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(72) Inventor: **Nordström, Lars Ingvar**
224 60 Lund (SE)

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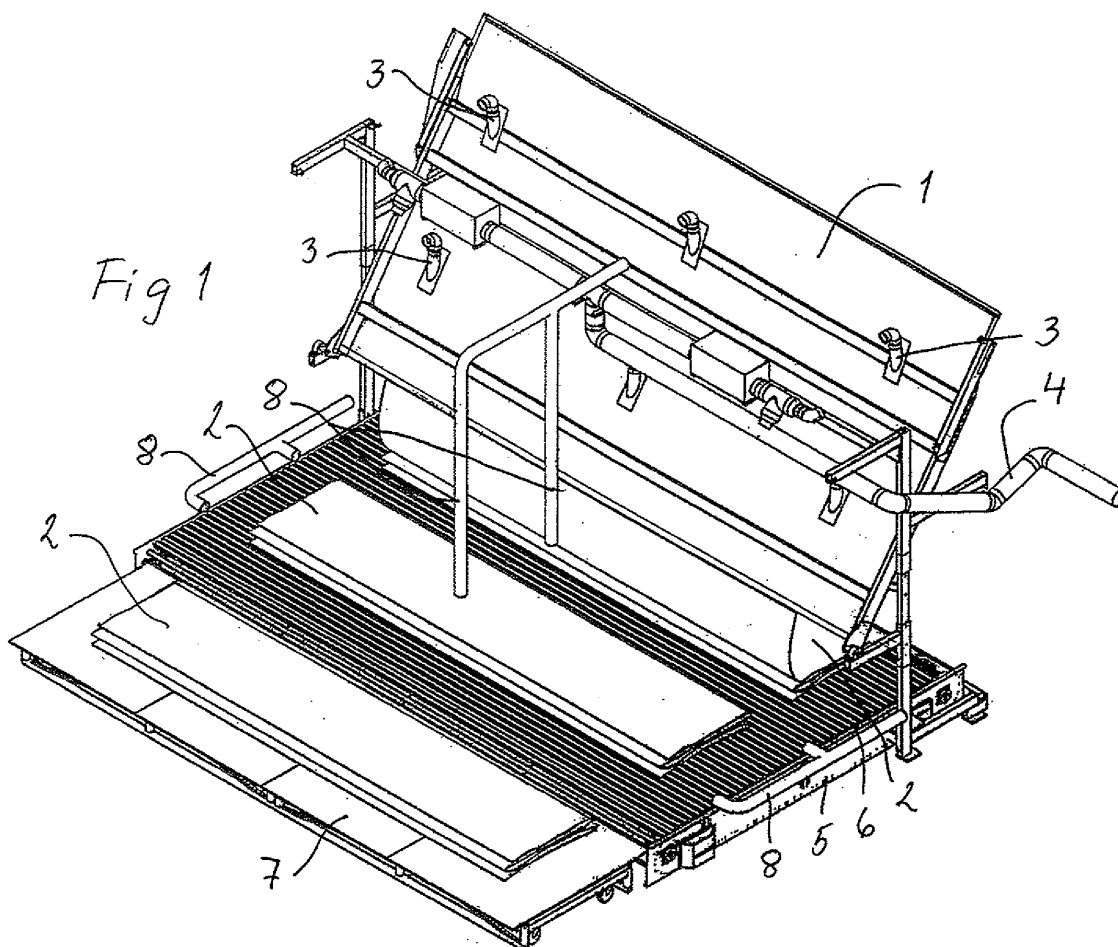
(74) Representative: **Petri, Stellan**
Ström & Gulliksson AB,
P.O. Box 4188
203 13 Malmö (SE)

(71) Applicant: **Nordström, Lars Ingvar**
224 60 Lund (SE)

(54) **A method and device for drying a tarpaulin**

(57) A drying device at a tarpaulin cleaning machine has a drying tunnel (1), in which a tarpaulin (2) transferred therethrough is exposed to hot air, and a table (5), on

which the tarpaulin is folded after having left the drying tunnel. Means (3, 8) are provided at the drying tunnel (2) as well as at the table (5) for blowing hot air especially on portions of the tarpaulin containing cord weltings.



Description

Technical Field

[0001] The present invention relates to a method of drying a tarpaulin - after cleaning in a tarpaulin cleaning machine - in a drying tunnel, in which the tarpaulin transferred therethrough is exposed to hot air. It also relates to a drying device at a tarpaulin cleaning machine, having a drying tunnel, in which a tarpaulin transferred therethrough is exposed to hot air, and a table, on which the tarpaulin is folded after having left the drying tunnel.

Background of the Invention

[0002] An example of a tarpaulin cleaning machine is disclosed in EP-B-1 247 889. In this machine, where water is used for washing, drying is performed in a drying tunnel, through which the tarpaulin is transferred in a flat condition. Hot air is used for the drying. By the term tarpaulin is throughout this document meant not only a tarpaulin per se but any large piece of cloth, such as a tent cloth.

[0003] Under certain circumstances it has appeared that an improved drying is desired. A requirement that 90-95 % of the humidity is removed from the tarpaulin can be difficult to reach for all parts of the tarpaulin, especially for cord weltings at side edges of the tarpaulin.

The Invention

[0004] A required drying of a tarpaulin can according to the invention be attained in that the tarpaulin is exposed to hot air not only in the drying tunnel but also after having left it, the hot air in both cases being especially directed to areas for cord weltings on the tarpaulin.

[0005] A device for attaining the desired drying result has according to the invention means at the drying tunnel as well as at the table for blowing hot air especially on portions of the tarpaulin containing cord weltings.

[0006] Preferably, air inlet ducts are provided on the drying tunnel and air conduits are provided at the table, both at locations for blowing hot air on portions of the tarpaulin containing cord weltings.

[0007] The air inlet ducts as well as the air conduits may be connected to an air supply tubing system, which contains at least one blower and at least one air heating battery.

[0008] The table preferably has an endless belt, which may be imparted a movement back and forth for folding a tarpaulin leaving the drying tunnel and may transfer the folded tarpaulin on the table to a drying station with the air conduits and further from the table to a transport wagon or the like.

Brief Description of the Drawings

[0009] The invention will be described in further detail

below under reference to the accompanying drawings, in which

Fig 1 is an isometric view of a drying device according to the invention and

Fig 2 is a side view of the same device.

Description of Embodiments

[0010] A drying device according to the invention is intended to be a part of or be connected to a tarpaulin cleaning machine, such as the one disclosed in EP-B-1 247 889. In this machine the cleaned tarpaulin is fed by gravity through a drying channel, where it is exposed to hot air supplied through tubes therein.

[0011] The drying effect obtained by this arrangement may be satisfactory in many instances, but it has appeared that tarpaulins provided with corded weltings, i.e. weltings containing cords, may not always be dried to a desirable degree. The purpose of the invention is thus to improve the drying of tarpaulins in or for a tarpaulin cleaning machine, especially if the tarpaulin has corded weltings.

[0012] A drying device for a tarpaulin cleaning machine is shown in Figs 1 and 2. The device has a drying tunnel 1, through which a cleaned and comparatively wet tarpaulin 2 can be fed by gravity. The drying tunnel 1 may have a width of more than 6 m in order to accommodate for example one tarpaulin with a width of 5 m or two tarpaulins side by side with a width of 3 m each. The length of the drying tunnel 1, which may be mounted at an angle with the vertical as shown, may be some 3 m. The feeding speed of the tarpaulin may be 3 m/min, which means that the tarpaulin 1 will be treated for 1 min in the drying tunnel 1.

[0013] The drying tunnel 1 may have a bottom, on which the tarpaulin 2 moves, consisting of longitudinally corrugated plastic panels for providing access of air to both sides of the tarpaulin. Also the cover of the drying tunnel 1 may consist of longitudinally corrugated plastic panels.

[0014] Air at a temperature of 60-90°C may be blown into the drying tunnel 1 in the movement direction of the tarpaulin 2. For this purpose the drying tunnel 1 is provided with a number of air inlet ducts 3. Such inlet ducts 3 may for example as shown be provided at two levels of the drying tunnel 1, namely one not too far from the inlet to the tunnel and another one towards its outlet. At each level, for example three inlet ducts 3 may be provided, one centrally located and one towards each side edge of the tunnel 1. The locations of the inlet ducts 3 are aimed at especially blowing the hot air on the cord weltings of the tarpaulin or of the parallel tarpaulins, said weltings being especially difficult to dry, as mentioned above. A requirement may be that after the drying process the tarpaulin, including its cord weltings, must be 90 % or even 95 % dry.

[0015] The inlet ducts 3 are to be connected to an air

supply tubing system 4. Only certain portions of this system 4 are depicted, but it contains one or more blowers and one or more air heating batteries for the supply of hot air at a desirable volume and speed.

[0016] The tarpaulin 2 leaving the drying tunnel 1 is to be folded on a table 5. This table preferably has a width corresponding to that of the drying tunnel and is provided with an endless belt 6 for transferring the tarpaulin 2 in relation to the drying tunnel 1. In a first stage the endless belt 6 is imparted a movement back and forth during the feeding out of the tarpaulin from the drying tunnel 1, so that the tarpaulin 2 is nicely folded on the table 5. In a second stage the endless belt 6 moves forward (to the left in the drawings), so that the tarpaulin 2 arrives in a drying station on the table. In a third stage the endless belt 6 moves further forward for unloading the now dried tarpaulin on a transport wagon 7 or the like.

[0017] In the drying station mentioned at the second stage above, hot air from the air supply tubing system 4 is supplied to the tarpaulin 2 lying folded on the transport belt 6 through fixed air conduits 8. As shown, air conduits 8, connected to the air supply tubing system 4, may be provided centrally over the tarpaulin 2 as well as at each side edge, i.e. where there may be cord wetlings on the tarpaulin.

[0018] Modifications are possible within the scope of the appended claims. It is especially to be noted that the drying device according to the invention can be used in conjunction with other machines than a tarpaulin cleaning machine of the kind disclosed in EP-B-1 247 889.

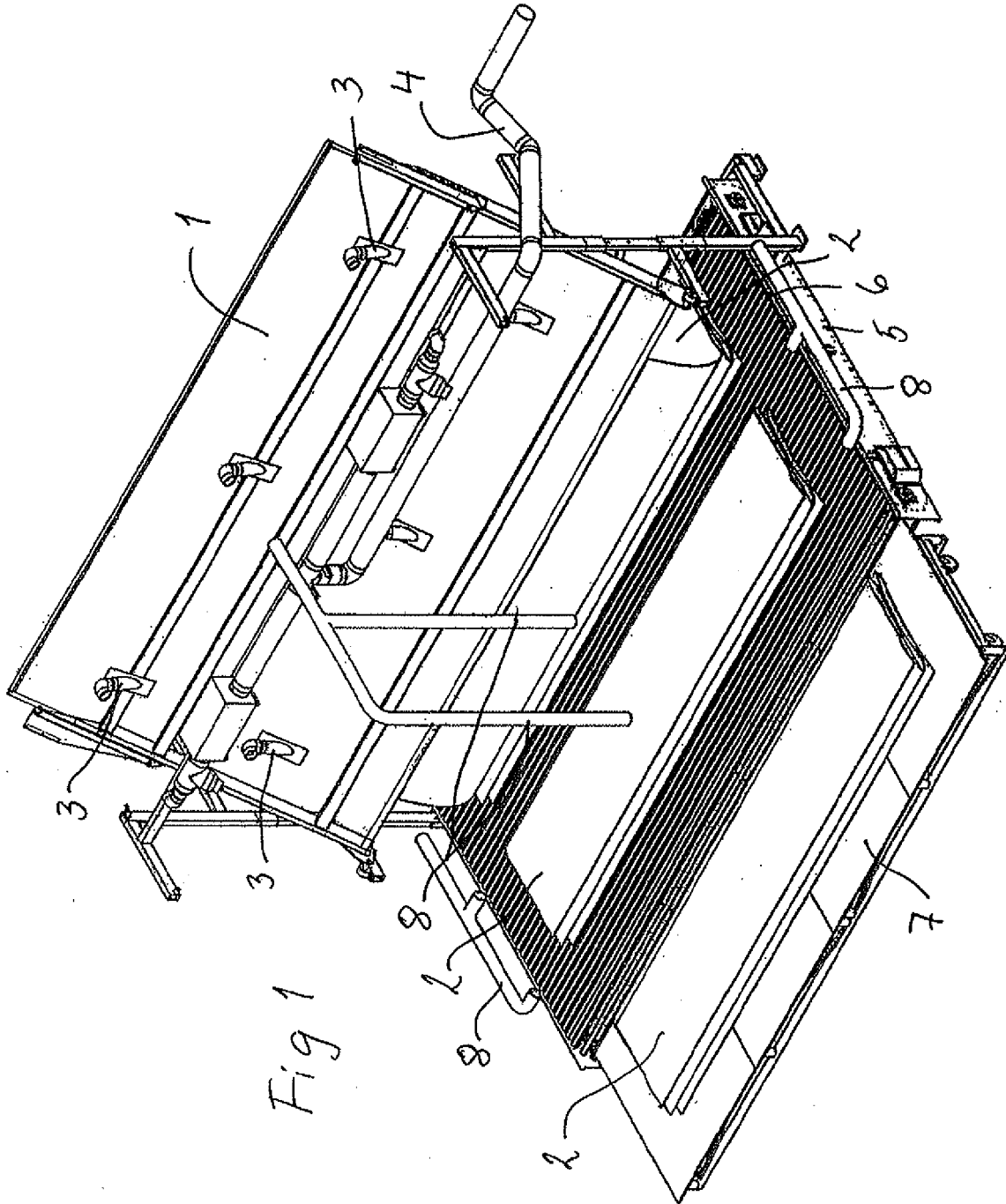
4. A drying device according to claim 3, wherein the air inlet ducts (3) and the air conduits (8) are connected to an air supply tubing system (4).

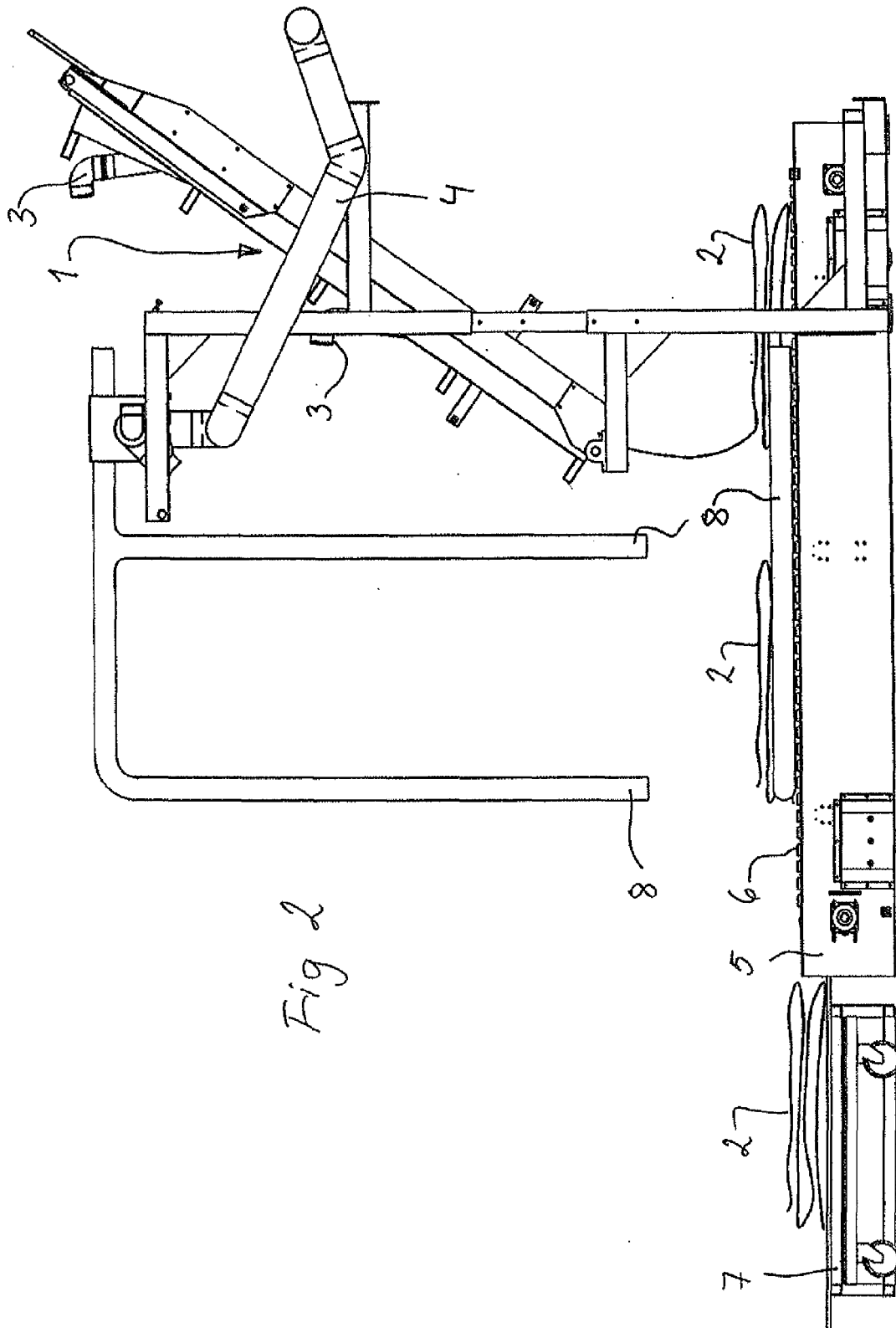
5. A drying device according to claim 4, wherein the air supply tubing system (4) contains at least one blower and at least one air heating battery.

6. A drying device according to claim 3, wherein the table (5) has an endless belt (6), which may be imparted a movement back and forth for folding a tarpaulin (2) leaving the drying tunnel (1) and may transfer the folded tarpaulin on the table to a drying station with the air conduits (8) and further from the table to a transport wagon (7) or the like.

Claims

1. A method of drying a tarpaulin (2) - after cleaning in a tarpaulin cleaning machine - in a drying tunnel (1), in which the tarpaulin transferred therethrough is exposed to hot air, **characterized in that** the tarpaulin (2) is exposed to hot air not only in the drying tunnel (1) but also after having left it, the hot air in both cases being especially directed to areas for cord wetlings on the tarpaulin.
2. A drying device at a tarpaulin cleaning machine, having a drying tunnel (1), in which a tarpaulin (2) transferred therethrough is exposed to hot air, and a table (5), on which the tarpaulin is folded after having left the drying tunnel, **characterized by** means (3, 8) at the drying tunnel (2) as well as at the table (5) for blowing hot air especially on portions of the tarpaulin containing cord wetlings.
3. A drying device according to claim 2, wherein air inlet ducts (3) are provided on the drying tunnel (1) and that air conduits (8) are provided at the table (5), both at locations for blowing hot air on portions of the tarpaulin (2) containing cord wetlings.





REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 1247889 B [0002] [0010] [0018]