

Animal Handling System

Field of the Invention

5 The present invention relates to an animal handling system particularly, though not exclusively, for handling sheep for the purposes of wool harvesting.

Background of the Invention

10 The present Applicant has developed numerous apparatus and methods for handling animals, particularly sheep, for the purposes of wool harvesting. Examples of such apparatus and methods are described in New Zealand patent application No. 502953 and
15 New Zealand patent No. 314626.

The present invention is the result of further research and development in systems for handling animals.

20 Summary of the Invention

According to the present invention there is provided an animal handling system comprising:

25 a first conveyor having an elevated rail, and one or more carriages moveable along said rail, each carriage having a resiliently supported line mechanism and an animal coupling device attached to said line for coupling an animal to said carriage.

30 Preferably said resiliently supported line mechanism comprises a housing coupled to said carriage and a tether biased to retract into said housing.

35 Preferably said system further comprises a brake to selectively arrest or allow payout of said tether.

of work stations 30f and 30g is tilted upwardly on opposite sides of the work stations 30f and 30g. This is to assist in cradling a sheep 24 when rolled onto one side and allow closer access for an operator to the sheep. The ability to
5 tilt is provided by pneumatic ram 89 and roller 91 (Figure 9).

Referring to Figures 1, 2 and 10, the system 10 can be housed in a trailer 90 so as to be easily transportable to a
10 herd of sheep 24. This allows the shearers to go to the sheep rather than the sheep being driven to the shearers. The work stations 30 are supported via a floor 92 and underlying chassis 94 of the trailer 90. The trailer 90 also has walls 96 and a roof 98. The walls 96 are
15 constituted by outer, centre and inner wall sections 96a, 96b and 96c. Appropriate hydraulics and hinging systems (not shown) are provided to allow outer wall sections 96a to fold up to form roof of extended sections, centre wall section 96b to fold down to form floor 92 of extended
20 sections and inner wall sections 96c to fold up to form outer walls of extended sections. The trailer 90 also houses other equipment which may be useful in a mobile shearing system such as wool bins, wool presses, fleece classing table, fleece testing equipment, and a sheep lifter
25 100 for lifting sheep onto a first one of the work stations 30a. The sheep lifter 100 may ideally be in the form described in the Applicant's co-pending application No. 2002950992 the contents of which are incorporated herein by way of reference.

30 The provision of multiple stations 30 allows the systematic "production line" de-fleecing of sheep 24 for example as described in the Applicant's New Zealand patent No. 314626.

35 When in use, a sheep 24 would typically be lifted via the lifter 100 to the station 30a. When the sheep has been lifted to the maximum extent by the lifter 100, the lifter

The claims defining the invention are as follows:

1. An animal handling system comprising:
5 a first conveyor having an elevated rail, and one or more carriages moveable along said rail, each carriage having a resiliently supported line mechanism and an animal coupling device attached to said line for coupling an animal to said carriage.
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2. The system according to claim 1 wherein said resiliently supported line mechanism comprises a housing coupled to said carriage and a tether biased to retract into said housing.
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3. The system according to claim 2 further comprising a brake to selectively arrest or allow payout of said tether.
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4. The system according to any one of claims 1 - 3 further comprising a support for an animal, said support located beneath said first conveyor and comprising one or more work stations, each work station having a surface on which an animal can be supported, and one or more releasable latching mechanisms for releasably latching said animal coupling device.
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5. The system according to claim 4 wherein each latching mechanism is attached to a manipulator, and each manipulator is coupled to a corresponding work station.
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6. The system according to claim 5 wherein at least one of said manipulators is coupled to a corresponding work station with at least one degree of freedom.
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7. The system according to claim 5 or 6 wherein one or more of said manipulators is coupled in a manner to allow said manipulator to pivot or swing laterally of a corresponding work station.
- 5
8. The system according to any one of claims 4 - 7 wherein said surface is an upper run of an endless belt conveyor.
- 10
9. An animal handling system substantially as herein described with reference to and as illustrated in the accompanying drawings.