CLAIMS

1. ~~A spreader assembly comprising~~

a spreader having container engagement devices for engaging and disengaging a container;

a lid engagement device mounted to the spreader, said lid engagement device having an actuator for positioning a lid engagement frame proximate to a lid of said container, said lid engagement frame arranged to engage said lid so as to permit the actuator to move said lid relative to the container.

2. The spreader assembly according to claim 1, wherein said actuator is arranged to lift the lid vertically.

3. The spreader assembly according to claim 1 or 2, wherein the spreader includes a first frame to which the lid engagement device is mounted and a second frame to which the container engagement devices are mounted, said first and second frames in rotational engagement such that the second frame is rotatable relative to the first frame.

4. The spreader assembly according to claim 3, further including a support device, said support device having at least one support arm extending parallel to the longitudinal axis of the spreader and positioned proximate to a vertical wall of said container, said support device arranged to contact and support the container ~~as the second frame rotates.~~

~~5. The spreader assembly according to claim 4, wherein the at least one support~~ arm is selectively movable along an axis perpendicular to the longitudinal axis of the spreader.

6. The spreader assembly according to claim 5, wherein the support device includes two support arms.

7. The spreader assembly according to any one of claims 3 to 6, further including a rotational actuator for rotating the second frame relative to the first frame.

8. A dual spreader assembly for engaging two containers comprising

A head frame;

two parallel spreaders mounted to the head frame;

each spreader having a first frame through which the spreader is mounted to the head frame and a second frame arranged to engage the respective container, wherein said first and second frames are in rotational engagement such that the second frame is rotatable relative to the first frame so as to rotate engaged containers.

9. The spreader assembly according to claim 8, wherein each of said first frames includes a lid engagement device mounted thereto, each of said lid engagement ~~devices having an actuator for positioning a lid engagement frame proximate to~~

~~a lid of said respective container, said frame arranged to engage said lid so as to~~ permit the actuator to move said lid relative to the respective container.

10. The dual spreader assembly according to claim 8 or 9, further including a support device mounted to each spreader, each of said support devices having at least one support arm extending parallel to the longitudinal axis of the spreader and positioned proximate to a vertical wall of said container, said support device arranged to contact and support the container as the second frame rotates.

11. The dual spreader assembly according to any one of claims 8 to 10, further including a support bracket mounted to said head frame, said support bracket selectively movable perpendicular to longitudinal axes of said spreaders, said support bracket arranged to move to a position above a centre of gravity of said dual spreader assembly when in engagement with the respective containers.

12. A lid engagement device comprising

an actuator for positioning a lid engagement frame proximate to a lid of a container, said frame arranged to engage said lid so as to permit the actuator to move said lid relative to the container;

said lid engagement device is mountable to lifting apparatus.

13. The lid engagement device according to claim 12 wherein said lifting apparatus ~~includes a crane spreader, a fork lift spreader and a reach stacker spreader.~~

~~14. A lid locking assembly for locking a shipping container lid comprising~~

a locking pin and locking recess;

an engagement portion for receiving an applied load;

a linkage for connecting the engagement portion and locking pin;

wherein the assembly is arranged such that on application of the applied load the locking pin is movable from a locked position engaged with the recess and so locking the lid to the container and an unlocked position.

15. The lid locking assembly according to claim 14 wherein the engagement portion is positioned within a twistlock casting such that the applied load is provided by a twistlock on insertion into the casting.

16. The lid locking assembly according to claim 14 or 15 wherein the linkage is arranged to apply a horizontal load to the locking pin so as to move the locking pin horizontally into the locking recess.

17. The lid locking assembly according to any one of claims 14 to 16 wherein the ~~locking pin is biased toward the locked position.~~

CLAIMS

1. A spreader assembly comprising

a spreader having container engagement devices for engaging and disengaging a container;

a lid engagement device mounted to the spreader, said lid engagement device having an actuator for positioning a lid engagement frame proximate to a lid of said container, said lid engagement frame arranged to engage said lid so as to permit the actuator to move said lid relative to the container;

a first frame to which the lid engagement device is mounted;

a second frame to which the container engagement devices are mounted, said first and second frames in rotational engagement such that the second frame is rotatable relative to the first frame; and

a support device, said support device having at least one support arm extending parallel to the longitudinal axis of the spreader and positioned proximate to a vertical wall of said container, said support device arranged to contact and support the container as the second frame rotates.

2. The spreader assembly according to claim 1, wherein said actuator is arranged to lift the lid vertically.

3. The spreader assembly according to claims 1 or 2, wherein the at least one support arm is selectively movable along an axis perpendicular to the longitudinal axis of the spreader.

4. The spreader assembly according to claim 3, wherein the support device includes two support arms.

5. The spreader assembly according to any one of claims 1 to 4, further including a rotational actuator for rotating the second frame relative to the first frame.

6. A dual spreader assembly for engaging two containers comprising

A head frame;

two parallel spreaders mounted to the head frame;

each spreader having a first frame through which the spreader is mounted to the head frame and a second frame arranged to engage the respective container, wherein said first and second frames are in rotational engagement such that the second frame is rotatable relative to the first frame so as to rotate engaged containers, wherein each of said first frames includes a lid engagement device mounted thereto, each of said lid engagement devices having an actuator for positioning a lid engagement frame proximate to a lid of said respective container, said frame arranged to engage said lid so as to permit the actuator to move said lid relative to the respective container.

7. The dual spreader assembly according to claim 6, further including a support device mounted to each spreader, each of said support devices having at least one support arm extending parallel to the longitudinal axis of the spreader and positioned proximate to a vertical wall of said container, said support device arranged to contact and support the container as the second frame rotates.

8. The dual spreader assembly according to any one of claims 6 or 7, further including a support bracket mounted to said head frame, said support bracket selectively movable perpendicular to longitudinal axes of said spreaders, said support bracket arranged to move to a position above a centre of gravity of said dual spreader assembly when in engagement with the respective containers.

9. A lid engagement device comprising

an actuator for positioning a lid engagement frame proximate to a lid of a container, said frame arranged to engage said lid so as to permit the actuator to move said lid relative to the container, said engagement frame in rotational engagement with a second frame to which container engagement devices are mounted wherein said second frame is rotatable relative to the engagement frame;

said lid engagement device is mountable to lifting apparatus.

10. The lid engagement device according to claim 9 wherein said lifting apparatus includes a crane spreader, a fork lift spreader and a reach stacker spreader.