



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.07.2023 Bulletin 2023/30

(51) International Patent Classification (IPC):
C14B 1/00 (2006.01) C14B 1/02 (2006.01)
C14B 1/44 (2006.01) C14B 17/06 (2006.01)

(21) Application number: **23151873.9**

(52) Cooperative Patent Classification (CPC):
C14B 17/06; C14B 1/00; C14B 1/02; C14B 1/44

(22) Date of filing: **17.01.2023**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR
 Designated Extension States:
BA
 Designated Validation States:
KH MA MD TN

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(30) Priority: **19.01.2022 IT 202200000767**

(54) **MACHINE FOR PROCESSING HIDES**

(57) A machine for processing hides, which comprises a supporting framework (2) which defines an entry zone (3) for the hide to be processed and an exit zone (4) for the processed hide and which supports at least two processing stations (5, 6) which are arranged along the route of the hide between the entry zone (3) and the exit zone (4). There are also transport means (8) for the

hide from the entry zone (3) to the exit zone (4). According to the invention, the transport means (8) comprise at least one entrainment assembly (9) which has at least one pair of conveyor belts (10, 11) which roll continuously and define respective entrainment portions (10a, 11a) which are mutually facing and are designed to come into contact with the opposite faces of the hide being processed.

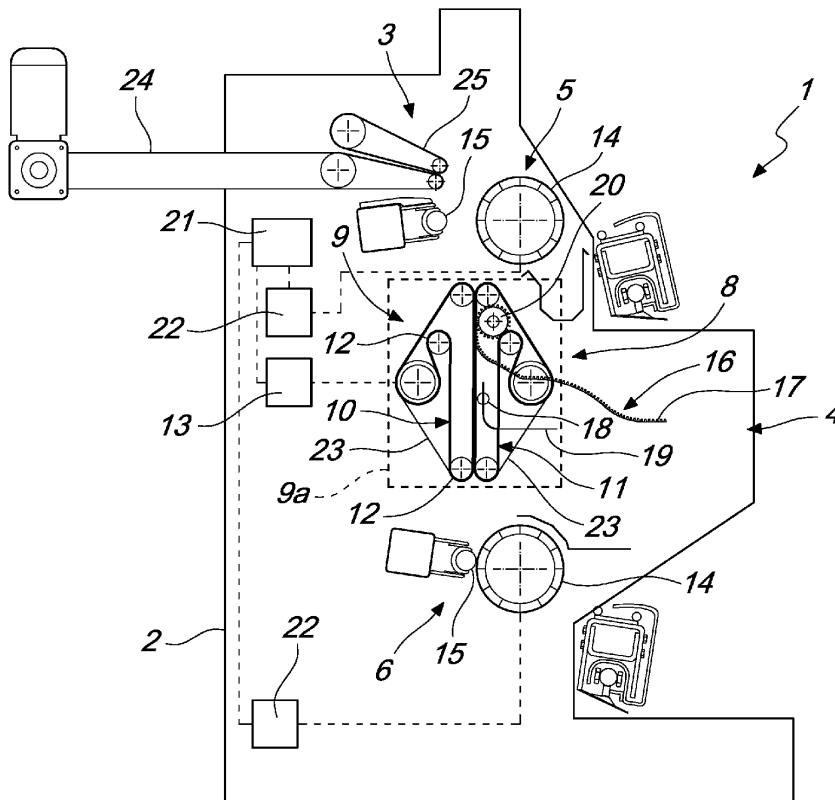


Fig. 1

Description

[0001] The present invention relates to a machine for processing hides.

[0002] Various different types of machines for processing hides are known, such as fleshing machines, sammying and setting-out machines, or shaving machines, the structure of all of which is substantially similar.

[0003] In particular, such machines generally execute the processing of the hides by using conveyor rollers to make them pass through a processing unit which has a scraper cylinder, which is actuated to rotate and cooperates with a contrast element which pushes the hides being processed against the scraper cylinder.

[0004] In particular, traditional fleshing machines have a supporting framework, which supports, so that they can rotate, a scraper cylinder and a pair of conveyor rollers, and a structure, also called a beam, on which a rubberized supporting roller, which can be actuated so as to rotate, and a contrast element are mounted.

[0005] The beam can be moved by tilting, with respect to the supporting framework, in order to pass from an open machine condition, in which the supporting roller and the contrast element are spaced apart from the pair of conveyor rollers and from the scraper cylinder, to a closed machine condition, in which the supporting roller and the elastic resting element are moved closer to the conveyor rollers and to the scraper cylinder, so as to be able to act on the hide being processed and carry out the fleshing.

[0006] The use of the traditional machines described requires, in particular, the operators to initially - in the open machine condition - insert a first half of the hide to be processed into the machine.

[0007] Once the machine has been transitioned to the closed condition, the supporting roller and the conveyor rollers conduct the extraction therefrom of the hide, which, pushed by the contrast element against the scraper cylinder, is fleshed on the half thereof that was inserted previously.

[0008] Once the hide has been extracted and the machine returned to the open condition, the operators have to manually pick up the hide, turn it over, and then introduce it once again into the machine with its other, yet unprocessed half, subsequently repeating the operations carried out previously in order to perform the fleshing on the entire surface of the hide.

[0009] It is evident that traditional fleshing machines entail the execution of multiple operations with consequent long processing times.

[0010] In particular, it should be noted that traditional machines, in order to complete the fleshing, require the operators to manually turn the hides over, an operation that, in addition to requiring considerable experience on the part of the operators, is very wearying for them, in that the hides are extremely slippery and heavy.

[0011] In order to seek to solve this problem, it has been proposed to install two traditional fleshing machines

in a "back-to-back" arrangement, in which the two fleshing machines are connected with a conveyor belt.

[0012] With this arrangement, in the first machine the first half of the hide is fleshed in the conventional way, but instead of being picked up by the operators assigned to the first machine in order to turn it around, it is placed by the operators on the conveyor belt located at the front of the first machine, in order to be sent to the second fleshing machine with the non-fleshed part arranged in front, with respect to its motion of advancement, so that it can be introduced without effort into the second machine either automatically or by operators assigned to performing this task.

[0013] Although valid in terms of reducing processing times and effort on the part of the operators, this solution however requires a greater number of operators and that at least the operators assigned to the first machine have sufficient experience.

[0014] In fact, the hide needs to be positioned on the continuously-moving conveyor belt without wrinkles which could spoil it in the second machine, so the job of the operators on the first machine is not simply to allow it to fall on the conveyor belt; they must have the necessary skill and dexterity to be certain that there are no wrinkles in the hides that are sent to the second machine.

[0015] Also in order to overcome the problem with traditional fleshing machines of requiring operators to turn the hide over after the first pass, continuous fleshing machines have also been provided, which, in general, have two processing units that operate in mutual succession and are fitted with means that are capable of performing the transfer of the hides from one unit to the other automatically, i.e. without requiring the manual intervention of operators.

[0016] In particular, machines of this type are known which have, on their supporting framework, two processing units arranged one above the other and more precisely one upper processing unit and one lower processing unit.

[0017] More specifically, the upper processing unit comprises an upper scraper cylinder and first upper conveyor rollers, which are mounted on the supporting framework, as well as a contrast element and second upper conveyor rollers, which are mounted on an upper tilting beam, which can be moved on command between an open or inactive position and a closed or active position.

[0018] In turn, the lower processing unit comprises a lower scraper cylinder and at least one first lower conveyor roller, which are mounted on the supporting framework, as well as a contrast element and one or more second lower conveyor rollers, which are mounted on a lower tilting beam which can also be moved between an open position and a closed position.

[0019] To process the hides with a machine of this type, the operators have to insert a first half of the hide into the machine, with the upper beam open, and then actuate the closure of the upper beam, so that the upper conveyor

rollers can pull the hide inside the machine.

[0020] As the hide enters the machine, the upper scraper cylinder performs the fleshing of the second half of the hide, and the first half of the hide is introduced between the lower conveyor rollers.

[0021] When the operators see, by way of a mirror, that the start of the fleshed part of the hide is exiting from the upper processing unit, they actuate the closing of the lower beam and the opening of the upper beam.

[0022] At this point, the lower conveyor rollers are activated so as to extract the hide from the machine and allow the lower scraper cylinder to flesh the first half of the hide, while the operators can insert another hide into the upper processing unit.

[0023] Machines of this type, although they boast considerable advantages over traditional fleshing machines, also have a number of drawbacks.

[0024] In fact, pulling the hides inside the machine is done by conveyor rollers that come into contact with the hide exclusively at a limited portion of their lateral surface, with the consequent need to have to exert a high pressure of the conveyor rollers upon the hide to ensure an adequate grip thereby on the hide.

[0025] Again owing to the reduced contact surface of the conveyor rollers with the hide, the hide can go down incorrectly in its passage from the upper processing unit to the lower processing unit, especially if there are parts on it that are tougher, with the consequent need to have to stop the machine, in order to avoid damaging the hide.

[0026] Furthermore, the hide, in passing from one conveyor roller to another, can be subjected to wrinkling that would compromise its processing.

[0027] Technical problems similar to those described above also afflict other machines for processing hides that are structurally similar to the fleshing machines described above.

[0028] The aim of the present invention is to provide a machine for processing hides that is capable of avoiding the drawbacks of the known art in one or more of the above mentioned aspects.

[0029] Within this aim, an object of the invention is to provide a machine for processing hides that is capable of executing a complete processing on the hides, without requiring considerable manual interventions by operators, and which permit a secure conveyance of the hides being processed, while eliminating or, at least, enormously reducing the risk of damaging the hide during its conveyance, with respect to the known art.

[0030] Another object of the invention is to provide a machine for processing hides that does not require a high contact pressure to be exerted between the means used to convey the hides and the hides themselves.

[0031] Another object of the invention is to provide a machine for processing hides that makes it possible to convey the hides without causing wrinkles in the hides themselves.

[0032] Another object of the invention is to provide a machine for processing hides that makes it possible for

the hide, in its conveyance within the machine, not to have different speeds between its center and its outer part.

[0033] Another object of the present invention is to provide a machine for processing hides that is capable of producing, at the exit point from the machine, the processed hide in a properly outspread condition, so as to be already ready and correctly prepared for subsequent forms of processing.

[0034] Another object of the invention is to provide a machine for processing hides that, owing to its peculiar implementation characteristics, is capable of offering the highest guarantees of reliability and safety in its operation.

[0035] Another object of the invention is to provide a machine for processing hides that is convenient to maintain, easily washable and does not require the use of pollutant consumables for its operation.

[0036] Another object of the invention is to provide a machine for processing hides that can be constructively simple to provide.

[0037] Furthermore, the present invention sets out to overcome the drawbacks of the background art in a manner that is alternative to any existing solutions.

[0038] Another object of the invention is to provide a machine for processing hides that is highly reliable, easy to implement and of low cost.

[0039] This aim and these and other objects which will become more apparent hereinafter are achieved by a machine for processing hides according to claim 1, optionally provided with one or more of the characteristics of the dependent claims.

[0040] Further characteristics and advantages of the invention will become better apparent from the detailed description that follows of a preferred, but not exclusive, embodiment of the machine for processing hides according to the invention, which is illustrated for the purposes of non-limiting example in the accompanying drawings wherein:

Figure 1 is a schematic front elevation view of a machine according to the invention;

Figure 2 is an enlarged-scale schematic view of an entrainment assembly for the hide of the machine according to the invention;

Figures 3 to 9 are schematic views of a sequence of operating steps of the machine according to the invention;

Figure 10 is a schematic view of the machine according to the invention in a step of washing thereof.

[0041] With reference to the figures, the machine for processing hides according to the invention, generally designated by the reference numeral 1, comprises a supporting framework 2, which defines an entry zone 3 for the hide to be processed and an exit zone 4 for the processed hide.

[0042] The supporting framework 2 supports at least

two processing stations 5 and 6, which are arranged along the route of the hide between the entry zone 3 and the exit zone 4.

[0043] More precisely, conveniently, at least one first processing station 5 and at least one second processing station 6 are mounted on the supporting framework 2, and are arranged in mutual succession along the route of the hide between the entry zone 3 and the exit zone 4.

[0044] There are also transport means 8 for the hide from the entry zone 3 to the exit zone 4.

[0045] According to the invention, the transport means 8 comprise at least one entrainment assembly 9, which has at least one pair of conveyor belts 10 and 11.

[0046] In particular, the conveyor belts 10, 11 roll continuously, between respective transmission rollers 12, of which at least one is connected to drive means 13, so as to define respective entrainment portions 10a, 11a which are mutually facing and are designed to come into contact with the opposite faces of the hide being processed.

[0047] Advantageously, the conveyor belts 10 and 11 can be moved, relative to each other, between an operative condition, in which their entrainment portions 10a, 11a are mutually close together in order to allow each one of the entrainment portions 10a, 11a to engage a respective face of the hide being processed, so as to be able to clamp the hide being processed between the entrainment portions 10a, 11a of the conveyor belts 10, 11, and an inoperative condition, in which the entrainment portions 10a, 11a are instead mutually spaced apart in order to not allow the entrainment portions 10a, 11a to engage the hide being processed, as will also be explained below.

[0048] Conveniently, the drive means 13 that make it possible to actuate the conveyor belts 10, 11 can be activated on command, so as to actuate the rolling of the conveyor belts 10, 11 with scrolling of the entrainment portions 10a, 11a in one direction, when the hide is being processed at one of the two processing stations 5, 6, and in the opposite direction, when the hide is being processed at the other processing station 5, 6.

[0049] As illustrated, each one of the processing stations 5 and 6 comprises a respective scraper cylinder 14 and a respective contrast element 15 which is adapted to push the hides against the scraper cylinder 14.

[0050] The contrast element 15 can be moved, relative to the scraper cylinder 14, in a way that is per se known, in order to pass from a disengaged position, in which it is spaced apart from the scraper cylinder 14, to an engaged position, in which it is held close to the scraper cylinder 14, so that the hide being processed can be kept in contact with the scraper cylinder 14.

[0051] For example, the scraper cylinders 14 of the processing stations 5, 6 can be configured to execute the fleshing of the hide being processed and they can be actuated by a single electric motor, not shown, which is connected kinematically to the scraper cylinders 14 via means for transmitting motion, also not shown and comprising, for example, a belt or the like.

[0052] Conveniently, as shown in the figures, the processing stations 5 and 6 are arranged on the supporting framework 2 one above the other and, in particular, the first processing station 5 is arranged above the second processing station 6.

[0053] It should be noted that, with such arrangement of the processing stations 5 and 6, the entry zone 3 of the machine is, conveniently, positioned at the top and toward the rear of the supporting framework 2, while its exit zone 4 is substantially at the front of the supporting framework, at a lower elevation than that of the exit zone 3.

[0054] Advantageously, the entrainment assembly 9 is, in turn, positioned between the processing stations 5, 6.

[0055] In particular, the entrainment assembly 9 is, conveniently, mounted on the supporting framework 2 with the capacity to rotate about at least one oscillation axis which is substantially transverse to the extension of the entrainment portions.

[0056] In this manner, the entrainment assembly 9 is able to pass from at least one first angular position, in which the entrainment portions 10a, 11a of the conveyor belts 10 and 11 are arranged substantially vertically, so as to allow the transfer of the hide being processed between the processing stations 5 and 6, to at least one second angular position, in which the entrainment portions 10a, 11a of the conveyor belts 10 and 11 are oriented substantially horizontally, in order to allow the conveyance of the hide to the exit zone 4 and its removal from the exit zone 4 in a flat condition and adequately outspread, so that the hide will be ready to be sent for subsequent forms of processing, and vice versa.

[0057] Advantageously, in order to allow the machine to be able to effectively process hides of various lengths, the entrainment assembly 9 can furthermore be moved in translation, with respect to the supporting framework 2, along a substantially vertical direction, so that it can be moved from a first working position, in which it is substantially closer to one of the processing stations, in particular to the processing station 5 arranged above, to a second working position, in which it is substantially closer to the processing station 6, and vice versa.

[0058] In addition, it is possible, advantageously, that the entrainment assembly 9, at least when it is in the second angular position, can be moved along a substantially horizontal direction, between a retracted position, in which it is positioned with the conveyor belts 10, 11 inside the supporting framework 2, and at least one extended position, in which it is positioned with the conveyor belts 10, 11 arranged closer to the exit zone 4 of the machine, with respect to the retracted position, and optionally arranged at least partially protruding from the supporting framework 2 through the exit zone 4.

[0059] In particular, there are movement means 16 for the entrainment assembly 9, which can be activated on command and which make it possible to automate the conveyance of the entrainment assembly 9 from the first

working position to the second working position, with the entrainment assembly 9 arranged in its first angular position, and, subsequently, to provide the rotation movement of the entrainment assembly 9 from the first angular position to its second angular position, and vice versa.

[0060] It should be noted that the movement means 16 are also able to move, conveniently, the entrainment assembly 9 from the retracted position and to the extended position, in particular following the transition of the entrainment assembly 9 from the first angular position to the second angular position, and to return it from the extended position to the retracted position.

[0061] In more detail, the entrainment assembly 9 comprises a frame 9a that supports the conveyor belts 10, 11 and which is mounted so that it can move on the supporting framework 2.

[0062] As in the embodiment shown, the movement means 16 for the entrainment assembly 9 can be provided by at least one toothed rack 17, which is fixed to the supporting framework 2 and extends along a locus that corresponds to the path of a zone of the frame 9a.

[0063] At least one other zone of the frame 9a of the entrainment assembly 9 is, on the other hand, engaged, via an abutment element 18, which is constituted by a pin protruding from the frame 9a with a sliding guide 19, which has an extension that corresponds to the path traveled by such other zone of the frame 9a during the movement of the entrainment assembly 9 actuated by the movement means 16.

[0064] The toothed rack 17 is engaged by a motorized pinion 20, which is supported so that it can rotate by the frame 9a, so that the rotary actuation of the pinion 20 produces the rolling thereof along the toothed rack 17 with consequent movement of the frame 9a along the path imposed by the shape of the toothed rack 17 and of the sliding guide 19.

[0065] Advantageously, the machine is provided with control means 21, which are constituted, for example, by an electronic control unit, and which are functionally connected to detection means 22 of the position of the hide being processed at the processing stations 5, 6.

[0066] The control means 21 are configured to activate the movement means 16 of the entrainment assembly 9 and the drive means 13 of the conveyor belts 10 and 11, on the basis of signals originating from the detection means 22.

[0067] More specifically, the detection means 22 can be, for example, constituted by an inductive sensor designed to acquire positions of the zone of the processing stations 5, 6, in order to identify the presence of the hides being processed at one or the other of the processing stations 5, 6.

[0068] Alternatively, the detection means 22 can be constituted by a device for measuring the current absorbed by the electric motor that actuates the scraper cylinders 14, so as to detect the presence of the hide being processed at one or the other of the processing stations 5, 6 on the basis of the value of the current ab-

sorbed by the electric motor that actuates the scraper cylinders 14.

[0069] Preferably, each one of the conveyor belts 10 and 11 is connected to a respective support 23, which is in turn mounted on the frame 9a, so as to be movable, with respect to the other support 23, in order to allow the passage of the conveyor belts 10, 11 between the operative condition and the inoperative condition.

[0070] In particular, the displacement of the conveyor belts 10, 11 between the operative condition and the inoperative condition can, conveniently, be actuated by pneumatic pistons, not shown, each one of which acts between the frame 9a of the entrainment assembly 9 and a respective support 23 of the conveyor belts 10, 11 and which can, furthermore, be actuated advantageously by the control means 21.

[0071] It should be noted that the pinion 20 can be mounted on one of the supports 23, so as to be engaged with the toothed rack 17 at least when the conveyor belts 10, 11 are in the operative condition.

[0072] Conveniently, substantially at the entry zone 3 of the machine, at least one first feeding mat 24 is positioned which makes it possible to convey the hide to be processed from a loading zone, located at one of its ends, where the operators place the hide to be processed on the first feeding mat 24, up until the entry zone 3 of the machine, so as to be able to reach the first processing station 5.

[0073] Advantageously, proximate to the end of the first feeding mat 24 opposite to the end located in the loading zone of the hide to be processed, there can be a second feeding mat 25, opposite with respect to the first feeding mat 24, so that the hide to be processed which enters the machine through its entry zone 3 comes to pass between the first and the second feeding mat 24, 25, so as to be correctly outspread prior to being processed in the processing stations 5, 6.

[0074] It should be noted that the feeding mats 24 and 25 can be moved in rotation, with respect to the supporting framework 2, between a working condition, in which they assume during operation of the machine, in which their active arms are positioned substantially horizontally, and a rest condition, to which they can be brought, in particular, during a step of washing of the machine, in which their active arms are located in a substantially vertical position, so as to facilitate the drainage of the water used in the washing.

[0075] The operation of the machine according to the invention is the following.

[0076] With the first and the second feeding mat 24, 25 in the working condition, the entrainment assembly 9 in the first working position and in its first angular position, the conveyor belts 10 and 11 in the inoperative condition and the contrast elements 15 of the processing stations 5 and 6 in the disengaged position, as shown in Figure 3, the operators can place the hide to be processed in the loading zone of the feeding mat 24.

[0077] The feeding mat 25 then pulls the hide to be

processed, loaded thereupon, toward the other end thereof, so that the hide is introduced into the machine through the entry zone 3.

[0078] Once the hide has reached the other end of the feeding mat 24, it begins, continuing its movement on the first feeding mat 24, to fall from the feeding mat, passing between the scraper cylinder 14 and the contrast element 15 of the first processing station 5 and getting inserted between the entrainment portions 10a, 11a of the conveyor belts 10, 11.

[0079] When a portion of preset length of the hide and, more specifically, a first half of the hide has passed the scraper cylinder 14 and the contrast element 15 of the first processing station 5, the contrast element 15 of the first processing station 5 is brought to the engaged position.

[0080] Simultaneously, the conveyor belts 10 and 11 are brought to the operative condition, as shown in Figure 4, so as to clamp a portion of the hide between the entrainment portions 10a, 11a of the conveyor belts 10, 11, while their drive means 13 are activated so that the conveyor belts 10, 11, using the respective entrainment portions 10a, 11a to pull the hide downward, enable the processing of the second half of the hide by the scraper cylinder 14 of the first processing station 5 in cooperation with the corresponding contrast element 15.

[0081] When the detection means 22 detect that the hide has passed the first processing station 5, the contrast element 15 of the first processing station 5 is returned to the disengaged position and the movement means 16 for the entrainment assembly 9 are activated so as to bring the entrainment assembly 9 to its second working position, as can be seen in Figure 5.

[0082] In the meantime, the hide being processed is introduced by the conveyor belts 10, 11 between the scraper cylinder 14 and the contrast element 15 of the second processing station 6.

[0083] When the first half of the yet unprocessed hide has passed the scraper cylinder 14 and the contrast element 15 of the second processing station 6 and at least a part of the second half of the hide is still engaged between the entrainment portions 10a, 11a of the conveyor belts 10, 11, the contrast element 15 of the second processing station 6 is brought to the engaged position and the drive means 13 of the conveyor belts 10, 11 are made to rotate in the opposite direction in order to invert the direction of advancement of the entrainment portions 10a, 11a of the conveyor belts 10, 11, so as to pull the hide so that its first half can be processed by the scraper cylinder 14 and by the contrast element 15 of the second processing station 6.

[0084] Simultaneously, the movement means 16 determine the gradual transition of the entrainment assembly 9 from the first angular position to the second angular position, as shown in Figures 6, 7 and 8.

[0085] The conveyor belts 10, 11, once the entrainment assembly 9 has reached the second angular position, allow the processed hide to be extracted from the

machine, through the exit zone 4, thus making the hide available for successive operations.

[0086] Once the entrainment assembly 9 has reached the second angular position, the movement means 16 can move the entrainment assembly 9 from the retracted position, which is the position the entrainment assembly 9 is in after its rotation from the first angular position to the second angular position, to the extended position, thus better facilitating the extraction of the hide from the machine, as shown in Figure 9.

[0087] When the detection means 22 detect that the hide is no longer being processed in the second processing station 6, the contrast element 15 of the second station 6 is returned to the disengaged position and, after the hide has fully exited from the machine, the drive means 13 are activated in order to invert once again the direction of travel of the entrainment portions 10a, 11a, so as to be able to begin a new processing cycle with another hide to be processed, after the movement means 16 have returned the entrainment assembly 9 to its first working position.

[0088] If it is necessary to subject the machine to washing, the first mat and the second mat 24 and 25 can be brought to the rest condition and the conveyor belts to their inoperative condition, as shown in Figure 10.

[0089] In practice it has been found that the machine according to the invention achieves the intended aim and objects and, in particular, attention is drawn to the fact that the machine according to the invention enables the entrainment of the hide in contact with the conveyor belts over an extensive surface, by enabling a practically perfect adherence of the hide to the conveyor belts even with a relatively reduced pressure.

[0090] The machine according to the invention furthermore has the advantage that it conducts the conveyance of the hide between two scraper cylinders without producing wrinkles or allowing the hide to travel at different speeds between its center and its outer part.

[0091] Another advantage of the machine according to the invention is that it enables the exit of the hide from the machine in a properly outspread condition, thus making it possible to lay it on an optional subsequent conveyor, where it will be possible to execute other processes on the hide in a very simple manner.

[0092] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0093] Thus for example, with the same inventive concept, not only fleshing machines can be provided, but also shaving machines, sammying or setting-out machines or other, similar machines for processing hides.

[0094] Moreover, all the details may be substituted by other, technically equivalent elements.

[0095] In practice the materials employed, provided they are compatible with the specific use, and the contingent dimensions and shapes, may be any according to requirements and to the state of the art.

[0096] The disclosures in Italian Patent Application No.

10202200000767 from which this application claims priority are incorporated herein by reference.

[0097] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A machine for processing hides, which comprises a supporting framework (2) which defines an entry zone (3) for the hide to be processed and an exit zone (4) for the processed hide and which supports at least two processing stations (5, 6) which are arranged along the route of the hide between said entry zone (3) and said exit zone (4), transport means (8) for the hide from said entry zone (3) to said exit zone (4) being provided, **characterized in that** said transport means (8) comprise at least one entrainment assembly (9) which has at least one pair of conveyor belts (10, 11) which roll continuously and define respective entrainment portions (10a, 11a) which are mutually facing and are designed to come into contact with the opposite faces of the hide being processed.
2. The machine according to claim 1, **characterized in that** said conveyor belts (10, 11) can be moved between an operative condition, in which their entrainment portions (10a, 11a) are mutually close together, for each one to engage a respective face of the hide being processed, and an inoperative condition, in which said entrainment portions (10a, 11a) are mutually spaced apart, for their disengagement from the hide being processed.
3. The machine according to one or more of the preceding claims, **characterized in that** it comprises drive means (13) for actuating said conveyor belts (10, 11), said drive means (13) being activatable on command, in order to actuate the rolling of said conveyor belts (10, 11) with scrolling of said entrainment portions (10a, 11a) in one direction, with the hide being processed at one of said processing stations (5, 6), and in the opposite direction, with the hide being processed at the other processing station (5, 6).
4. The machine according to one or more of the preceding claims, **characterized in that** each one of said processing stations (5, 6) comprises a respective scraper cylinder (14) and a respective contrast element (15) which is adapted to push the hides against the scraper cylinder (14), said processing stations (5, 6) being arranged one above the other, said at least one entrainment assembly (9) being positioned between said processing stations (5, 6).
5. The machine according to one or more of the preceding claims, **characterized in that** said entrainment assembly (9) can move in rotation, with respect to said supporting framework (2), about at least one oscillation axis which is substantially transverse to the extension of said entrainment portions (10a, 11a), between at least one first angular position, in which said entrainment portions (10a, 11a) are arranged substantially vertically, in order to allow the transfer of the hide being processed between said processing stations (5, 6), and at least one second angular position, in which said entrainment portions are oriented substantially horizontally, in order to allow the removal of the hide from said exit zone (4).
6. The machine according to one or more of the preceding claims, **characterized in that** said entrainment assembly (9) can be moved in translation, along a substantially vertical direction, from a first working position, in which it is substantially closer to one of said processing stations (5, 6), to a second working position, in which it is substantially closer to the other processing station (5, 6), and vice versa.
7. The machine according to one or more of the preceding claims, **characterized in that** said entrainment assembly (9), at least in said second angular position, can be moved along a substantially horizontal direction, between a retracted position, in which it is positioned with said conveyor belts (10, 11) inside said supporting framework (2), and at least one extended position, in which it is positioned with said conveyor belts (10, 11) arranged closer to said exit zone (4) than in said retracted position.
8. The machine according to one or more of the preceding claims, **characterized in that** it comprises movement means (16) for said entrainment assembly (9) which can be activated on command in order to actuate the transition, with said entrainment assembly (9) in said first angular position, of said entrainment assembly (9) from said first working position to said second working position, with subsequent transition of said entrainment assembly (9) from said first angular position to said second angular position, and vice versa.
9. The machine according to one or more of the preceding claims, **characterized in that** said movement means (16) are adapted to move said entrainment assembly (9) between said retracted position and said extended position.
10. The machine according to one or more of the pre-

ceding claims, **characterized in that** it comprises detection means (22) of the position of the hide being processed at said processing stations (5, 6), there being control means (21) which are functionally connected to said detection means and are adapted to activate said movement means (16) and said drive means (13) on the basis of signals originating from said detection means (22).

11. The machine according to one or more of the preceding claims, **characterized in that** said entrainment assembly (9) comprises a frame (9a) that supports said conveyor belts (10, 11) and is mounted so that it can move on said supporting framework (2), said movement means (16) comprise at least one toothed rack (17), which is fixed to said supporting framework (2) and has a locus that corresponds to the path of one zone of said frame (9a), and at least one motorized pinion (20), rotatably supported by said frame (9a) and meshing with said toothed rack (16).

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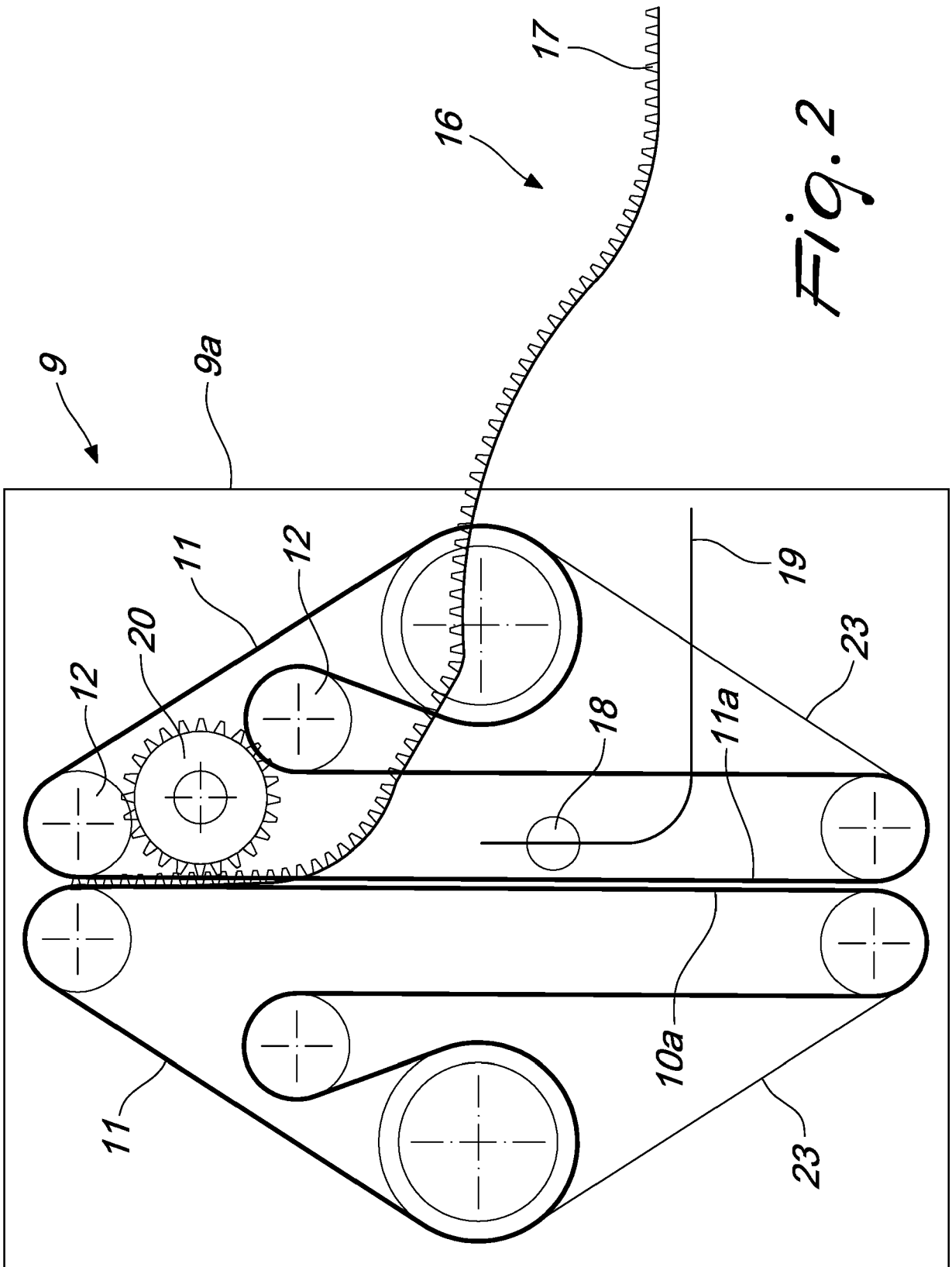


Fig. 2

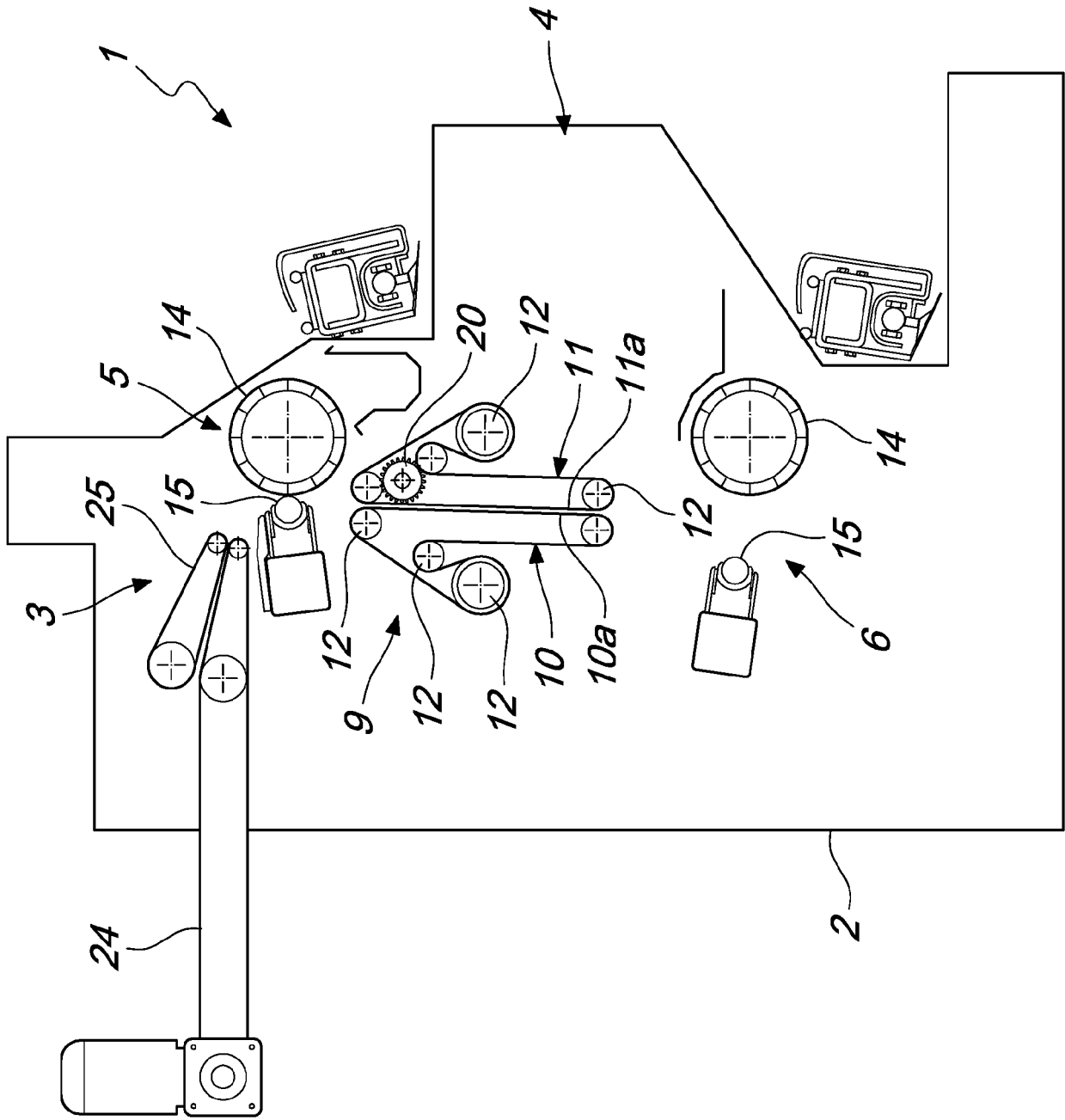


Fig. 4

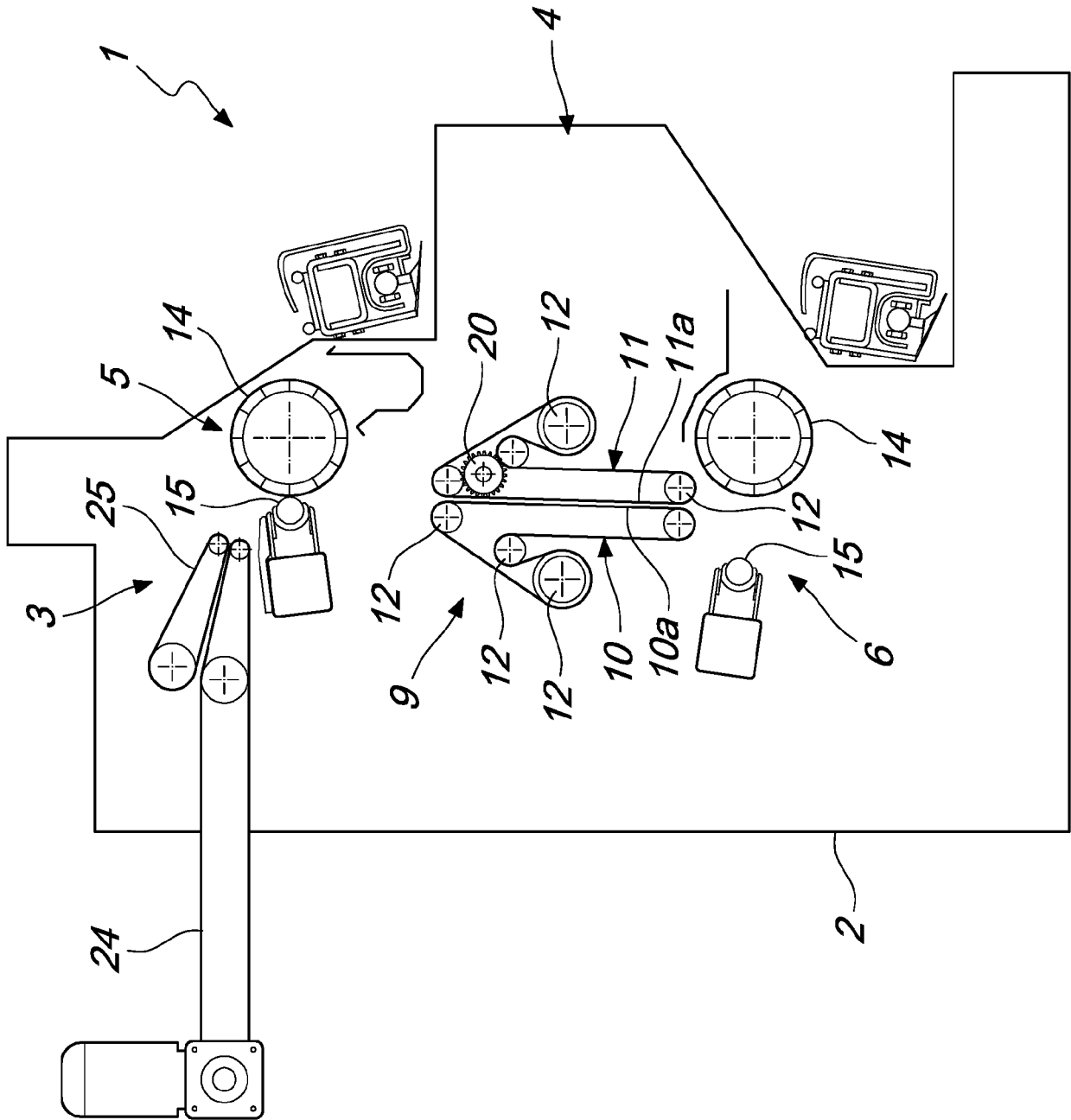


Fig. 5

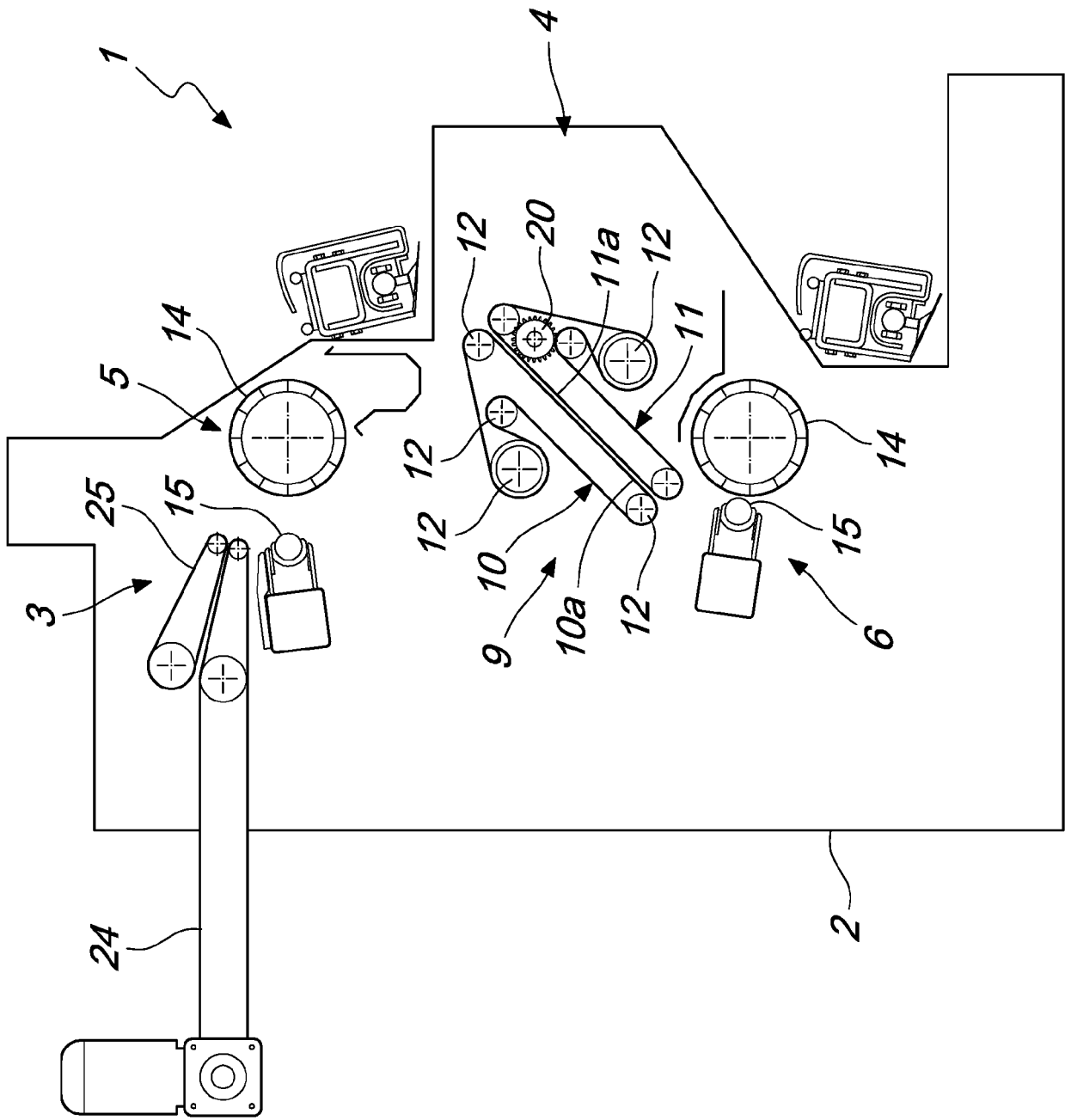


Fig. 6

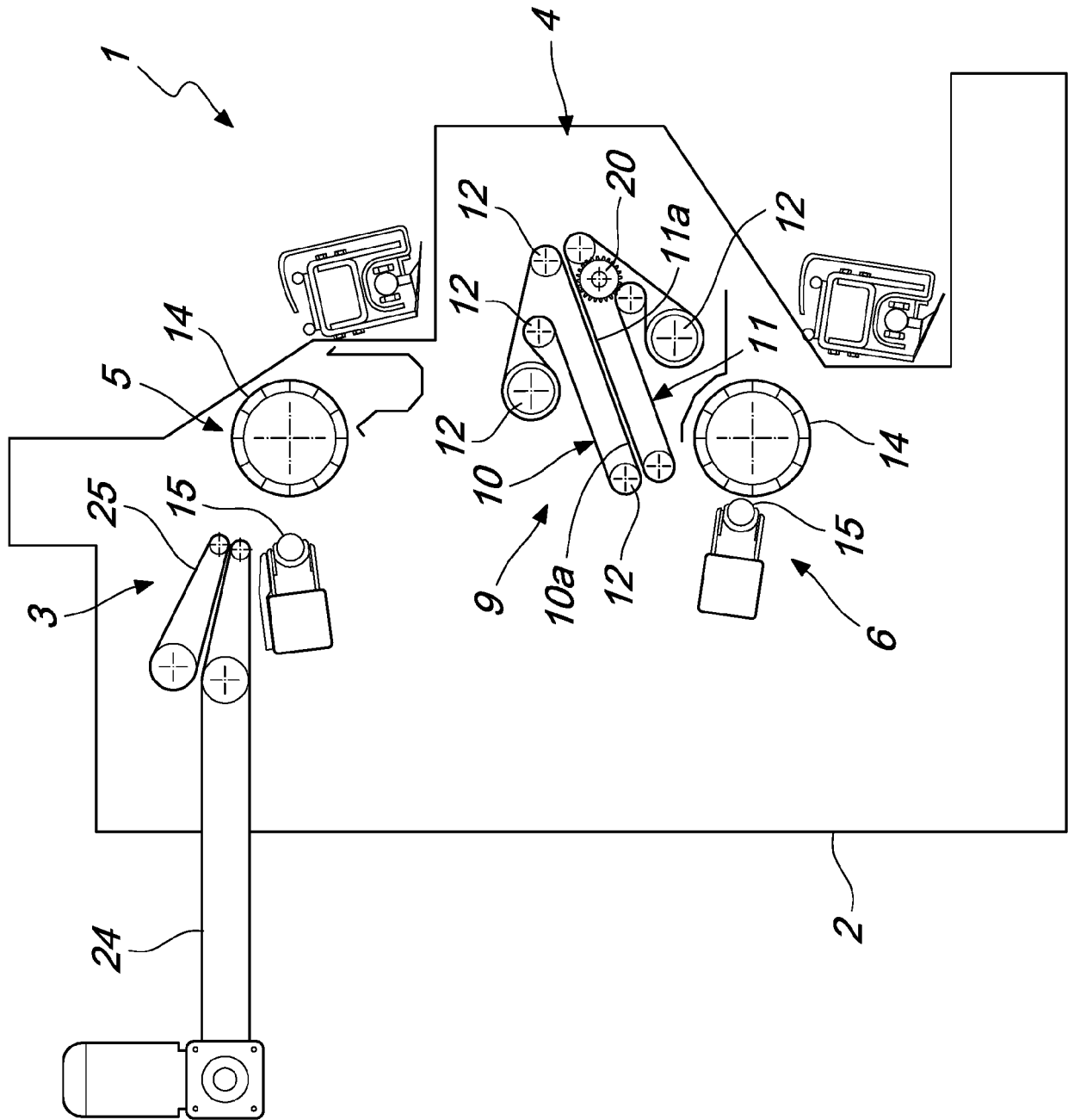


Fig. 7

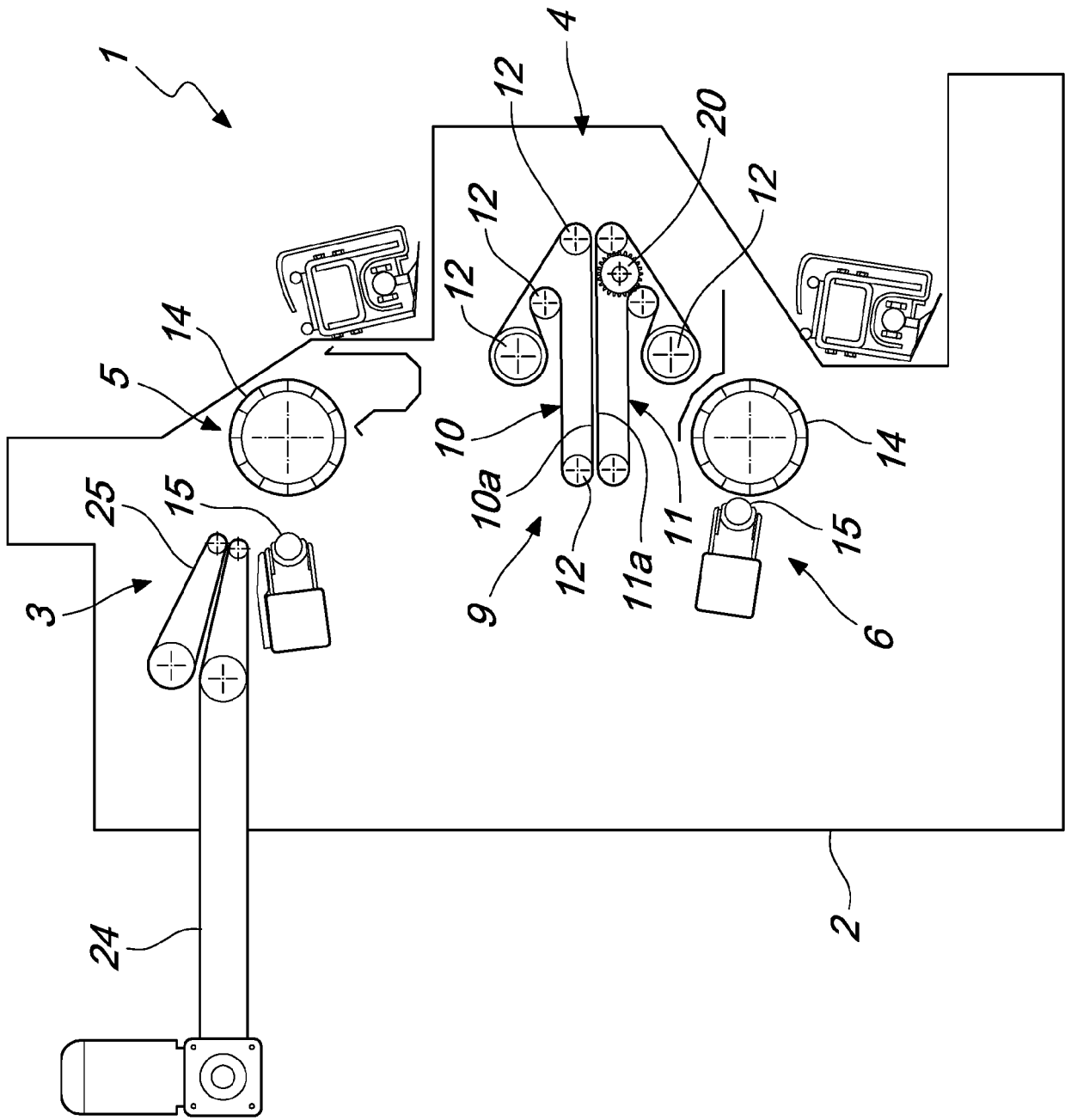


Fig. 8

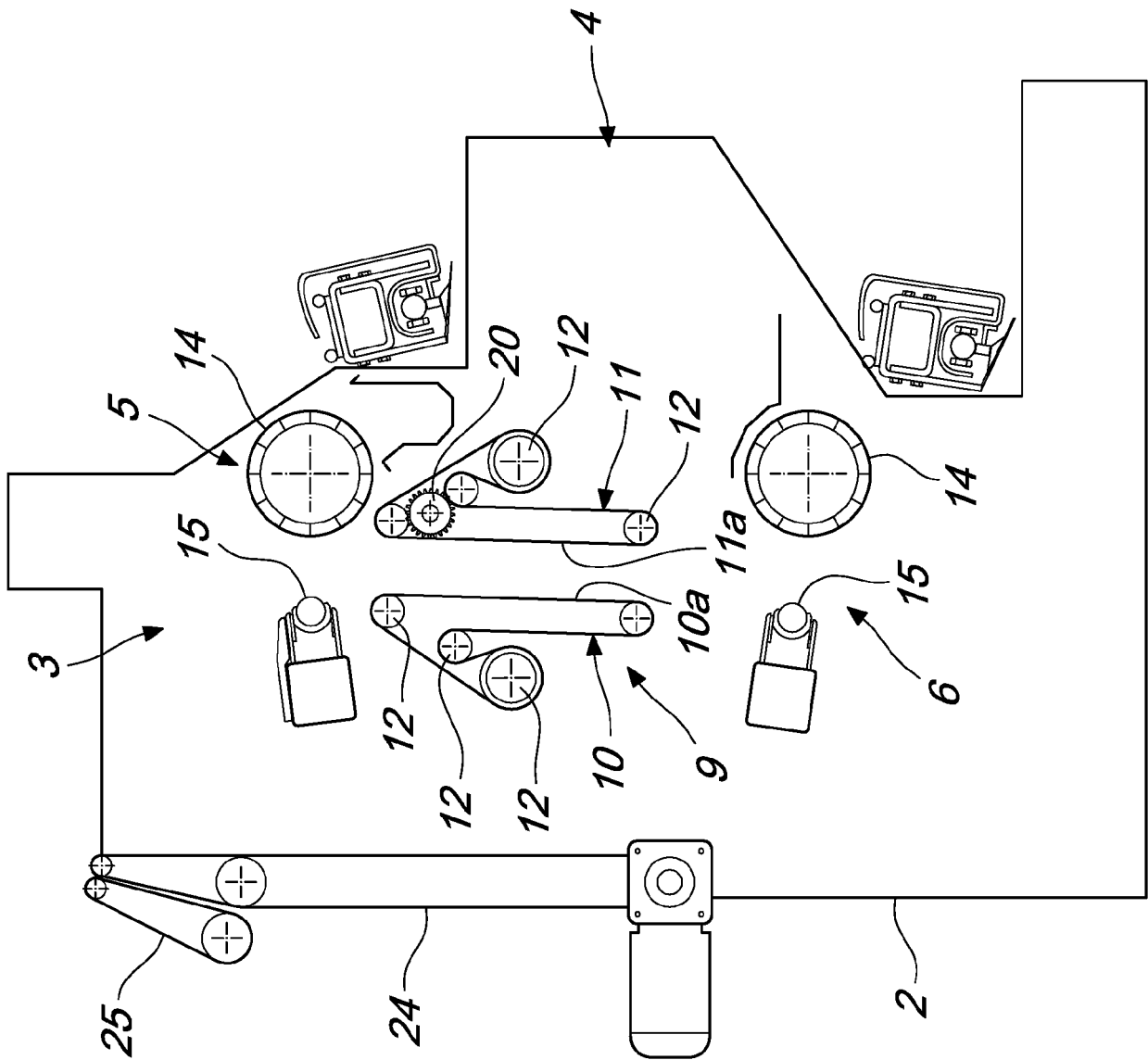


Fig. 10



EUROPEAN SEARCH REPORT

Application Number
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A	* claims 1-3; figures 1,2 * -----	2-11	C14B1/02 C14B1/44
X	EP 3 255 156 A1 (EVOLUTION TECH SRL [IT]) 13 December 2017 (2017-12-13) * figure 1 *	1	C14B17/06
			TECHNICAL FIELDS SEARCHED (IPC)
			C14B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 9 June 2023	Examiner Iamandi, Daniela
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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09-06-2023

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