THE INVENTION CLAIMED IS:

1. An adapter for connection with a fluid container, the adapter comprising:

an outer housing having a distal end, a proximal end, and a sidewall extending between the distal end and the proximal end;

an inner member comprising a rotatable body inserted within the outer housing, a connector extending from the body configured to connect the adapter to a fluid container, and at least one grasping member extending from the inner member;

a first locking arrangement engageable with the inner member and configured to restrict the inner member from rotating relative to the outer housing in a first direction; and

a second locking arrangement engageable with the inner member and configured to restrict the inner member from moving in a proximal direction relative to the outer housing,

wherein the adapter is transitionable between a disengaged state, in which both the first locking arrangement and the second locking arrangement are not engaged with the inner member, a first fully engaged state in which the first locking arrangement engages the inner member, and a second fully engaged state in which the second locking arrangement engages the inner member~~.~~, and

wherein the second locking arrangement engages with a top surface of the inner member.

2. The adapter according to claim 1, wherein the inner member is rotatable in both the first direction and a ~~the~~ second direction when the connector is in the disengaged state, wherein the inner member is prevented from rotating in a first direction when the connector is in the first fully engaged state; and wherein the inner member is prevented from retracting proximally out of the housing while permitting the inner member to rotate freely in the second fully engaged state.

3. The adapter according to claim 1, wherein the inner member is transitionable from an extended position to a recessed position by applying a compressive force to the inner member.

4. The adapter according to claim 1, wherein the first locking arrangement comprises at least one tooth extending inward from an inner surface of the sidewall of the outer housing and a corresponding tooth on the body of the inner member configured to engage the tooth on the sidewall.

5. The adapter according to claim 4, wherein the at least one tooth extending inward from the inner surface of the sidewall of the outer housing and the corresponding tooth on the body of the inner member comprise an angled portion and a vertical locking surface.

6. The adapter according to claim 1, wherein the first locking arrangement comprises a plurality of teeth extending around a circumferential inner surface of the sidewall of the outer housing and a plurality of corresponding teeth extending from a distal end of the body of the inner member.

7. The adapter according to claim 1, wherein the second locking arrangement comprises at least one inwardly extending locking tab connected to a portion of an inner surface of the sidewall of the outer housing and configured to engage the proximal surface of the inner member.

8. The adapter according to claim 7, wherein the second locking arrangement comprises at least two inwardly extending locking tabs positioned on opposing sides of the sidewall of the outer housing.

9. The adapter according to claim 7, wherein the at least one locking tab comprises a locking surface configured such that applying a compressive force to the inner member biases the tab outward to insert the inner member into the outer housing.

10. The adapter according to claim 1, wherein the connector comprises an outer surface with helical threads, configured to engage corresponding threads on an inner surface of a portion of the fluid container.

11. The adapter according to claim 10, wherein the connector comprises a luer connector configured to receive a corresponding luer connector of the fluid container.

12. The adapter according to claim 1,

wherein the at least one grasping member comprises two curved flanges extending from a proximal surface of the inner member, each curved flange including a planar portion and an angled portion extending from each end of the planar portion, and

wherein the curved flanges are configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

13. The adapter according to claim 1,

wherein the at least one grasping member comprises two bumps extending from a proximal surface of the inner member, each bump having a substantially hemispherical shape, and

wherein the bumps are configured for pressing by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

14. The adapter according to claim 1,

wherein the at least one grasping member comprises two flanges positioned on the connector, each flange comprising a vertical portion that extends vertically along a side surface of the connector, and

wherein the flanges are configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

15. The adapter according to claim 14, wherein one of the flanges further comprises a horizontal portion that extends horizontally from the connector and perpendicular to the vertical portion.

16. The adapter according to claim 1,

wherein the at least one grasping member comprises a thumb stop extending horizontally from the connector and vertically from the body, and

wherein the thumb stop is configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

17. The adapter according to claim 1,

wherein the at least one grasping member comprises a groove defined in the body of the inner member, and

wherein the groove is configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

18. A method of disconnecting a fluid container to an adapter comprising:

providing an adapter comprising:

an outer housing having a distal end, a proximal end, and a substantially cylindrical sidewall extending between the distal end and the proximal end;

an inner member comprising a body rotatably inserted within the outer housing, a connector extending from the body configured to connect the adapter to a fluid container, and at least one grasping member extending from the inner member, the grasping member being configured for grasping by a user of the adapter;

a first locking arrangement engageable with a distal end of the inner member and configured to restrict the inner member from rotating relative to the outer housing in a first direction; and

a second locking arrangement engageable with a proximal surface of the inner member and configured to restrict the inner member from moving in a proximal direction relative to the outer housing, wherein the second locking arrangement engages with a top surface of the inner member;

grasping the at least one grasping member;

moving the fluid container in an axial direction towards the adapter; and

rotating the fluid container to disconnect the fluid container from the inner member of the adapter.

19. The method according to claim 18,

wherein the at least one grasping member comprises two curved flanges extending from a proximal surface of the inner member, each curved flange including a planar portion and an angled portion extending from each end of the planar portion, and

wherein the curved flanges are configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

20. The method according to claim 18,

wherein the at least one grasping member comprises two flanges positioned on the connector, each flange comprising a vertical portion that extends vertically along a side surface of the connector, and

wherein the flanges are configured for grasping by the user to prevent rotation of the inner member in a second direction, in which the second direction is opposite the first direction.

21. An adapter for connection with a fluid container, the adapter comprising:

an outer housing having a distal end, a proximal end, and a sidewall extending between the distal end and the proximal end;

a hub cover attached to the proximal end of the outer housing;

an inner member comprising a rotatable body inserted within the outer housing and a connector extending from the body configured to connect the adapter to a fluid container;

a first locking arrangement engageable with the outer housing and configured to restrict the inner member from rotating relative to the outer housing in a first direction; and

a second locking arrangement engageable with the outer housing and configured to restrict the inner member from moving in a proximal direction relative to the outer housing,

wherein the adapter is transitionable between a disengaged state, in which both the first locking arrangement and the second locking arrangement are not engaged with the inner member, a first fully engaged state in which the first locking arrangement engages the outer housing, and a second fully engaged state in which the second locking arrangement engages the outer housing, and

wherein the second locking arrangement engages with a top surface of the inner member.

22. The adapter according to claim 21, wherein the hub cover is integrally formed on the proximal end of the outer housing and is configured to surround the rotatable body of the inner member when the inner member is connected to the outer housing.

23. The adapter according to claim 21, wherein the hub cover is substantially flexible so as to contact the inner member to prevent rotation of the inner member relative to the outer housing.

24. The adapter according to claim 21, wherein the inner member is rotatable in both the first direction and the second direction when the connector is in the disengaged state, wherein the inner member is prevented from rotating in a first direction when the connector is in the first fully engaged state; and wherein the inner member is prevented from retracting proximally out of the housing while permitting the inner member to rotate freely in the second fully engaged state.

25. The adapter according to claim 21, wherein the inner member is transitionable from an extended position to a recessed position by applying a compressive force to the inner member.

26. The adapter according to claim 21, wherein the first locking arrangement comprises at least one tooth extending inward from an inner surface of the inner member and at least one recess defined in the proximal end of the outer housing configured to engage the tooth on the inner member.

27. The adapter according to claim 26, wherein the at least one tooth extending inward from the inner member and the corresponding recess defined in the outer housing comprise an angled portion and a vertical locking surface.

28. The adapter according to claim 21, wherein the second locking arrangement comprises at least one inwardly extending locking tab connected to a portion of an inner surface of the inner member and configured to engage a locking protrusion extending from the proximal end of the outer housing.

29. The adapter according to claim 28, wherein the at least one locking tab comprises a locking surface configured such that applying a compressive force to the inner member biases the locking tab outward to insert the inner member into the outer housing.

30. The adapter according to claim 21, wherein the sidewall of the outer housing defines at least one indentation to assist a user in gripping the adapter.