Claims

1. An inhaler (1) comprising a housing (2), a blister strip (3) contained within said housing (2), said blister strip having a surface (6) and a plurality of blister pockets (5) depending from said surface (6), each blister pocket (5) containing a dose of medicament for inhalation by a user, and, a blister strip drive mechanism (7) including a drive wheel (13) comprising a plurality of spokes (14), each spoke (14) forming an arm of the blister drive mechanism (7), and a blister strip drive member (27) to drive said strip, the blister strip drive member (27) being disposed on an end of said arm, the blister strip drive member (27) having leading and trailing blister strip contact edges (29, 32) on opposite sides of an axis extending in a radial direction through said arm and the blister strip drive member (27) so that the leading blister strip contact edge (29) contacts the strip (3) along a line defined by the crease (30) between one blister pocket (5) and said surface (6) when the blister strip drive member (27) is rotated in one direction and so that the trailing blister strip contact edge (32) contacts the strip (3) along a line defined by the crease (30) between an adjacent blister pocket (5) and said surface (6), when the blister strip drive member (27) is rotated in the opposite direction, wherein the pitch of the blister strip (3) is selected so that it is less than the pitch of the drive wheel (13),characterised in thatthe blister strip drive member (27) is shaped to contact the strip (3) along said line defined by the crease (30) between said blister pocket (5) and said surface (6), the leading blister strip contact edge (29) being shaped to match that of the crease (30), and that the distance between the creases (30) of adjacent blister bowls is the same as the distance between the leading and trailing edges (29, 32) of the blister strip drive member (27), a nominal wheel tip width, W2, being equal to the distance between blisters, B2.

2. An inhaler (1) according to claim 1, wherein the blister strip drive member (27) is configured to direct a larger component of force in a direction along the surface (6) of the strip (3) relative to a component of force directed against a blister pocket (5).

3. An inhaler (1) according to any preceding claim, wherein the blister strip contact edge (29, 32) has a radius of up to 0.2mm.

4. An inhaler (1) according to claim 3 wherein the blister strip drive member (27) comprises an enlarged head on the end of the arm that tapers from the arm to the blister strip contact edge (29, 32).

5. An inhaler (1) according to any preceding claim, wherein the blister strip drive member (27) and arm are configured so that contact with the blister strip (3) is restricted to the blister strip contact edge (29, 32).

6. An inhaler (1) according to any of claims 3 to 5, wherein the arm and/ or blister strip drive member (27) is shaped such that the blister strip contact edge (29, 32) contacts the crease (30) between a shaped blister pocket (5) and the surface (6) of the strip (3).

7. An inhaler (1) according to claim 6, wherein the arm and/ or blister strip drive member (27) is at least partially curved in shape such that the blister strip contact edge (29, 32) contacts at least a partially curved line defined by the crease (30) between a shaped blister pocket (5) and the surface (6) of the strip (3).

8. An inhaler (1) according to any preceding claim, wherein the end view of the blister strip drive member (27) is substantially triangular or part triangular in shape, the apex of the triangle pointing in a radially inward direction along the length of the arm.

9. An inhaler (1) according to any preceding claim, wherein the blister strip drive member (27) has a substantially flat or concave end face extending between said blister strip contact edges (29, 32).

10. An inhaler (1) according to claim 9, wherein said end face extends in a plane lying substantially at right angles to a plane of the arm.

11. An inhaler (1) according to any preceding claim, wherein the drive mechanism (7) is configured to sequentially move a blister (5) into alignment with a blister opening member.

12. An inhaler (1) according to claim 11, wherein the inhaler (1) comprises a mouthpiece and a cap to cover the mouthpiece, the drive mechanism being operable in response to movement of the cap by a user.

13. An inhaler (1) according to any preceding claim, wherein each blister pocket (5) has a part cylindrical central region and part hemispherical end regions.

Claims

1. An inhaler comprising a housing to receive a strip having a surface and a plurality of blister pockets depending from said surface, each blister pocket containing a dose of medicament for inhalation by a user and, a blister strip drive mechanism including a blister strip drive member shaped to contact the strip along a line defined by the crease between a blister pocket and said surface, to drive said strip.

2. An inhaler according to claim 1, wherein the blister strip drive member is configured to direct a larger component of force in a direction along the surface of the strip relative to a component of force directed against a blister pocket.

3. An inhaler according to claim 1 or claim 2, wherein the blister drive mechanism includes an arm and the blister strip drive member is disposed on an end of said arm.

4. An inhaler according to claim 3, wherein the blister strip drive member has a blister strip contact edge to contact the strip along said line defined by the crease between a blister pocket and said surface.

5. An inhaler according to claim 4, wherein the edge has a radius of up to 0.2mm.

6. An inhaler according to claim 4 or claim 5, wherein the blister strip drive member comprises an enlarged head on the end of the arm that tapers from the arm to the blister strip contact edge.

7. An inhaler according to any of claims 4 to 6, wherein the blister strip drive member and arm are configured so that contact with the blister strip is restricted to the blister strip contact edge.

8. An inhaler according to any of claims 3 to 7, wherein the arm and/or blister strip drive member is shaped such that the blister strip contact edge contacts the crease between a shaped blister pocket and the surface of the strip.

9. An inhaler according to claim 8, wherein the arm and/or blister strip drive member is at least partially curved in shaped such that the blister strip contact edge contacts at least a partially curved line defined by the crease between a shaped blister pocket and the surface of the strip.

10. An inhaler according to any of claims 3 to 9, wherein the blister strip drive member has leading and trailing blister strip contact edges on opposite sides of an axis extending in a radial direction through said arm and the blister strip drive member so that the leading blister strip contact edge contacts the strip along said line defined by the crease between one blister pocket and said surface when the drive member is rotated in one direction and so that the trailing blister strip contact edge contacts the strip along said line defined by the crease between an adjacent blister pocket and said surface, when the drive member is rotated in the opposite direction.

11. An inhaler according to claim 10, wherein the end view of the blister strip drive member is substantially triangular or part triangular in shape, the apex of the triangle pointing in a radially inward direction along the length of the arm.

12. An inhaler according to claim 10 or 11, wherein the blister strip drive member has a substantially flat or concave end face extending between said blister strip contact edges.

13. An inhaler according to claim 10 or 11, wherein said end face extends in a plane lying substantially at right angles to a plane of the arm.

14. An inhaler according to claim 12, wherein the distance between said leading and trailing edge blister strip contact edges in a direction along the end

face is selected so as to be substantially the same as the distance between the crease of adjacent blister bowls of a blister strip to be indexed.

15. An inhaler according to any preceding claim, wherein the pitch of the drive wheel is selected so as to be equal to or larger than the pitch of the blister strip.

16. An inhaler according to any preceding claim, wherein the drive mechanism is configured to sequentially move a blister into alignment with a blister opening member.

17. An inhaler according to claim 16, wherein the inhaler comprises a mouthpiece and a cap to cover the mouthpiece, the drive mechanism being operable in response to movement of the cap by a user.

18. An inhaler according to claim 16 or 17, wherein the inhaler comprises an actuator, the drive mechanism being operable in response to movement of the actuator by a user.

19. An inhaler according to any of claims 2 to 18, wherein the drive mechanism includes a drive wheel.

20. An inhaler according to claim 19, wherein the drive wheel comprises a plurality of spokes, each spoke forming an arm of the blister drive mechanism.

21. An inhaler according to claim 19 or claim 20, wherein the drive wheel is rotatable to move the arm so that the blister strip drive member contacts a strip along a line defined by the crease between a blister pocket and said surface of the strip, to drive said strip.

22. An inhaler according to any preceding claim, comprising a blister strip ~~having a surface and a plurality of blister pockets depending from said surface,~~

each blister pocket containing a dose of medicament for inhalation by a user, contained within said housing.

23. An inhaler according to claim 22, wherein the distance between the creases of adjacent blister bowls is substantially the same as the distance between the leading and trailing edges of the blister strip contact edges.

24. An inhaler according to claim 22 or claim 23, wherein the pitch of the blister strip is selected so that it is equal to or less than the pitch of the drive wheel.

25. An inhaler according to any of claims 22 to 24, wherein each blister pocket has a part cylindrical central region and part hemispherical end regions.