It is a disadvantage of such dock levelling systems that there will be gaps between the side panels 3a and 3b of the ramp 3 of the leveller 1 and the side walls 12a and 12b of the recess 10. Such gaps can allow the entry of unwanted pests such as rodents or the like.

EP 2986544 A1 published 24 February 2016 discloses a gap seal for a loading ramp, with a magnetic carrier strip to which is attached a surface element with an essentially omega-shaped cross-section. It is a disadvantage of this gap seal that it is complex to construct, and once constructed the essentially omega-shaped cross-section of the surface element means it is bulky and difficult to store or transport. Further, it is not effective to stop pests such as rodents, as they will simply chew through the surface element.

The present invention seeks to mitigate the above-mentioned problems. Alternatively and/or additionally, the present invention seeks to provide improved seals for dock levelling systems, methods of sealing gaps in dock levelling systems, and methods of arranging seals for dock levelling systems for storage or transportation.

Summary of the Invention

In accordance with a first aspect of the invention there is provided a seal for a dock levelling system comprising a movable ramp arranged within a recess, wherein the seal is for sealing a gap between a side of the movable ramp and a wall of the recess, the seal comprising:

a flexible strip formed of a flexible material;

on each longitudinal edge of the flexible strip, an attachment strip for attaching the flexible strip to the side of the movable ramp;

wherein the seal is arranged so that when the attachment strips attachable to the side of the movable ramp adjacently to each other, such that the material of the flexible strip between the attachment strips forms a closed loop extending out from the side

of the movable ramp to the wall of the recess, to seal the gap between the side of the movable ramp and the wall of the recess;

wherein each attachment strip is discontinuous longitudinally, and wherein discontinuities in a first attachment strip of the attachment strips are aligned longitudinally with discontinuities in the second attachment strip of the attachment strip.

By having the seal comprise attachment strips it can be attached using those to the side of the movable ramp, and when the attachment strips are positioned adjacently the flexible strip between the adjacent strips will form the closed loop that extend across the gap to touch the wall of the recess, so sealing the gap. As the closed loop is formed of flexible material, it can change shape if required, in particular being pushed flatter by the wall of the recess so that it fits the gap exactly. However, as the attachment is provided by having the two separate attachment strips on the longitudinal edges of the flexible strip, and the closed loop is only formed when the attachment strips are positioned adjacent to each other, prior to use the seal can be kept in a flat form prior to be use, making it easier to store and transport, and also easier to initially construct.

The flexible material may be a textile. The flexible material may be woven. The flexible material may be a mesh, may be a wire mesh, and may be a metal wire mesh. Advantageously the flexible material is Kevlar. Kevlar provides a suitably flexible and resilient material to form the seal, but is also very tough so provides a good barrier against damage by rodents or the like, in particular damage by chewing.

Preferably, each attachment strip is a magnetic strip. This makes the seal easy to position in place, and to adjust or remove if required. Alternatively, each attachment strip may an adhesive strip, or other suitable attaching means.

Advantageously, each attachment strip is discontinuous longitudinally. Advantageously, discontinuities in a first attachment strip of the attachment strips are aligned longitudinally with discontinuities in the second attachment strip of the attachment strips. Advantageously, the seal is arranged for storage or transportation, and the flexible strip is folded transversely at one or more discontinuities in the attachment strips. This reduces the length of the seal, making storage, transportation or the like easier.

The seal may be arranged for storage or transportation, and the flexible strip folded longitudinally along the material of the textile strip between the attachment

strips. This reduces the width of the seal, making storage, transportation or the like easier.

In accordance with a second aspect of the invention there is provided a dock levelling system comprising a movable ramp arranged within a recess, wherein there is a gap between a side of the movable ramp and a wall of the recess, the dock levelling system further comprising a seal as described above.

In accordance with a third aspect of the invention there is provided a method of sealing a gap in a dock levelling system using a seal as above, wherein the dock levelling system comprises a movable ramp arranged within a recess, and wherein the gap is between a side of the movable ramp and a wall of the recess, the method comprising the steps of:

attaching a first attachment strip of the attachment strips to the side of the movable ramp;

attaching the second attachment strip of the attachment strips to the side of the movable ramp adjacent to the first attachment strip, so that the material of the flexible strip between the attachment strips forms a closed loop extending out from the side of the movable ramp to the wall of the recess, to seal the gap between the side of the movable ramp and the wall of the recess.

In accordance with a fourth aspect of the invention there is provided a method of arranging a seal as described above where each attachment strip is discontinuous longitudinally, for storage or transportation, comprising the step of folding the flexible strip of the seal transversely at one or more discontinuities in the attachment strips.

Claims

1. A seal for a dock levelling system comprising a movable ramp arranged within a recess, wherein the seal is for sealing a gap between a side of the movable ramp and a wall of the recess, the seal comprising:

a flexible strip formed of a flexible material;

on each longitudinal edge of the flexible strip, an attachment strip for attaching the flexible strip to the side of the movable ramp;

wherein the seal is arranged so that when the attachment strips are attachable to the side of the movable ramp adjacently to each other, such that the material of the flexible strip between the attachment strips forms a closed loop extending out from the side of the movable ramp to the wall of the recess, to seal the gap between the side of the movable ramp and the wall of the recess;

wherein each attachment strip is discontinuous longitudinally, and wherein discontinuities in a first attachment strip of the attachment strips are aligned longitudinally with discontinuities in the second attachment strip of the attachment strip.

2. A seal as claimed in claim 1, wherein each attachment strip is a magnetic strip.

3. A seal as claimed in claim 1, wherein each attachment strip is an adhesive strip.

4. A seal as claimed in any preceding claim, wherein the seal is arranged for storage or transportation, and wherein the flexible strip is folded transversely at one or more discontinuities in the attachment strips.

5. A seal as claimed in any preceding claim, wherein the seal is arranged for storage or transportation, and wherein the flexible strip is folded longitudinally along the material of the textile strip between the attachment strips.

6. A dock levelling system comprising a movable ramp arranged within a recess, wherein there is a gap between a side of the movable ramp and a wall of the recess, the dock levelling system further comprising a seal as claimed in any of claims 1 to 3.

7. A method of sealing a gap in a dock levelling system using a seal as claimed in any of claim 1 to 3, wherein the dock levelling system comprises a movable ramp arranged within a recess, and wherein the gap is between a side of the movable ramp and a wall of the recess, the method comprising the steps of:

attaching a first attachment strip of the attachment strips to the side of the movable ramp;

attaching the second attachment strip of the attachment strips to the side of the movable ramp adjacent to the first attachment strip, so that the material of the flexible strip between the attachment strips forms a closed loop extending out from the side of the movable ramp to the wall of the recess, to seal the gap between the side of the movable ramp and the wall of the recess.

8. A method of arranging a seal as claimed in any of claims 1 to 3 for storage or transportation, comprising the step of folding the flexible strip of the seal transversely at one or more discontinuities in the attachment strips.

9. A method as claimed in claim 8 further comprising the step of folding the flexible strip of the seal longitudinally along the material of the flexible strip between the attachment strips.