9): D04B15/88 D04B9/46

D04B9/56 (Advanced/Invention);

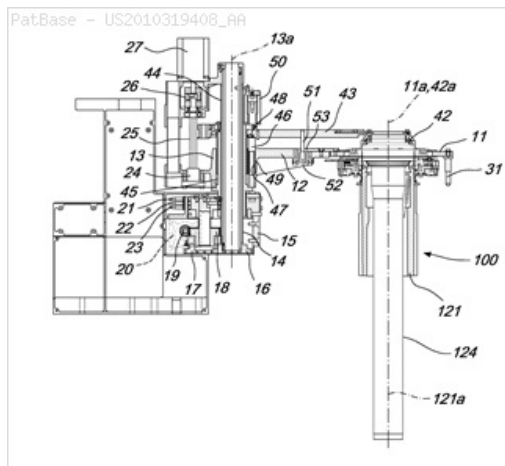
D04B15/88 D04B9/46 D04B9/56 (Advanced/Non-invention);

D04B15/00 D04B9/00 (Core/Invention)

CPC: D04B9/40 D04B15/02

European: D04B15/88 D04B9/56

US: 66/148 66/149.00RP 66/149R



Family:

Publication number	Publication date	Application number	Application date
CN101970739 A	20110209	CN200980108857	20090220
CN101970739 B	20121226	CN200980108857	20090220
DE602009009296 D1	20121025	DE200960009296T	20090220
EP2250306 A1	20101117	EP20090720112	20090220
EP2250306 B1	20120829	EP20090720112	20090220
ITMI20080398 A1	20090911	IT2008MI00398	20080310
JP2011514941 T2	20110512	JP20100550121T	20090220
JP5389831 B2	20140115	JP20100550121T	20090220
KR101581875 B1	20151231	KR20107020039	20090220
KR20100127217 A	20101203	KR20107020039	20090220
US2010319408 AA	20101223	US20090867629	20090220
US8028546 BB	20111004	US20090867629	20090220
WO09112347 A1	20090917	WO2009EP52040	20090220

Priority:

IT2008MI00398 20080310 EP20090720112 20090220 WO2009EP52040 20090220

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI SPA ; LONATI TIBERIO

Assignee(s): LONATI S P A

Inventor(s): (std): TIBERIO LONATI ; LONATI TIBERIO ; LONATI FAUSTO ; LONATI ETTORE ; FAUSTO LONATI ; ETTORE LONATI

Agent(s): MODIANO MICAELA NADIA; HUSCH BLACKWELL SANDERS LLP HUSCH BLACKWELL SANDERS LLP WELSH AND KATZ; HUSCH BLACKWELL LLP; MODIANO MICAELA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD AND APPARATUS FOR CLOSING A TUBULAR KNITTED ARTICLE AT ONE OF ITS AXIAL ENDS, AT THE END OF ITS PRODUCTION CYCLE ON A CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE

Abstract: A method and an apparatus for closing a tubular knitted article at one of its axial ends, at the end of its production cycle on a circular knitting machine for hosiery or the like. The method consists in ending the production of an article at one of its axial ends. The article is then picked up from the machine and transferred to a handling device located in a sewing or looping station. The pick-up is performed by transferring individually the loops of the last row of knitting from the needles of the machine to spikes of the handling device, which has an annular body composed of two semiannular elements. The article is then turned, and one of the two semiannular elements is turned over with respect to the other one, so that the spikes of one semiannular element face, and are aligned with, the spikes of the other semiannular element. The loops of knitting arranged on the spikes of one semiannular element are transferred to the spikes of the other semiannular element so that each spike of the latter semiannular element supports a pair of loops of knitting.

Classifications:

International (IPC 8-9): D04B15/88 D04B9/46

D04B9/56 (Advanced/Invention);

D04B15/88 D04B9/46 D04B9/56 (Advanced/Non-invention);

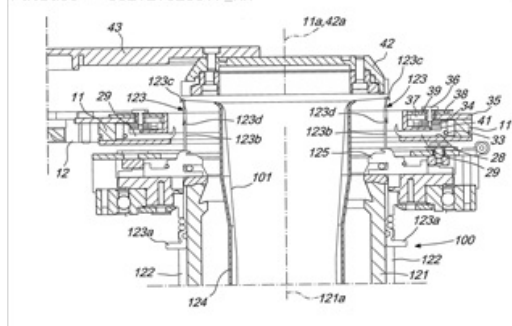
D04B15/00 D04B9/00 (Core/Invention)

CPC: D04B9/02 D04B9/40 D04B15/02

European: D04B15/02 D04B15/88 D04B9/02 D04B9/40 D04B9/56

US: 66/148 66/148P 66/150 66/150S

PatBase - US2010313607_AA



Family:

Publication number	Publication date	Application number	Application date
CN101970737 A	20110209	CN200980108882	20090220
CN101970737 B	20130904	CN200980108882	20090220
DE602009014379 D1	20130529	DE200960014379T	20090220
EP2250305 A1	20101117	EP20090718740	20090220
EP2250305 B1	20130327	EP20090718740	20090220
ES2416755 T3	20130802	ES20090718740T	20090220
HR20130593 T1	20130731	HR20130000593	20130627
ITMI20080397 A1	20090911	IT2008MI00397	20080310
JP2011514940 T2	20110512	JP20100550120T	20090220
JP5389830 B2	20140115	JP20100550120T	20090220
KR101570182 B1	20151118	KR20107020038	20090220
KR20100124276 A	20101126	KR20107020038	20090220
US2010313607 AA	20101216	US20090867382	20090220
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WO09112346 A1	20090917	WO2009EP52039	20090220

Priority:

IT2008MI00397 20080310 EP20090718740 20090220 WO2009EP52039 20090220

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI SPA ; LONATI TIBERIO

Assignee(s): LONATI S P A

Inventor(s): (std): ETTORE LONATI ; FAUSTO LONATI ; LONATI ETTORE ; LONATI FAUSTO ; LONATI TIBERIO ; TIBERIO LONATI

Agent(s): MODIANO MICHAELA NADIA; PONTI ADELAIDA; HUSCH BLACKWELL SANDERS LLP HUSCH BLACKWELL SANDERS LLP WELSH AND KATZ; HUSCH BLACKWELL LLP; MODIANO MICHAELA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHOD FOR PREPARING A TUBULAR MANUFACTURE SUCH AS A HOSIERY ITEM OR THE LIKE FOR AUTOMATED PICK-UP AT THE END OF ITS FORMATION ON A DOUBLE-CYLINDER CIRCULAR MACHINE WITH AT LEAST ONE FEED OR DROP AND DOUBLE-CYLINDER CIRCULAR MACHINE FOR PERFORMING THE METHOD

Abstract: A method for preparing a tubular manufacture such as a hosiery item or the like for automated pick-up at the end of its formation on a double-cylinder circular machine including at least the following steps: -a first step, which consists in transferring or retaining all the needles in the lower needle cylinder; -a second step, which consists in moving all the needles to the tuck-stitch position; -a third step, which consists in pushing upward the portion of the manufacture engaged with the needles; -a fourth step, which consists in disengaging the sinkers from the manufacture; -a fifth step, which consists in lifting the needles into the dropped-stitch position.

Classifications:

International (IPC 8-9): A41B11/00 D04B15/88 D04B9/10 D04B9/40

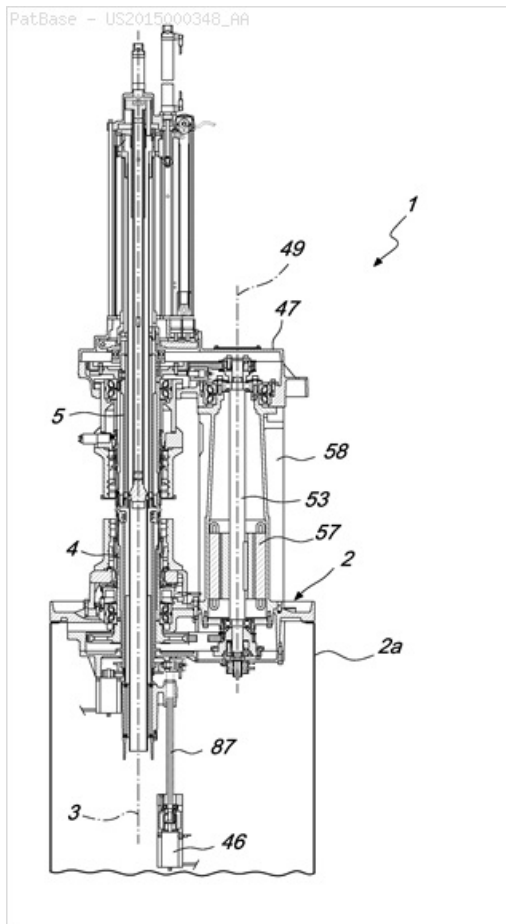
D04B9/46 D04B9/56 (Advanced/Invention);

D04B9/10 (Core/Invention);

D04B (Subclass/Invention)

CPC: A41B11/00 D04B9/56 D04B9/40 D04B9/46 D04B9/10

US: 1/1 66/8

**Family:**

Publication number	Publication date	Application number	Application date
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CN103946432 A	20140723	CN201280056849	20120723
CN103946432 B	20161102	CN201280056849	20120723
CO6930337 A2	20140428	CO20140080249	20140414
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EA201490652 A1	20140829	EA20140090652	20120723
EP2764149 A1	20140813	EP20120740567	20120723
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KR20140067130 A	20140603	KR20147009993	20120723
MX2014003298 A1	20140528	MX20140003298	20120723
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TH153481 A	20160621	TH20141001436	20120723
TR201600992 T4	20160222	TR20160000992T	20120723
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US2015000348 AA	20150101	US20120344503	20120723
US9365962 BB	20160614	US20120344503	20120723
WO13041268 A1	20130328	WO2012EP64416	20120723
ZA201401981 A	20150429	ZA20140001981	20140318

Priority:

IT2011MI01683 20110919 EP20120740567 20120723 WO2012EP64416 20120723

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI SPA ; LONATI TIBERIO

Assignee(s): LONATI S P A

Inventor(s): (std): ETTORE LONATI ; FAUSTO LONATI ; LONATI DECEASED TIBERIO ; LONATI ETTORE ; LONATI FAUSTO ; LONATI FRAUSTO ; LONATI TIBERIO ; TIBERIO LONATI ; LONATI TIBERIO FINADO

Agent(s): MODIANO MICAELA NADIA; PONTI ADELAIDA; KOHNO TAKAO; CEMEN KARABAG; HUSCH BLACKWELL LLP; MODIANO MICAELA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CIRCULAR MACHINE FOR KNITTING, HOSIERY OR THE LIKE, WITH SINKER ACTUATION DEVICE

Abstract: A circular machine for knitting, hosiery or the like, with sinker actuation device, comprising a needle cylinder; the needle cylinder has, on its lateral surface, a plurality of axial grooves, each of which accommodates a needle that can move on command along the corresponding axial groove in order to pick up at least one yarn dispensed at at least one feed or drop and form knitting; the machine also comprises needle actuation cams, which face the lateral surface of the needle cylinder and define paths that are extended around the axis of the needle cylinder and can be engaged by at least one heel of the needles, which protrudes from the lateral surface of the needle cylinder, in order to actuate the movement of the needles along the corresponding axial groove with respect to the needle cylinder as a consequence of the rotation of the needle cylinder about its own axis with respect to the needle actuation cams and the at least one feed.

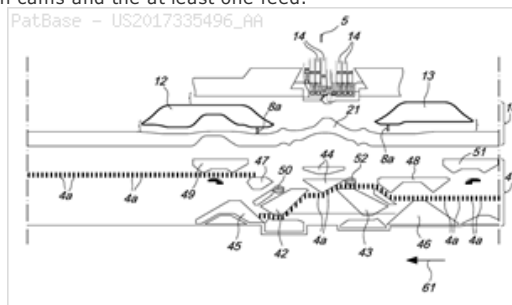
Classifications:**International (IPC 8-9):** D04B15/06 D04B15/16 D04B15/24

D04B15/32 D04B15/34 D04B15/36 D04B15/94 D04B9/20

D04B9/46 (Advanced/Invention)

CPC: D04B9/20 D04B15/06 D04B15/32 D04B15/24 D04B9/46

D04B15/16 D04B15/34 D04B15/94

**Family:**

Publication number	Publication date	Application number	Application date
BR112017007869 A2	20180123	BR20171107869	20151026
CN107002324 A	20170801	CN201580059536	20151026
CO20170005224 A2	20171031	CO20170005224	20170526
EA201790933 A1	20180131	EA20170090933	20151026
EP3212831 A1	20170906	EP20150794095	20151026
IN201737016269 A	20170825	IN201737016269	20170509
JP2017537238 T2	20171214	JP20170523452T	20151026
KR20170085054 A	20170721	KR20177014395	20151026
MX2017005696 A1	20170714	MX20170005696	20151026
SV2017005428 A	20170911	SV20170005428	20170428
US2017335496 AA	20171123	US20150522629	20151026
WO16066573 A1	20160506	WO2015EP74717	20151026

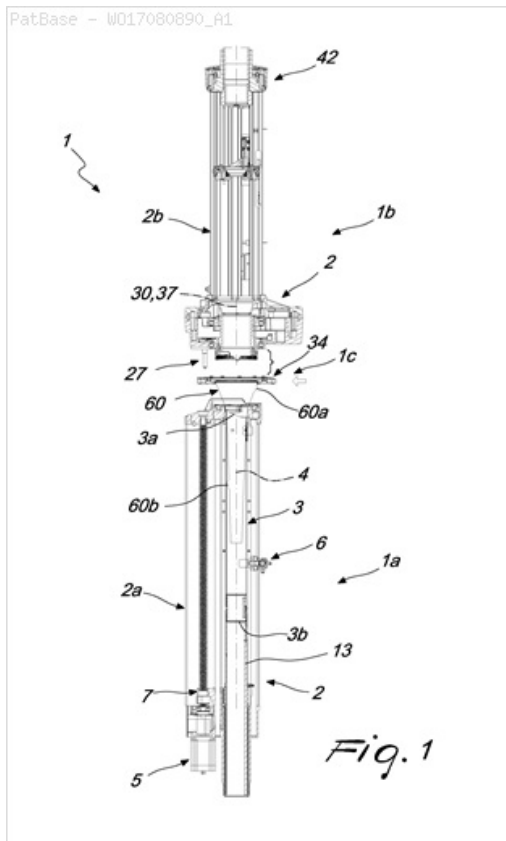
Priority:

IT2014MI01852 20141029 WO2015EP74717 20151026

Probable Assignee: LONATI SPA**Assignee(s):** (std): LONATI SPA**Assignee(s):** LONATI S P A**Inventor(s):** (std): ETTORE LONATI ; FAUSTO LONATI ; FRANCESCO LONATI ; LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO**Agent(s):** JOSE ANDRES RINCON USCATEGUI; MODIANO MICAELA NADIA; KOHNO TAKAO; MODIANO MICAELA**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**Title:** TURNING DEVICE FOR KNITTED TUBULAR ARTICLES, PARTICULARLY FOR TURNING INSIDE-OUT TUBULAR ARTICLES WITH POCKETS THAT PROTRUDE FROM THE LATERAL SURFACE THEREOF

Abstract: A turning device for knitted tubular articles, particularly for turning inside-out tubular articles with pockets that protrude from the lateral surface thereof. The turning device in question comprises a main supporting structure (2) which supports a tubular body (3) arranged with its axis (4) substantially vertical. The tubular body (3) has its upper axial end (3a) beveled along a plane that is inclined with respect to its axis (4). The turning device comprises first actuation means (5) which can be activated to perform a translation of the tubular body (3) along its axis (4) with respect to the main supporting structure (2). The tubular body (3) is insertable, with its upper axial end (3a), through an axial end of a tubular article (60) in order to turn it inside out. The turning device in question comprises second actuation means (6, 6a) which can be activated to rotate the tubular body (3) about its own axis (4), through an angle of preset breadth, with respect to the main supporting structure (2).

Classifications:**International (IPC 8-9):** D04B15/92 D04B9/40 (Advanced/Invention)**CPC:** D04B9/40 D04B15/92

**Family:**

Publication number	Publication date	Application number	Application date
CO20180002205 A2	20180719	CO20180002205	20180227
IN201837006566 A	20180824	IN201837006566	20180221
ITUB20155413 A1	20170510	IT2015UB05413	20151110
KR20180081037 A	20180713	KR20187008060	20161102
WO17080890 A1	20170518	WO2016EP76450	20161102

Priority:

IT201510000070695 20151110 IT2015UB05413 20151110 WO2016EP76450 20161102

Probable Assignee: LONATI S P A

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Inventor(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO

Agent(s): MODIANO MICAELA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

38) Family number: 65706859 (WO17080931A1)

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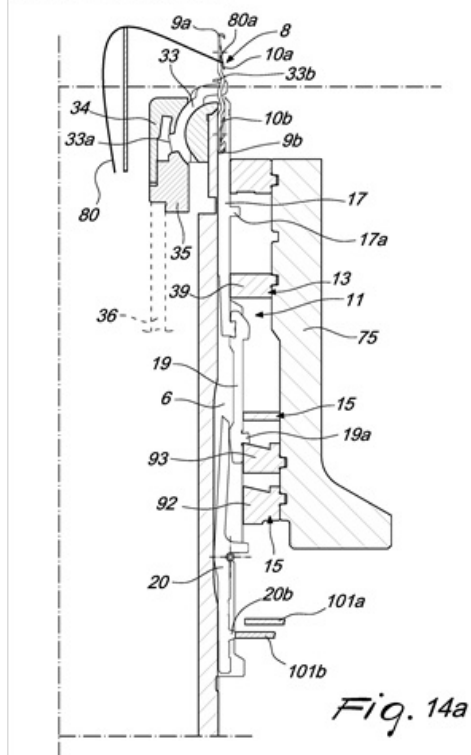
Title: METHOD FOR PREPARING A TUBULAR ARTICLE, SUCH AS A SOCK OR THE LIKE, FOR AUTOMATED PICKUP AT THE END OF ITS FORMING ON A DOUBLE CYLINDER CIRCULAR MACHINE WITH AT LEAST ONE FEED OR DROP, AND DOUBLE CYLINDER CIRCULAR MACHINE FOR THE EXECUTION THEREOF

Abstract: A method for preparing a tubular article, such as a sock or the like, for automated pickup at the end of its forming on a double cylinder circular machine with at least one feed or drop, and to a double cylinder circular machine for the execution thereof. The method in question is executed on a machine with at least one feed or drop (100) and with the needle cylinders (4, 5) actuatable with a rotary motion about their own axes (3) with respect to needle actuation cams, to cams (34) for actuating the knockover sinkers (33) and to the feed or drop (100). The method comprises: - a first step, which consists in transferring or retaining all the needles (8) in the lower needle cylinder (4) with the loops of the last row of knitting of the article (80), formed previously in the upper head (9a) of the needles (8), hooked, tensioning the article (80) downward inside the lower needle cylinder (4); - a second step, which consists in pushing upward the portion of the article (80) engaged with the needles (8); - a third step, which consists in moving all the needles (8) to the tuck stitch position; - a fourth step, which consists in progressively disengaging the knockover sinkers (33) from the article (80), moving the knockover sinkers (33) away from the axis (3) of the lower needle cylinder (4) at the feed or drop (100) owing to the rotation of the lower needle cylinder (4) about its own axis (3) with respect to the feed or drop (100) and to the needle actuation cams so that the article (80), owing to the upward thrust, moves so that the loops of its last row of knitting (80a) lie above the beak (33b) of the knockover sinkers (33) toward the upper head (9a) of the needles (8); - a fifth step, which consists in moving all the needles (8) to an intermediate position that is comprised between the tuck stitch position and the drop stitch position; - a sixth step, which consists in pushing the portion of the article (80) that is engaged with the needles (8) further upward; - a seventh step, which consists in lifting the needles (8) at least to the drop stitch position, keeping the article (80) pushed upward in order to retain the loops of the last row of knitting (80a) in the upper head (9a) of the needles (8).

Classifications:

International (IPC 8-9): D04B9/10 D04B9/40 (Advanced/Invention)

CPC: D04B9/40 D04B9/10

**Family:**

Publication number	Publication date	Application number	Application date
CN108350630 A	20180731	CN201680066234	20161104
CO20180002821 A2	20180328	CO20180002821	20180316
IN201837015407 A	20180615	IN201837015407	20180424
ITUB20155479 A1	20170511	IT2015UB05479	20151111
KR20180081046 A	20180713	KR20187010505	20161104
WO17080931 A1	20170518	WO2016EP76729	20161104

Priority:

IT201510000071276 20151111 IT2015UB05479 20151111 WO2016EP76729 20161104

Probable Assignee: LONATI S P A

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Inventor(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO

Inventor(s): ETTORE LONATI ; FAUSTO LONATI ; FRANCESCO LONATI

Agent(s): JOSE ANDRES RINCON USCATEGUI; MODIANO MICAELA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

39) Family number: 68258548 (WO18011076A1)

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Title: PICKUP DEVICE FOR PICKING UP A KNITTED TUBULAR MANUFACTURE FROM A CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE AND FOR TRANSFERRING IT TO A UNIT ADAPTED TO PERFORM ADDITIONAL OPERATIONS ON THE MANUFACTURE

Abstract: A pickup device for picking up a knitted tubular manufacture from a circular knitting machine for hosiery or the like and for transferring it to a unit adapted to perform additional operations on the manufacture, comprising an annular pickup body (2) that supports a plurality of pickup elements (3), which are arranged radially around the axis (2a) of the pickup body (2) and can slide with respect to the pickup body (2) along radial directions; the pickup body (2) can be arranged coaxially around the needle cylinder (42) of a circular knitting machine (41) for hosiery or the like, with each one of the pickup elements (3) laterally facing a needle (44) of the machine (41); actuation means (4) being provided which act on the pickup elements (3) for their movement along the radial directions at least from a first position, in which the pickup elements (3) are closer to the axis (2a) of the pickup body (2), to a second position, in which the pickup elements (3) are spaced further from the axis (2a) of the pickup body (2) with respect to the first position, and vice versa; the end (3a) of each one of the pickup elements (3) that is directed toward the axis (2a) of the pickup body (2) is hook-shaped and forms a compartment (5) that is adapted to receive at least one loop of knitting (51); safety means (6) being also provided which are associated with the pickup body (2) and can be engaged by the end (3a) of the pickup elements (3) in their transition from the first position to the second position in order to close the compartment (5).

Classifications:

International (IPC 8-9): D04B9/40 (Advanced/Invention);

D04B15/02 (Advanced/Non-invention)

CPC: D04B15/02 D04B9/40

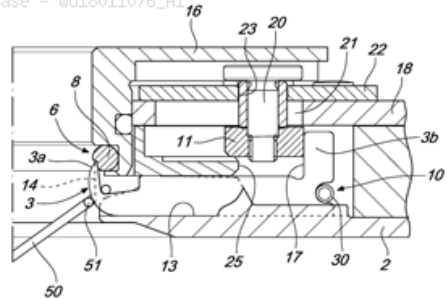


Fig. 8A

Family:

Publication number	Publication date	Application number	Application date
WO18011076 A1	20180118	WO2017EP67079	20170707

Priority:

IT201610000072994 20160713

Probable Assignee: LONATI SPA

Assignee(s): (std): LONATI SPA

Inventor(s): (std): LONATI ETTORE ; LONATI FAUSTO ; LONATI FRANCESCO

Agent(s): MODIANO MICAELA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW