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CHESTBAR FOR ANGLELOAD HORSEFLOATS

ABSTRACT

A chestbar assembly (10) for an angleload horsefloat (100) has a padded block (23) mounted on a horizontal chestbar (11) which is hingedly mounted to a divider assembly (110, 111) and releasably latched to a further divider assembly (109, 110) to limit the movement of a horse while travelling, but which can be swung away when the horse is entering or exiting the horsefloat (100).
Invention Title: "CHESTBAR FOR ANGLELOAD HORSEFLOATS"

The following statement is a full description of this invention, including the best method of performing it known to me/us:
TITLE: CHESTBAR FOR ANGLELOAD HORSEFLOATS

BACKGROUND OF THE INVENTION

1. Field of the Invention

THIS INVENTION relates to a chestbar for angleload horsefloats.

The invention particularly relates, but is not limited to such a chestbar which restricts the movement of horses while travelling, and which can be swung to an inoperative position when not in use.

2. Prior Art

In recent years, there has been a trend towards angleload horsefloats for the transport of horses.

While the angleload horsefloats are wider than conventional horsefloats, they provide a significant increase in storage capacity for a given length of horsefloat. It is also argued by some that horses prefer to travel standing at an angle to the direction of travel.

The horses generally stand at an angle of 40° to the longitudinal axis of the horsefloats. However, as they are able to move backwards and forwards, this has resulted in poor horse performance at the end of the travel due to the horses’ heads constantly hitting the sides of the horsefloats and the horses having too much room to move during braking and cornering.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a chestbar for angleload horsefloats which can limit a horse’s movement while travelling in
the horsefloat.

It is a preferred object to provide such a chestbar which can be selectively releasably swung to an inoperative position when the horsefloat is stationary.

It is a further preferred object to provide such a chestbar where all the fittings are concealed, or directed away, from the horse.

It is a still further preferred object to provide such a chestbar which is padded to protect the horse from injury.

Other preferred objects will become apparent from the following description.

In a broad aspect, the present invention resides in a chestbar assembly for angleload horsefloats including:

- a substantially horizontal chestbar;
- padding means on at least one side of the chestbar to engage a horse's chest;
- hinge means at one end of the chestbar to hingedly mount the chestbar in the horsefloat for movement between operative and inoperative positions; and
- latch means at the other end of the chestbar releasably engageable with striker means in the horsefloat when the chestbar is in the operative position.

Preferably, the chestbar is formed of rolled-hollow steel or aluminium tubing.

Preferably, the hinge means is provided on a right-angled
extension to the chestbar and selectively mounts the chestbar within a range of vertical heights.

While the hinge means may hingedly mount the chestbar on a wall of the horsefloat, it is preferred to hingedly mount the chestbar on a substantially vertical pin or post on a divider assembly in the horsefloat.

Preferably, the latch means includes:

a spring-loaded pin, slidably mounted on a latch bracket on the chestbar, the sliding pin releasably engageable with at least one hole in a first set of holes in the striker means or body of the striker means; and

a fixed side locking pin in a latch body plate substantially at right angles to, and spaced from, the spring-loaded pin, the side locking pin being engageable with at least one hole in a second set of holes in the striker means.

Preferably, the spring-loaded pin is slidably received in spaced arms of the U-shaped latch bracket and extends parallel to the chestbar; and side locking pin is mounted on the bottom of the U-shaped latch body plate and extends transverse to the chestbar.

Preferably, the striker means includes a substantially vertically hollow striker body or post mounted in the horsefloat, or on a divider assembly in the horsefloat, and has respective first and second sets of vertically spaced holes at right angles to each other.

Preferably, for a two-horse horsefloat, a first chestbar assembly is provided between a first divider assembly and a second divider assembly, the second divider assembly being hingedly mounted to allow a first horse to
enter (or exit) and be secured in the horsefloat; and a second chestbar assembly is provided between the second divider assembly and a third divider assembly, the third divider assembly being hingedly mounted to allow a second horse to enter (or exit) and be secured in the horsefloat.

BRIEF DESCRIPTION OF THE DRAWINGS

To enable the invention to be fully understood, a preferred embodiment will now be described with reference to the accompanying drawings, in which:

FIG. 1 is a schematic top plan view of a two-horse angleload horsefloat, fitted with two of the chestbar assemblies of the present invention, with the divider assemblies in the travelling position;

FIG. 2 is a similar view, but with the second and third divider assemblies positioned to allow the first horse to enter or exit the horsefloat;

FIG. 3 is a side elevational view of the front and intermediate sections of the second divider assembly;

FIG. 4 is a top plan view of the first chestbar assembly mounted on the second divider assembly;

FIG. 5 is a top plan view of the first chestbar assembly;

FIG. 6 is a rear perspective view corresponding to FIG. 4; and

FIG. 7 is a top perspective view of the latch and striker assemblies.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1 and 2, the two-horse angleload horsefloat
100 has a front wall 101, side walls 102, 103 and a rear entry 104 selectively closable by a hinged loading ramp (not shown).

The horsefloat 100 is separated into a first storage zone 105, first and second horse zones 106, 107, and a second storage zone 108 by first-, second- and third-divider assemblies 109, 110, 111.

The first divider assembly 109 is hingedly mounted on a front wall 101 at 112 and is releasably connectable to the left side wall 107 at 113.

The second divider assembly 110 has a front section 114 hingedly mounted on the right side wall 103 at 115; and a hinged connector 116 to a rear section 117 releasably connectable to the left side wall 102 at 118.

The third divider assembly 111 has a front section 119 hingedly mounted on the right side wall 103 at 120; a first hinged connector 121 to an intermediate section 122; and a second hinged connector 123 to a rear section 124 releasably connectable to the left side wall 102 at 125.

As shown in FIG. 2, the divider assemblies 109, 110, 111 can be selectively released and moved to allow access to the first storage zone 105 and the horse zones 106, 107. In FIG. 2, the second and third divider assemblies 110, 111 are configured to allow a horse to enter or exit the first horse zone 106.

First and second chestbar assemblies 10, to be described in more detail, are hingedly mounted on the front sections 114, 119 of the second and third divider assemblies 110, 111 and are releasably latched to the first divider assembly 109 and the rear section 117 of the second divider
assembly 110, respectively, to limit movement of the horses in the first and second horse zones 106, 107.

As shown in FIG. 3, a head divider 126 is hingedly mounted on the front post 127 of the front section 114 of the second divider assembly 110 and has a latch 128 to allow it to be swung relative to the front section 114.

Referring now to FIGS. 4 to 7, the chestbar assembly 1 has a substantially horizontal chestbar 11 formed of square hollow-section steel or aluminium tubing.

A right-angled extension 12 at one end of the chestbar 11 is provided with a hinge collar 13, arranged to be mounted on a hinge pin 14 supported by the front section 114 of the second divider assembly 110 (or its equivalent on the third divider assembly 111). A height adjustment pin 15 may pass through the hinge collar 13 and be received in a selected hole 16 in the hinge pin 14 to allow the height of the chestbar 11 to be selectively set.

(In an alternative embodiment, the height adjustment pin 15 is engaged by the underside of the hinge collar 13.)

It will be noted that the extension 12 allows the hinge mechanism for the chestbar 11 to be “concealed” in the second divider assembly 110.

At the other end of the chestbar 11, a latch assembly 16 has a substantially U-shaped latch body plate 17. A side locking pin 18 is provided on the bottom wall of the “channel” of the substantially-shaped latch body plate 17, extending transverse to the chestbar 11, to engage a
complementary hole in a post 128 the first divider assembly 109.

A sliding locking pin 19, with a handle 20, is supported by the latch bracket 21, to lie parallel to the chestbar 11 and is urged by a spring 22 to engage a side face of the post 128 of the first divider assembly 109.

(In an alternative embodiment, the sliding pin 19 engages a complementary hole in the post 128.)

To protect the horses, a block 23 of padded material, eg., vinyl-covered foam, is provide on at least the rearward face of the chestbar 11. (In alternative embodiments, the padded block is also provided on the top face of the chestbar 11, or fully surrounds the chestbar 11.)

The combination of the side locking pin 18 and sliding pin 19 ensures secure releasable anchoring of the chestbar 11 to the post 128 on the first divider assembly 109, or to an equivalent post on the second divider assembly 110.

It will be readily apparent to the skilled addressee that the chestbar assemblies 10 allow the movement of the horses to be safely limited while travelling, while allowing the chest assemblies 10 to be swung clear when the horses are entering or exiting a horsefloat 100.

Various changes and modifications may be made to the embodiments described and illustrated without departing from the present invention.
The claims defining the invention are as follows:

1. A chestbar assembly for angleload horsefloats including:
   a substantially horizontal chestbar;
   padding means on at least one side of the chestbar to engage a horse's chest;
   hinge means at one end of the chestbar to hingedly mount the chestbar in the horsefloat for movement between operative and inoperative positions; and
   latch means at the other end of the chestbar releasably engageable with striker means in the horsefloat when the chestbar is in the operative position.

2. A chestbar assembly as claimed in Claim 1, wherein:
   the hinge means is provided on a right-angled extension to the chestbar and selectively hingedly mounts the chestbar, within a range of vertical heights, on a wall of the horsefloat, or on a substantially vertical pin or post on a divider assembly in the horsefloat.

3. A chestbar assembly as claimed in Claim 1 or Claim 2, wherein:
   the latch means includes:
   a spring-loaded pin, slidably mounted on a latch bracket on the chestbar, the sliding pin releasably engageable with at least one hole in a first set of holes in the striker means or a body of the striker means; and
   a fixed side locking pin in a latch body plate substantially at right angles to, and spaced from, the spring-loaded pin, the side locking pin
being engageable with at least one hole in a second set of holes in the striker means.

4. A chestbar assembly as claimed in Claim 3, wherein:

the spring-loaded pin is slidably received in spaced arms of the

U-shaped latch bracket and extends parallel to the chestbar; the side locking pin is mounted on the bottom of the U-shaped latch body plate and extends transverse to the chestbar; and

the striker means includes a substantially vertically hollow striker body or post mounted in the horsefloat, or on a divider assembly in the horsefloat, and has respective first and second sets of vertically spaced holes at right angles to each other.

5. A two-horse angleload horsefloat incorporating:

a first chestbar assembly, as claimed in any one of Claims 1 to 4, provided between a first divider assembly and a second divider assembly, the second divider assembly being hingedly mounted to allow a first horse to enter or exit and be secured in the horsefloat; and a second chestbar assembly, as claimed in any one of Claims 1 to 4, is provided between the second divider assembly and a third divider assembly, the third divider assembly being hingedly mounted to allow a second horse to enter or exit and be secured in the horsefloat.

DATED this twenty-seventh day of June 2005.

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By his Patent Attorneys
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