We Claim:

1. A lock for a sliding wing comprising
   - a lock tongue movable between a locking position and an unlocking position to lock and unlock the wing respectively,
   - an operating component which can engage with the lock tongue, the operating component being movable between a first position and a second position wherein movement of the operating component into the first position causes the lock tongue to adopt the unlocking position and movement of the operating component into the second position causes the lock tongue to adopt the locking position,
   - a snib operatively associated with the operating component such that the operating component can be moved between the first and second positions by moving the snib,
   - a drive component that can engage with the operating component and which is movable between a lock opening position, a lock closing position and a deadlocking position,

   wherein movement of the drive component into the lock opening position causes the operating component to adopt the first position, movement of the drive component into the lock closing position causes the operating component to adopt the second position, and movement of the drive component into the deadlocking position causes the operating component to be held in the second position so that the operating component cannot be moved from the second position to the first position by the snib.

2. A lock as claimed in claim 1, wherein the lock has a body which incorporates a handle and other external furniture of the lock, the components of the lock are assembled inside the body in use, and the handle and furniture are substantially symmetrical about a horizontal centre line of the furniture.

3. A lock as claimed in claim 1 or 2, wherein the lock includes a cassette which is a separate component from external furniture of the lock and at least some of the lock's internal components are mounted inside the cassette, the cassette is insertable into, and removable from, the lock furniture, and the orientation of the lock furniture can be flipped to convert from one handedness to the other, but the orientation of the cassette when the lock is installed can remain the same for both handednesses.

4. A lock as claimed in any one of the preceding claims, wherein the lock tongue comprises a pivoting hook shaped "parrot beak", the locking position is where the hooked end of the beak is rotated to engage with a strike or keeper in or associated with a surrounding frame and the unlocking position is where the hooked end is rotated out of engagement with the strike or keeper, and the operating component slides linearly between the first position and the second position and engages with the parrot beak in such a way that the linear movement of the operating component between the first and second positions causes rotation of the parrot beak between the unlocking and locking positions respectively.

5. A lock as claimed in claim 4, wherein the operating component engages with the parrot beak at a point on the parrot beak that is offset from the parrot beak's axis of rotation, and the engagement comprises a small protrusion on one of the operating component and the parrot beak, and a small recess that receives the protrusion, or one or more edges or ridges that can engage with the protrusion, on the other of the parrot beak and the operating component.

6. A lock as claimed in any one of claims 4 or 5, wherein a pair of parrot beaks are provided which rotate simultaneously but in opposite directions.

7. A lock as claimed in claim 6, wherein the operating component engages with the parrot beaks in such a way that the linear movement of the operating component

between the first and second positions causes each parrot beak to rotate between its respective unlocking and locking positions.

8. A lock as claimed in claim 6 or 7, wherein the operating component comprises a substantially rigid plate-like member extending between the parrot beaks and which has edges, ridges, openings, indents or protrusions to allow it to engage with the parrot beaks.

9. A lock as claimed in any one of the preceding claims, wherein the snib incorporates an external snib member that the user can manipulate by hand from externally of the lock, and the snib has, or connects with, a rigid member (hereinafter referred to as the "snib link") which engages with the operating component.

10. A lock as claimed in any one of the preceding claims, wherein the drive component comprises a rotating component which rotates between the lock opening position, the lock closing position and the deadlocking position, and the lock closing position is between the lock opening position and the deadlocking position such that the drive component adopts or passes through the lock closing position as it rotates from the lock opening position to the deadlocking position (and vice versa).

11. A lock as claimed in claim 10, wherein the drive component has a cam for engaging with the operating component, and the operating component has a pair of edges, one for engaging the cam from one side and the other for engaging the cam from the other side, whereby rotation of the drive component in one direction causes of the cam to push one way on the operating component, forcing the operating component to slide in that direction, and rotation of the drive component in the other direction causes the cam to push the other way on the operating component, forcing the operating component to slide the other way.

12. A lock as claimed in claim 11, wherein rotating the drive component from the lock opening position to the lock closing position drives the operating component from

the first position to the second position (and vice versa), and rotating the drive component from the lock closing position to the deadlocking position causes the cam on the drive component to become positioned directly in line with the drive component's point of rotation.

13. A lock as claimed in any one of the preceding claims, wherein the lock has a key cylinder and the drive component is a rotating component which is operable from externally of the lock using the key cylinder.

14. A lock as claimed in claim 13, wherein the drive component is centrally located within the lock mechanism and the key cylinder's axis of rotation is coaxial with the drive component's axis of rotation.

15. A lock as claimed in claim 13 or 14, wherein the lock is configured to enable the key barrel to be removed, inverted and reinserted into the lock when converting the lock from one handedness to the other.

16. A lock as claimed in any one of claims 13-15, wherein, whichever handedness the lock is in, the edge of the key which points upwards when the key is inserted into the key cylinder is rotated towards the front edge of the lock to lock the lock, and away from the front edge of the lock to unlock the lock.

17. A lock as claimed in any one of claims 13-16, wherein the connection between the key cylinder barrel and the drive component allows over 300° of lost motion.

18. A lock as claimed in any one of claims 13-16, wherein an entraining member protrudes from the internal end of the key cylinder barrel, the entraining member having an elongate shape extending part way across the diameter of the barrel's end, one end of the entraining member being wider than the remainder of the entraining member, and the other end of the entraining member having an entraining lug which

protrudes from the end of the barrel further than the other parts of the entraining member, the drive component incorporates a cylindrical portion towards the centre thereof, the cylindrical portion having a round through-bore extending all the way through the centre of the drive component and there being a raised ridge extending along the length of the inside wall of the bore, the cylindrical portion having a tab on either end of the cylindrical portion (on either side of the drive component) each said tab extending from a point on the circumference of the cylindrical portion, the tabs are wedge-shaped, and the ridge is located diametrically across from the tabs, wherein when the key cylinder barrel is brought into engagement with the drive component on one side or other of the drive component depending on the handedness of the lock, the entraining lug on one end of the barrel's entraining member inserts into the through-bore in the drive component, and at the same time, a wedge-shaped tab on the circumference of the drive component's cylindrical portion becomes positioned beside the barrel's protruding entraining member, such that rotating the barrel in one direction causes the wider end of the entraining member to contact with the wedge-shaped tab on the drive component, and the entraining lug contacts with the ridge inside the drive component's through bore, thus causing the drive component to rotate in the same direction as the barrel, but rotating the barrel back the other way causes the wide end of the entraining member and the entraining lug to separate from the wedge-shaped tab and the ridge respectively whereupon the barrel can rotate all the way around until the wide end of the entraining member contacts with the other side of the wedge-shaped tab on the drive component and the entraining lug contacts with the other side of the ridge.

19. A lock as claimed in any one of the preceding claims which incorporates means for providing an indication to the user when the drive component reaches one or more or each of the respective lock opening, lock closing and deadlocking position is.

20. A lock as claimed in any one of the preceding claims, having a deadlock indicator that comprises a tab which extends visibly out from the lock body when the lock is

deadlocked, but which is retracted into the lock body out of sight when the lock is not deadlocked.

21. A lock for a sliding wing comprising

- a parrot beak rotatable between a locking position and an unlocking position to lock and unlock the wing respectively,
- a rigid operating component which is slidable in a linear fashion between a first position and a second position and which can engage with the parrot beak at a point on the parrot beak offset from the parrot beak's axis of rotation such that sliding the operating component into the first position causes the parrot beak to rotate into the unlocking position and sliding the operating component into the second position causes the parrot beak to rotate into the locking position, and
- a key operated drive component that can engage with the operating component and which is moveable between an opening position and a deadlocking position,

wherein moving the drive component into the opening position causes the operating component to adopt the first position and moving the drive component into the deadlocking position causes the operating component to adopt the second position.

22. A lock as claimed in claim 1 wherein the lock can be converted from one handedness to the other handedness, the lock comprising lock furniture that can be inverted when converting the lock from one handedness into the other, a casing within which internal components of the lock can be mounted, the casing being mountable to the furniture but also removable and re-mountable to the furniture in an inverted orientation whereby, when the lock is installed, the orientation of the casing can be the same whichever handedness the lock is installed in, and a key cylinder mountable to the furniture but which can be removed, inverted and re-mounted to the furniture wherein the key cylinder can engage the components inside the casing from either side of the casing and the lock can be operated by turning a key in conventional directions which ever handedness the lock is installed in.

23. A lock as claimed in claim 1 wherein the drive component can be rotated to cause the lock tongue to move between the locking position and the unlocking position, and the lock also having a key cylinder for rotating the drive component, the key cylinder being configurable to engage with the drive component from either side of the drive component, wherein the engagement between the key cylinder and the drive component allows over 180° of lost motion of the key cylinder whichever side of the drive component the key cylinder engages from.

We Claim:

1. A lock for a sliding wing comprising
   - a lock tongue movable between a locking position and an unlocking position to lock and unlock the wing respectively,
   - an operating component which can engage with the lock tongue, the operating component being movable between a first position and a second position wherein movement of the operating component into the first position causes the lock tongue to adopt the unlocking position and movement of the operating component into the second position causes the lock tongue to adopt the locking position,
   - a snib operatively associated with the operating component such that the operating component can be moved between the first and second positions by moving the snib,
   - a drive component that can engage with the operating component and which is movable between a lock opening position, a lock closing position and a deadlocking position,

   wherein movement of the drive component into the lock opening position causes the operating component to adopt the first position, movement of the drive component into the lock closing position causes the operating component to adopt the second position, and movement of the drive component into the deadlocking position causes the operating component to be held in the second position so that the operating component cannot be moved from the second position to the first position by the snib.

2. A lock as claimed in claim 1, wherein the lock has a body which incorporates a handle and other external furniture of the lock, the components of the lock are assembled inside the body in use, and the handle and furniture are substantially symmetrical about a horizontal centre line of the furniture.

3. A lock as claimed in claim 2, wherein the lock includes a cassette which is a separate component from the lock's external furniture and at least some of the lock's internal components are mounted inside the cassette.

4. A lock as claimed in claim 3, wherein the cassette is insertable into, and removable from, the lock furniture and the orientation of the lock furniture can be flipped to convert from one handedness to the other, but the orientation of the cassette when the lock is installed can remain the same for both handednesses.

5. A lock as claimed in any one of the preceding claims, wherein the lock tongue comprises a pivoting hook shaped "parrot beak" and the locking position is where the hooked end of the beak is rotated to engage with a strike or keeper in or associated with a surrounding frame, and the unlocking position is where the hooked end is rotated out of engagement with the strike or keeper.

6. A lock as claimed in claim 5, wherein the operating component slides linearly between the first position and the second position, and it engages with the parrot beak in such a way that the linear movement of the operating component between the first and second positions causes rotation of the parrot beak between the unlocking and locking positions respectively.

7. A lock as claimed in claim 6, wherein the operating component engages with the parrot beak at a point on the parrot beak that is offset from the parrot beak's axis of rotation, and the engagement comprises a small protrusion on one of the operating component and the parrot beak, and a small recess that receives the protrusion, or one or more edges or ridges that can engage with the protrusion, on the other of the parrot beak and the operating component.

8. A lock as claimed in any one of claims 5-7, wherein a pair of parrot beaks are provided which rotate simultaneously but in opposite directions.

9. A lock as claimed in claim 8, wherein the operating component engages with the parrot beaks in such a way that the linear movement of the operating component between the first and second positions causes each parrot beak to rotate between its respective unlocking and locking positions.

10. A lock as claimed in any one of claims 8-9, wherein the operating component comprises a substantially rigid plate-like member extending between the parrot beaks and which has edges, ridges, openings, indents or protrusions to allow it to engage with the parrot beaks.

11. A lock as claimed in any one of the preceding claims, wherein the snib incorporates an external snib member that the user can manipulate by hand from externally of the lock, and the snib has, or connects with, a rigid member (hereinafter referred to as the "snib link") which engages with the operating component.

12. A lock as claimed in claim 11, wherein the operating component incorporates openings or slots to allow the snib link to engage with the operating component.

13. A lock as claimed in any one of the preceding claims, wherein the drive component comprises a rotating component which rotates between the lock opening position, the lock closing position and the deadlocking position.

14. A lock as claimed in claim 13, wherein the lock closing position is between the lock opening position and the deadlocking position such that the drive component adopts or passes through the lock closing position as it rotates from the lock opening position to the deadlocking position (and vice versa).

15. A lock as claimed in claim 14, wherein the drive component rotates between two extremes of rotation, and the lock opening position is towards one extreme and a deadlocking position is towards the other extreme.

16. A lock as claimed in any one of claims 13-15, wherein the drive component has a cam for engaging with the operating component, and the operating component has a pair of edges, one for engaging the cam from one side and the other for engaging the cam from the other side, whereby rotation of the drive component in one direction causes of the cam to push one way on the operating component, forcing the operating component to slide in that direction, and rotation of the drive component in the other direction causes the cam to push the other way on the operating component, forcing the operating component to slide the other way.

17. A lock as claimed in claim 16, wherein rotating the drive component from the lock opening position to the lock closing position drives the operating component from the first position to the second position (and vice versa), and rotating the drive component from the lock closing position to the deadlocking position causes the cam on the drive component to become positioned directly in line with the drive component's point of rotation.

18. A lock as claimed in any one of the preceding claims, wherein the lock has a key cylinder and the drive component is a rotating component which is operable from externally of the lock using the key cylinder.

19. A lock as claimed in claim 18, wherein the key cylinder has a key cylinder barrel and an end of the barrel inside the lock connects directly, or indirectly via linking component(s), to the drive component such that rotation of the barrel causes rotation of the drive component.

20. A lock as claimed in claim 18 or 19, wherein the drive component is centrally located within the lock mechanism and the key cylinder's axis of rotation is coaxial with the drive component's axis of rotation.

21. A lock as claimed in any one of claims 18-20, wherein the lock is configured to enable the key barrel to be removed, inverted and reinserted into the lock when converting the lock from one handedness to the other.

22. A lock as claimed in any one of claims 18-21, wherein, whichever handedness the lock is in, the edge of the key which points upwards when the key is inserted into the key cylinder is rotated towards the front edge of the lock to lock the lock, and away from the front edge of the lock to unlock the lock.

23. A lock as claimed in any one of claims 19-22, wherein the connection between the key cylinder barrel and the drive component allows over 300° of lost motion.

24. A lock as claimed in claim 23, wherein an entraining member protrudes from the internal end of the key cylinder barrel, the entraining member having an elongate shape extending part way across the diameter of the barrel's end, one end of the entraining member being wider than the remainder of the entraining member, and the other end of the entraining member having an entraining lug which protrudes from the end of the barrel further than the other parts of the entraining member.

25. A lock as claimed in claim 24, wherein the drive component incorporates a cylindrical portion towards the centre thereof, the cylindrical portion having a round through-bore extending all the way through the centre of the drive component and there being a raised ridge extending along the length of the inside wall of the bore, the cylindrical portion having a tab extending from a point on its circumference, and the ridge being located diametrically across from the tab.

26. A lock as claimed in claim 25, wherein there is a tab on either end of the cylindrical portion (on either side of the drive component), the tabs are wedge-shaped, and the ridge is located diametrically across from the tabs.

27. A lock as claimed in claim 26, wherein when the key cylinder barrel is brought into engagement with the drive component on one side or other of the drive component depending on the handedness of the lock, the entraining lug on one end of the barrel's entraining member inserts into the through-bore in the drive component, and at the same time, a wedge-shaped tab on the circumference of the drive component's cylindrical portion becomes positioned beside the barrel's protruding entraining member, such that rotating the barrel in one direction causes the wider end of the entraining member to contact with the wedge-shaped tab on the drive component, and the entraining lug contacts with the ridge inside the drive component's through bore, thus causing the drive component to rotate in the same direction as the barrel, but rotating the barrel back the other way causes the wide end of the entraining member and the entraining lug to separate from the wedge-shaped tab and the ridge respectively whereupon the barrel can rotate all the way around until the wide end of the entraining member contacts with the other side of the wedge-shaped tab on the drive component and the entraining lug contacts with the other side of the ridge.

28. A lock as claimed in any one of the preceding claims which incorporates means for providing an indication to the user when the drive component reaches one or more or each of the respective lock opening, lock closing and deadlocking position is.

29. A lock as claimed in claim 28, wherein the said means comprises a mechanism that allows the user to physically feel when the drive component reaches one or more of the said positions.

30. A lock as claimed in any one of the preceding claims, having a deadlock indicator that comprises a tab which extends visibly out from the lock body when the lock is deadlocked, but which is retracted into the lock body out of sight when the lock is not deadlocked.

31. A lock for a sliding wing comprising

- a parrot beak rotatable between a locking position and an unlocking position to lock and unlock the wing respectively,
- a rigid operating component which is slidable in a linear fashion between a first position and a second position and which can engage with the parrot beak at a point on the parrot beak offset from the parrot beak's axis of rotation such that sliding the operating component into the first position causes the parrot beak to rotate into the unlocking position and sliding the operating component into the second position causes the parrot beak to rotate into the locking position, and
- a key operated drive component that can engage with the operating component and which is moveable between an opening position and a deadlocking position,

wherein moving the drive component into the opening position causes the operating component to adopt the first position and moving the drive component into the deadlocking position causes the operating component to adopt the second position.

32. A lock that can be converted from one handedness to the other handedness, the lock comprising lock furniture that can be inverted when converting the lock from one handedness into the other, a casing within which internal components of the lock can be mounted, the casing being mountable to the furniture but also removable and re-mountable to the furniture in an inverted orientation whereby when the lock is installed the orientation of the casing can be the same whichever handedness the lock is installed in, and a key cylinder mountable to the furniture but which can be removed, inverted and re-mounted to the furniture wherein the key cylinder can engage the components inside the casing from either side of the casing and the lock can be operated by turning a key in conventional directions which ever handedness the lock is installed in.

33. A lock having a lock tongue movable between a locking position and an unlocking position, a drive component in the lock that can be rotated to cause the lock tongue to move between the locking position and the unlocking position, and a key cylinder for rotating the drive component, the key cylinder being configurable to engage with the drive component from either side of the drive component, wherein the

engagement between the key cylinder and the drive component allows over 180° of lost motion of the key cylinder whichever side of the drive component the key cylinder engages from.

34. A lock substantially as hereinbefore described with reference to the drawings.