What is claimed is:

1. A power-assisted apparatus for tightening and untightening union wing nuts, the apparatus comprising:

a body adapted to encircle a union wing nut and movable between a closed position wherein the body engages the union wing nut, and an open position wherein the body releases the union wing nut, the body including:

an inner annulus having a gear-teeth outer circumference and a plurality of lug slots adapted to receive into engagement a plurality of lugs of the union wing nut when the inner annulus engages the lugs during the closed position, and

an outer casing adapted to retain the inner annulus during the closed position;

a pinion gear disposed at the outer casing and adapted to engage with the gear-teeth of the inner annulus during the closed position; and

a power-assisted actuator adapted to drive the pinion gear into turning the inner annulus together with the union wing nut during the closed position.

What is claimed is:

1. A power-assisted apparatus for tightening and untightening union wing nuts, the apparatus comprising:

a body adapted to encircle a union wing nut and movable between a closed position wherein the body engages the union wing nut, and an open position wherein the body releases the union wing nut, the body including:

an inner annulus having a gear-teeth outer circumference and a plurality of lug slots adapted to receive into engagement a plurality of lugs of the union wing nut when the inner annulus engages the lugs during the closed position, and

an outer casing adapted to retain the inner annulus during the closed position;

a pinion gear disposed at the outer casing and adapted to engage with the gear-teeth of the inner annulus during the closed position; and

a power-assisted actuator adapted to drive the pinion gear into turning the inner annulus together with the union wing nut during the closed position.

2. The power-assisted apparatus of claim 1, wherein the power-assisted actuator includes one of a hydraulic piston, an electric motor and a pneumatic gun.

3. The power-assisted apparatus of any of claims 1 to 2, wherein the outer casing includes at least a handle.

4. The power-assisted apparatus of any of claims 1 to 3, wherein the outer casing includes a hinge mechanism to allow the outer casing move between the open position and the closed position.

5. The power assisted apparatus of any of claims 1 to 4, wherein the outer casing is securable in the closed position by screws or bolts.

6. A method of installing hose and/or pipe segments using a power-assisted apparatus, the method comprising:

aligning two proximate hose and/or pipe segments such that a union wing nut of one of the two segments overlaps the two segments;

mounting an inner annulus of the power-assisted apparatus onto the union wing nut by having the inner annulus encircle the union wing nut, and having a plurality of lug slots of the inner annulus engage with a plurality of lugs of the union wing nut;

mounting an outer casing of the power-assisted apparatus onto the inner annulus to retain the inner annulus therein;

securing the outer casing in a closed position wherein the power-assisted apparatus engages the union wing nut; and

using a power-assistor actuator of the power-assisted apparatus, driving a pinion gear provided at the outer casing to turn the inner annulus together with the union wing nut engaged therewith.

7. The method of claim 6, further comprising:

moving the outer casing and the inner annulus to an open position wherein the union wing nut is released from the power-assisted apparatus.

8. The method of any of claims 6 to 7, wherein using a power-assistor actuator of the power-assisted apparatus includes using one of a hydraulic piston, an electric motor and a pneumatic gun.

9. A method of uninstalling hose and/or pipe segments using a power-assisted apparatus, the method comprising:

mounting an inner annulus of the power-assisted apparatus onto a union wing nut of two joined hose and/or pipe segments by having the inner annulus encircle the union wing nut, and having a plurality of lug slots of the inner annulus engage with a plurality of lugs of the union wing nut;

mounting an outer casing of the power-assisted apparatus onto the inner annulus to retain the inner annulus therein;

securing the outer casing in a closed position wherein the power-assisted apparatus engages the union wing nut; and

using a power-assistor actuator of the power-assisted apparatus, driving a pinion gear provided at the outer casing to turn the inner annulus together with the union wing nut engaged therewith.

10. The method of claim 9, further comprising:

moving the outer casing and the inner annulus to an open position wherein the union wing nut is released from the power-assisted apparatus.

11. The method of any of claims 9 to 10, wherein using a power-assistor actuator of the power-assisted apparatus includes using one of a hydraulic piston, an electric motor and a pneumatic gun.