CLAIMS

What is claimed is:

1. A device comprising:

a housing comprising a chamber and an opening in communication with the chamber;

a nozzle comprising a passageway therethrough and a housing interface,

wherein the housing interface is sized to be positioned within the opening and configured to slidably engage the housing such that when the housing interface is slidably engaged to the housing, the nozzle is translatable from a completely extended position to a completely depressed position,

wherein the housing interface comprises a first angled indentation thereon, and

wherein the passageway is positioned to be in communication with the chamber when the housing interface is positioned within the opening and slidably engaged to the housing;

a first lock movable from an open position to a closed position,

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the closed position, the first lock inhibits depression of the housing interface of the nozzle further into the housing via the opening of the housing,

wherein the first lock comprises a first angled extension that is positioned within the first angled indentation when the first lock is in the closed position and the housing interface is slidably engaged to the housing,

wherein the first angled indentation and the first angled extension are shaped such that when the first lock is in the closed position and the housing interface is slidably engaged to the housing, the first angled extension presses against the first angled indentation to inhibit depression of the housing interface further into the housing and the first angled extension is slidable against the first angled indentation to allow the nozzle to move toward the completely extended position, and

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the open position, the housing interface is uninhibited, by the first lock, from depression further into the housing via the opening of the housing;

a sensor configured to provide a sensor signal indicative of a partially depressed position of the nozzle between the completely extended position and the completely depressed position; and

electrical circuitry configured to move the first lock from the open position to the closed position in response to the sensor signal.

2. The device of claim 1, wherein, when the housing interface is slidably engaged to the housing, the first lock, sensor, and electrical circuitry are completely contained by the housing and nozzle.

3. The device of claim 1, wherein the sensor comprises an optical sensor.

4. The device of claim 1, wherein the housing interface comprises visual features thereon that when moved in relation to the sensor when the housing interface is slidably engaged to the housing causes the sensor to provide the sensor signal indicative of the partially depressed position.

5. The device of claim 1, wherein one or more sensors comprising the sensor are configured to provide sensor signals indicative of a plurality of partially depressed positions each between the completely extended position and the completely depressed position.

6. The device of claim 1,

wherein the housing interface comprises a plurality of angled indentions thereon comprising the first angled indention, each of the plurality of angled indentions individually aligned orthogonal to a longitudinal axis of the housing and aligned to each other parallel to the longitudinal axis,

wherein the plurality of angled indentions and the first angled extension are shaped such that when the first lock is in the closed position and the housing interface is slidably engaged to the housing, the first angled extension is slidable against each of the plurality angled indentations to allow the nozzle to move toward the completely extended position, and

wherein the angled extension and each of the plurality of angled indentions and are shaped such that when the first lock is in the closed position, the housing interface is slidably engaged to the housing, and the first angled extension is in an angled indention of the plurality of angled indentations, the first angled extension presses against the respective angled indentation to inhibit depression of the housing interface.

7. A device comprising:

a housing comprising a chamber and an opening in communication with the chamber, wherein the housing comprises a chassis, and

a nozzle comprising a passageway therethrough and a housing interface,

wherein the housing interface is sized to be positioned within the opening and configured to slidably engage the housing such that when the housing interface is slidably engaged to the housing, the nozzle is translatable from a completely extended position to a completely depressed position,

wherein the passageway is positioned to be in communication with the chamber when the housing interface is positioned within the opening and slidably engaged to the housing;

a first lock movable from an open position to a closed position,

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the closed position, the first lock inhibits depression of the housing interface of the nozzle further into the housing via the opening of the housing,

wherein the first lock comprises:

an extension slidably translatable in relation to the chassis to move the first lock between the open and closed positions,

a cam rotatable to slidably translate the extension such that a rotation of the cam is limited by engagement of the cam to the chassis,

a motor rotatable to move the cam and in communication with the electrical circuitry, and

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the open position, the housing interface is uninhibited, by the first lock, from depression further into the housing via the opening of the housing;

a sensor configured to provide a sensor signal indicative of a partially depressed position of the nozzle between the completely extended position and the completely depressed position; and

electrical circuitry configured to move the first lock from the open position to the closed position in response to the sensor signal.

8. A device comprising:

a housing comprising a chamber and an opening in communication with the chamber;

a nozzle comprising a passageway therethrough and a housing interface,

wherein the housing interface is sized to be positioned within the opening and configured to slidably engage the housing such that when the housing interface is slidably engaged to the housing, the nozzle is translatable from a completely extended position to a completely depressed position,

wherein the passageway is positioned to be in communication with the chamber when the housing interface is positioned within the opening and slidably engaged to the housing;

a first lock movable from an open position to a closed position,

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the closed position, the first lock inhibits depression of the housing interface of the nozzle further into the housing via the opening of the housing, and

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the open position, the housing interface is uninhibited, by the first lock, from depression further into the housing via the opening of the housing;

a sensor configured to provide a sensor signal indicative of a partially depressed position of the nozzle between the completely extended position and the completely depressed position;

electrical circuitry configured to move the first lock from the open position to the closed position in response to the sensor signal,

wherein the nozzle and the housing are separable from each other without damaging the device; and

a second lock movable between an open position and a closed position,

wherein, when the housing interface is positioned within the opening and the second lock is in the closed position, the second lock inhibits the nozzle from extending beyond the completely extended position, and

wherein, when the housing interface is positioned within the opening and the second lock is in the open position, the nozzle is uninhibited, by the second lock, from extending beyond the completely extended position.

9. The device of claim 8, wherein, when the housing interface is positioned within the opening and the second lock is in the closed position, the housing interface cannot be disengaged from the housing without damaging the device.

10. The device of claim 8, wherein, when the housing interface is slidably engaged to the housing and the first lock is in the closed position, the second lock is inhibited from moving from the closed position to the open position.

11. A device comprising:

a housing comprising a chamber and an opening in communication with the chamber;

a nozzle comprising a passageway therethrough and a housing interface,

wherein the housing interface is sized to be positioned within the opening and configured to slidably engage the housing such that when the housing interface is slidably engaged to the housing, the nozzle is translatable from a completely extended position to a completely depressed position, and

wherein the passageway is positioned to be in communication with the chamber when the housing interface is positioned within the opening and slidably engaged to the housing;

a first lock movable from an open position to a closed position,

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the closed position, the first lock inhibits depression of the housing interface of the nozzle further into the housing via the opening of the housing, and

wherein, when the housing interface is slidably engaged to the housing and the first lock is in the open position, the housing interface is uninhibited, by the first lock, from depression further into the housing via the opening of the housing;

a sensor configured to provide a sensor signal indicative of a partially depressed position of the nozzle between the completely extended position and the completely depressed position;

electrical circuitry configured to move the first lock from the open position to the closed position in response to the sensor signal;

a base piece; and

a second lock movable from an open position to a closed position,

wherein the housing comprises the opening in communication with the chamber and a second opening in communication with the chamber,

wherein the base piece is sized to be positioned within the opening and to cover the opening,

wherein, when the base piece is positioned within the opening and the second lock is in the closed position, the base piece is fixed in place by the second lock, and

wherein, when the base piece is positioned within the opening and the second lock is in the open position, the base piece is movable to uncover the opening.