CLAIMS

1. A dispensing unit (20) for a thin film dispenser comprising:

a base (21) having a side;

a wheel assembly (23) mounted on the base (21) and comprising

a tape supplying wheel (24) mounted rotatably on the base (21); and

a used tape collecting wheel (25) mounted rotatably on the base (21);

a thin film (26) mounted around the wheel assembly (23); and

a locking device (28) resiliently disposed on the base (21) and having

at least one resilient engaging arm (29) formed on and connected to the side of the base (21) and selectively and directly engaging at least one of the tape supplying wheel (24) and the used tape collecting wheel (25) ~~and selectively and directly engaging at least one of the tape supplying wheel (24) and the used tape collecting wheel (25)~~ to prevent the wheel assembly (23) from rotating, and each one of the at least one resilient engaging arm (29) having at least one end connected with the side of the base (21) and being pushable radially outward relative to a corresponding one of the tape supplying wheel (24) and the used tape collecting wheel (25) of the wheel assembly (23) to disengage from the corresponding one of the tape supplying wheel (24) and the used tape collecting wheel (25) of the wheel assembly (23).

2. The dispensing unit as claimed in claim 1, wherein the locking device

(28) engages the tape supplying wheel (24).

3. The dispensing unit as claimed in claim 2 further comprising a dispensing head (22) disposed on one end of the base (21).

4. The dispensing unit as claimed in claim 2 or 3, wherein

the tape supplying wheel (24) has multiple concave-convex teeth (242) disposed alternately, formed on a side of the tape supplying wheel (24) and arranged in a circle; and

the at least one resilient engaging arm (29) of the locking device (28) selectively engages one of the concave-convex teeth (242) on the tape supplying wheel (24).

5. The dispensing unit as claimed in claim 4, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having a free end opposite to the base (21);

a curved segment (294) connected with the straight segment (292) and having

a connecting end connected with the free end of the straight segment (292); and

an engaging end opposite to the connecting end;

an engaging element (296) formed on the engaging end of the curved segment (294) and selectively engaging one of the concave-convex teeth (242)

on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

6. The dispensing unit as claimed in claim 4, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having an engaging end opposite to the base (21);

an engaging element (296) formed on the engaging end of the straight segment (292) and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the straight segment (292).

7. The dispensing unit as claimed in claim 4, wherein each one of the at least one resilient engaging arm (29) comprises

a curved segment (294) integrally and resiliently connected with the base (21) and having an engaging end opposite to the base (21);

an engaging element (296) formed on the engaging end of the curved segment (294) and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

8. The dispensing unit as claimed in claim 4, wherein each one of the at least one resilient engaging arm (29) comprises

two ends securely connected with the base (21);

an engaging segment formed between the ends;

an engaging element (296) formed on the engaging segment and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging segment.

9. The dispensing unit as claimed in claim 1, wherein

the at least one resilient engaging arm (29) of the locking device (28) selectively engages the used tape collecting wheel (25).

10. The dispensing unit as claimed in claim 9, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having a free end opposite to the base (21);

a curved segment (294) connected with the straight segment (292) and having

a connecting end connected with the free end of the straight segment (292); and

an engaging end opposite to the connecting end and engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

11. The dispensing unit as claimed in claim 9, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (~~291~~21) and having an engaging end opposite to the base (21) and selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the straight segment (292).

12. The dispensing unit as claimed in claim 9, wherein each one of the at least one resilient engaging arm (29) comprises

a curved segment (294) integrally and resiliently connected with the base (21) and having an engaging end selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

13. The dispensing unit as claimed in claim 9, wherein each one of the at least one resilient engaging arm (29) comprises

two ends securely connected with the base (21);

an engaging segment formed between the ends and selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging segment.

14. A thin film dispenser comprising:

a housing (10) having a transmission device disposed in the housing (10);

a dispensing unit (20) mounted in the housing (10) and comprising

a base (21) having a side;

a wheel assembly (23) mounted on the base (21), connected with the transmission device and comprising

a tape supplying wheel (24) mounted rotatably on the base (21); and

a used tape collecting wheel (25) mounted rotatably on the base (21);

a thin film (26) mounted around the wheel assembly (23);

a locking device (28) resiliently disposed on the base (21) and having

at least one resilient engaging arm (29) formed on and connected to the side of the base (21) and selectively and directly engaging at least one of the tape supplying wheel (24) and the used tape collecting wheel (25) to prevent the wheel assembly (23) from rotating, and each one of the at least one resilient engaging arm (29) having at least one end connected with the side of the base (21) and being pushable radially outward relative to a corresponding one of the tape supplying wheel (24) and the used tape collecting wheel (25) of the

wheel assembly (23) to disengage from the corresponding one of the tape supplying wheel (24) and the used tape collecting wheel (25) of the wheel assembly (23);

a dispensing head (22) connected with the dispensing unit (20) and capable of extending out from the housing (10); and

an unlocking device disposed on the housing (10) and corresponding to the locking device (28) to unlock the wheel assembly (23) from the locking device (28).

15. The thin film dispenser as claimed in claim 14, wherein the locking device (28) engages the tape supplying wheel (24).

16. The thin film dispenser as claimed in claim 15, wherein the dispensing head (22) is disposed on one end of the base (21) of the dispensing unit (20).

17. The thin film dispenser as claimed in claim 16, wherein

the tape supplying wheel (24) has multiple concave-convex teeth (242) formed on a side of the tape supplying wheel (24) and arranged in a circle; and

the at least one resilient engaging arm (29) of the locking device (28) selectively engages one of the concave-convex teeth (242) on the tape supplying wheel (24).

18. The thin film dispenser as claimed in claim 17, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having a free end opposite to the base (21);

a curved segment (294) connected with the straight segment (292) and having

a connecting end connected with the free end of the straight segment (292); and

an engaging end opposite to the connecting end;

an engaging element (296) formed on the engaging end of the curved segment (294) and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

19. The thin film dispenser as claimed in claim 17, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having an engaging end opposite to the base (21);

an engaging element (296) formed on the engaging end of the straight segment (292) and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the straight segment (292).

20. The thin film dispenser as claimed in claim 17, wherein each one of the at least one resilient engaging arm (29) comprises

a curved segment (294) integrally and resiliently connected with the base (21) and having an engaging end opposite to the base (21);

an engaging element (296) formed on the engaging end of the curved segment (294) and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

21. The thin film dispenser as claimed in claim 17, wherein each one of the at least one resilient engaging arm (29) comprises

two ends securely connected with the base (21);

an engaging segment formed between the ends;

an engaging element (296) formed on the engaging segment and selectively engaging one of the concave-convex teeth (242) on the tape supplying wheel (24); and

a pushed protrusion (298) formed on and protruding from the engaging segment.

22. The thin film dispenser as claimed in any one of claims 17 to 21, wherein the unlocking device is disposed on an inner surface of the housing (10) and comprises

at least one guiding block (16) corresponding respectively to the at least one resilient engaging arm (29) and spaced from and respectively aligning with the at least one resilient engaging arm (29) after the housing (10) is closed.

23. The thin film dispenser as claimed in any one of claims 18 to 21, wherein the unlocking device is disposed on an inner surface of the housing (10A) and comprises

at least one guiding block (16A) corresponding respectively to the at least one resilient engaging arm (29A) and abutting respectively against the pushed protrusion (298A) on the at least one resilient engaging arm (29A) after the housing (10A) is closed.

24. The thin film dispenser as claimed in claim 14, wherein

the at least one resilient engaging arm (29) of the locking device (28) selectively engages the used tape collecting wheel (25).

25. The thin film dispenser as claimed in claim 24, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (21) and having a free end opposite to the base (21);

a curved segment (294) connected with the straight segment (292) and having

a connecting end connected with the free end of the straight segment (292); and

an engaging end opposite to the connecting end and engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

26. The thin film dispenser as claimed in claim 24, wherein each one of the at least one resilient engaging arm (29) comprises

a straight segment (292) integrally and resiliently connected with the base (~~291~~21) and having an engaging end opposite to the base (21) and selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the straight segment (292).

27. The thin film dispenser as claimed in claim 24, wherein each one of the at least one resilient engaging arm (29) comprises

a curved segment (294) integrally and resiliently connected with the base (21) and having an engaging end selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging end of the curved segment (294).

28. The thin film dispenser as claimed in claim 24, wherein each one of the at least one resilient engaging arm (29) comprises

two ends securely connected with the base (21);

an engaging segment formed between the ends and selectively engaging the used tape collecting wheel (25); and

a pushed protrusion (298) formed on and protruding from the engaging segment.

29. The thin film dispenser as claimed in any one of claims 24 to 28, wherein the unlocking device is disposed on an inner surface of the housing (10) and comprises

at least one guiding block (16) corresponding respectively to the at least one resilient engaging arm (29) and spaced from and respectively aligning with the at least one resilient engaging arm (29) after the housing (10) is closed.

30. The thin film dispenser as claimed in any one of claims 25 to 28, wherein the unlocking device is disposed on an inner surface of the housing (10A) and comprises

at least one guiding block (16A) corresponding respectively to the at least one resilient engaging arm (29A) and abutting respectively against the pushed protrusion (298A) on the at least one resilient engaging arm (29A) after the housing (10A) is closed.

31. The thin film dispenser as claimed in claim 17, wherein the unlocking device is disposed on an inner surface of the housing (10A) and comprises

at least one guiding block (16A) corresponding to the locking device

(28A) and abutting respectively against the at least one resilient engaging arm (29A) after the housing (10A) is closed.