and 70 forms engaging protrusions positioned on the inner peripheral surface of the syringe needle holding part 72 at intervals (see Figs. 3, 5, 8, and 10). Also, the first holding recess 56 of the first holding part 54 and the second holding recess 66 of the second holding part 64 together form a holding recess that detachably receives the tip end of the small-diameter protrusion 30 of the syringe body 28.

[0025] Also, when the moving member 48 is positioned at the retract position, the other end of the moving member 48 contacts or comes close to the other end of the mounting recess 46, and the second holding part 64 separates from the first holding part 54, opening the syringe needle holding part 72 (see Figs. 4, 6, 9, and 11). The first and the second holding parts 54 and 64 will be described later in detail.

[0026] In this embodiment, a lock mechanism 76 for locking the moving member 48 at the holding position is provided. The lock mechanism 76 includes a tilting member 78 provided at a center of the mounting recess 46 below the moving member 48 so as to be freely tiltable and a locking protrusion 80 provided to an under surface of the moving member 48. The tilting member 78 is provided at a tip end with a locking claw 82 slightly protruding upward. The locking claw 82 is formed at a tip end with a first taper part 86. Also, the locking protrusion 80 is formed at a tip end with a second taper part 84 corresponding to the first taper part 86~~84~~ of the locking claw 82.

[0027] Also, a part of the upper surface of the tilting member 78 forms a slope surface 88 that slopes upward from its base side toward a tip-end side (see Figs. 10 and 11). Also, the moving member 48 is formed with an operation opening 90 in an oval shape. The upper surface (the slope surface 88) of the tilting member 78 is exposed outside through the operation opening 90. The operation opening 90 is formed at its edge with a ring-shaped operation protrusion 92 slightly protruding upward. With the operation protrusion 92, pressing operation on the slope surface 88 of the tilting member 78 through operation opening 90 is made easier.

[0028] The tilting member 78 is capable of freely tilting in the up-down direction between a lock position (indicated with a solid line in Fig. 10~~8~~) where the locking claw 82 engages the locking protrusion 80 and an unlock position (indicated with a single-dot chain line in Fig. 10~~8~~) where the locking claw 82 is detached from the locking protrusion 80. The tilting member 78 is resiliently deformable between the lock position and the unlock position, and is normally held at the lock position.

[0029] In this embodiment, the mounting recess 46 is formed with a moving opening 94. The moving opening 94 extends along a moving path of the locking protrusion 80. The moving member 48 is provided at the other end (an end opposite

syringe needle holding part 72 (the first holding recess 56 of the first holding part 54 and the second holding recess 66 of the second holding part 64), and the syringe needle 26 is held by the syringe needle holding part 72. In this holding state, the plurality of engaging protrusions 60 and 70 of the first and second holding parts 54 and 64 are held engaged with the plurality of engaging recesses 40 in the outer peripheral surface of the ~~syringe~~ needle holder 36.

[0036] Next, with the syringe needle 26 inserted in the syringe needle holding part 72, the syringe body 28 is moved in the detaching direction indicated with an arrow R in Fig. 10 relative to the syringe needle 26. As a result, the screw fit between the female screw part (not shown) of the needle holder 36 and the male screw part 34 of the needle attaching part 32 of the syringe body 28 is released, and the syringe body 28 is removed from the needle holder 36 of the syringe needle 26. At this time, because the moving member 48 is locked at the holding position by the lock mechanism 76, the moving member 48 does not slide-move to the retract position when the syringe body 28 is rotated relative to the syringe needle 26.

[0037] Then, a user inserts his/her finger into the operation opening 90 and presses down the upper surface of the tilting member 78, tilting the tilting member 78 downward to release the engagement between the locking claw 82 and the locking protrusion 80 on the lid 8 side (i.e., unlock the lock mechanism 76). In this unlocked condition, the user hooks the finger to the operation protrusion 92 or the like and slide-moves the moving member 48 from the holding position to the retract position. As a result, as shown in Fig. 11, the second holding part 64 on the moving member 48 side is separated from the syringe needle 26 (i.e., the needle holder 36) held by the first holding part 54 on the lid 8 side. The syringe needle 26 tilts toward the moving member 48 by its own weight, and the needle holder 36 is detached from the first holding part 54. Thus detached syringe needle 26 drops and is contained into the container body 4 through the dropping opening 62. In this manner, with the weight of the syringe needle 26 itself, a simple operation to move the moving member 48 to the retract position can put the syringe needle 26 detached from the syringe body 28 into the container body 4.

[0038] After collecting the syringe needle 26 into the container body 4, the moving member 48 is slide-moved from the retract position to the holding position for the next collection. At this time, the first taper part 86~~8~~4 of the locking claw 82 slide-moves over the second taper part 84~~8~~6 of the locking protrusion 80. This makes the tilting member 78 tilt downward, engaging the locking claw 82 with the locking protrusion 80. In this manner, the lock mechanism 76 is locked, and the moving member 48 is locked at

peripheral surface at even intervals in the radial direction.

[0043] If the first and second predetermined angles α1 and α2 defining the first and second bottom areas S1 and S2 are excessively small, then the number of the engaging protrusions 70 for engaging with the engaging recesses 40 of the needle holder 36 becomes small, causing a danger that the engagement between the plurality of engaging recesses 40 of the needle holder 36 and the engaging protrusions 70 of the second holding part 64A becomes insufficient. Also, if the first and second predetermined angles α1 and α2 are excessively large, then it makes harder for the engaging protrusions 70 of the second~~first~~ holding part 64A (especially the engaging protrusions 70 located on the open end part side) to be detached from the engaging recesses 40 of the needle holder 36. Thus, there is a danger that the needle holder 36 moves together with the moving member 48A toward the retract position when the moving member 48A is moved toward the retract position.

[0044] The remaining configuration of the modification (such as the configuration of the first holding part 54 on the lid 8 side) may be the same as those described above. In this modification, because the first and second open areas K1 and K2 of the second holding part 64A of the moving member 48A are the non-holding area with no engaging protrusions, the inner surfaces of the first and second open areas K1 and K2 of the second holding part 64A do not act on the needle holder 36 held by the syringe needle holding part 72A. Thus, even when the moving member 48A is moved from the holding position shown in Fig. 12 to the retract position shown in Fig. 13, the needle holder 36 (i.e., the syringe needle) does not move together with the moving member 48A. As a result, it is possible to make the syringe needle (the needle holder 36) remaining on the lid 8 side reliably drop and be contained into the container body with its own weight as described above.

[0045] For example, in the above-described embodiment, the first predetermined angle α1 and the second predetermined angle α2 are the same angle. However, it is unnecessary to set both the same. The first predetermined angle α1 may be set larger (or smaller) than the second predetermined angle α2.

[0046] While the embodiment and the modification of the syringe needle disposal container according to the invention have been described, the invention is not limited to the embodiment and the modification. Various changes and modifications may be made therein without departing from the spirit of the invention.

[0047] For example, in the above-described embodiment, the plurality of engaging recesses 40 are formed in the outer peripheral surface of the needle holder 36 of

64B~~38B~~ does not act on the vertical ribs of syringe needle 26~~2~~4 when the moving member 48B moves toward the retract position, making it possible to prevent force from the moving member 48B from acting on the vertical ribs.

[0061] In addition, each engaging protrusion 70B provided to the second holding part 64B has both side surfaces 80, 82 that slop inward toward the ends (i.e., inward in the radial direction), such that each engaging protrusion 70B has a trapezoidal shape in a horizontal cross-section. With this configuration, the plurality of engaging protrusions 70B of the second holding part 64B does not act on the vertical ribs of the syringe needle 26~~2~~4 when the moving member 48 moves toward the retract position, and it is possible to prevent the force from the moving member 48B through the engaging protrusions 70B from acting on the vertical ribs of the syringe needle 26~~2~~4. Thus, when the moving member 48B is moved toward the retract position, the needle holder 36 of the syringe needle 26~~2~~4 does not taken by the moving member 48B. Note that such sloping of the side surfaces 80, 82 of each engaging protrusion 70B is not necessarily provided to both side surfaces, but may be provided to one side (that is, the side surface 82 opposite to open end parts 102A, 104A to achieve desired effects.

[0062] As described above, forming the non-holding area to the first holding part and/or the second holding part prevents the syringe needle from remaining at a predetermined holding part. As a result, it is possible to provide the syringe needle disposal container that can easily make the syringe needle detach from the syringe body and drop and be contained into the container body.

[0063] Although the above is the embodiment based on the drawings, the present invention is not limited to the embodiment. For example, in the embodiment, the first holding part is formed at one end of the mounting part, and the second holding part is formed at one end of the moving member. The mounting part may, however, have two moving members capable of freely sliding, and the first holding part and the second holding part may be formed at two holding parts respectively. That is, the syringe needle holding part may be formed by a plurality of moving members.

EXPLANATION OF REFERENCES

[0064] 2 syringe needle disposal container
4 container body
8 lid
26 syringe needle
28 syringe body
36 needle holder