Claims:

1. A pull station comprising:

a pull lever connected to a rope, the rope further connected to a release mechanism for a fire suppression system; and

a pulley;

wherein the pulley changes a direction of the rope;

wherein the pull station includes at least one structure for installation of the pulley in the pull station in one of a plurality of orientations, each of the plurality of orientations resulting in the rope exiting the pull station in a different direction; and

wherein the rope abuts at least a part of the pulley so that the pulley reduces an amount of force necessary to pull the pull lever in order to activate the release mechanism.

2. The pull station of claim 1, wherein the pull station further comprises a pulley block and a faceplate, the pulley mounted with the pulley block, the pulley block connected to the faceplate.

3. The pull station of claim 2, wherein a groove on the pulley block is pressed into the faceplate to engage the faceplate.

4. The pull station of claim 2, wherein the pull station further comprises a junction box; and

wherein the pulley block is connectable with the faceplate in at least two configurations depending on a size of the junction box.

5. The pull station of claim 4, wherein a first configuration of the pulley comprises a shallow box configuration for a shallow box; and

wherein a second configuration of the pulley comprises a deep box configuration for a deep box.

6. The pull station of claim 4, wherein the pulley and pulley block are configured to direct the rope on a centerline to openings in the junction box.

7. The pull station of claim 2, wherein the pull station further comprises a junction box with a first opening and a second opening; and

wherein the pulley block is connectable with the faceplate in a first configuration and a second configuration so that the rope exits the pulley block along a centerline of the first opening in the first configuration and exits the pulley block along a centerline of the second opening in the second configuration.

8. The pull station of claim 1, further comprising a flexible conduit, the rope disposed to slide axially within the flexible conduit, wherein a material is on at least one of the rope or an interior of the flexible conduit in order to reduce a coefficient of friction.

9. The pull station of claim 8, wherein the flexible conduit comprises a plastic liner; and

wherein a lubricant is applied on at least one of an interior of the plastic liner or the rope.

10. The pull station of claim 1, wherein the pull station further comprises a junction box; and wherein at least a part of the pulley is within the junction box.

11. The pull station of claim 10, wherein the pulley is entirely within the junction box.

12. The pull station of claim 1, wherein the pull station further comprises a pull knob assembly and a faceplate, the pull knob assembly configured to interface with a break rod, wherein at least one of at least a part of the pull knob assembly that is configured to interface with the break rod and the faceplate is configured to move in order to install the break rod.

13. The pull station of claim 12, wherein the faceplate is stationary and the at least a part of the pull knob assembly that is configured to interface with the break rod is rotatable.

14. The pull station of claim 1, wherein the plurality of directions comprise an upward direction, a downward direction, a rightward direction, and a leftward direction.

15. The pull station of claim 1, wherein the pulley is configured to be in fixed relation to a faceplate in one of multiple orientations such that the rope exits the pulley in the one of the plurality of directions.

16. The pull station of claim 1, wherein the pulley is proximate to the pull lever; and

further comprising a pulley block, the pulley in fixed relation to the pulley block such that the rope exits the pulley block in the one of the plurality of directions.

17. The pull station of claim 16, further comprising a faceplate; and

wherein the faceplate and the pulley block are configured to connect in one of multiple ways, each of the ways resulting in the rope exiting the pull station in a different direction.

Claims

1. A fire suppression system comprising:

a pull station (400);

a release mechanism (160) for causing fire suppression agent to be released when activated; and

a wire rope (140) connected between the pull lever and the release mechanism, the pull station (400) comprising:

the pull lever (416) connected to the wire rope (140);

a pulley block (610,710); and

a pulley (640, 740) changing a direction of the wire rope

wherein the wire rope (140) abuts at least a part of the pulley (640, 740) so that the pulley (640, 740) reduces an amount of force necessary to pull the pull lever (416) in order to activate the release mechanism (160) **characterised in that** the pull station comprises a junction box (440, 445), and **in that** the pulley (640,740) is configured for installation with the pulley block inside the junction box (440,445) of the pull station (400) in one of a multitude of orientations, each of the multitude of orientations resulting in the wire rope (140) exiting the pull station (400) in a different direction.

2. The fire suppression system of claim 1, further comprising a faceplate (410), the pulley (640, 740) being mounted with the pulley block (610, 710), and the pulley block (610, 710) being connected to the faceplate (410).

3. The fire suppression system of claim 2, wherein a groove (627, 726) on the pulley block (610, 710) is pressed into the faceplate (410) to engage the faceplate (410).

4. The fire suppression system of claim 1, wherein the plurality of directions comprise an upward direction, a downward direction, a rightward direction, and a leftward direction.

5. The fire suppression system of claim 1, wherein the pulley (640, 740) and pulley block (610, 710) are configured to be in fixed relation to a faceplate (410) in one of multiple orientations such that the wire rope (140) exits the pulley (640, 740) and pulley block (610, 710) in the one of the plurality of different directions.

6. The fire suppression system of claim 1, further comprising a flexible conduit (220), the wire rope (140) disposed to slide axially within the flexible conduit (220), wherein a material (320, 504) is on at least one of the wire rope (140) or an interior of the flexible conduit (220) in order to reduce a coefficient of friction.

7. The fire suppression system of claim 6, wherein the flexible conduit (220) comprises a plastic liner (320, 504); and

wherein a lubricant is applied on at least one of an interior of the plastic liner (320, 504) or the wire rope (140).

8. The fire suppression system of claim 1, the pulley block (610, 710) being configured to be connected to the faceplate in one of multiple positions.

9. The fire suppression system of claim 1, wherein the pull station (400) includes a pull knob assembly (416, 418) and a faceplate (410), the pull knob assembly (416, 418) being configured to interface with a break rod (412), wherein at least one of the pull knob assembly (416, 418) and the faceplate (410) are rotatable.

10. The fire suppression system of claim 9, wherein the pull knob assembly (416, 418) and the faceplate (410) are rotatable relative to one another.

11. The fire suppression system of claim 10, wherein the faceplate (410) is stationary and the pull knob assembly (416, 418) is rotatable.

12. The fire suppression system of claim 11, wherein the pull knob assembly (416, 418) comprises the pull lever (416) connected to a pull knob (418), the pull knob (418) connected to the wire rope (140), a user pulling the pull lever (416) in order to pull the wire rope (140) and activate the release mechanism (160);

wherein the pull knob (418) and pull lever (416) are adapted to be rotated in a first direction in order to interface with the break rod (412);

wherein the faceplate (410) includes at least two sidewalls (411); and

wherein the pull (418) and pull lever (416) are adapted to rotate in a second direction opposite to the first direction in order for the break rod (412) to be received by at least a portion of the two sidewalls (411) of the faceplate (410).

13. The fire suppression system of claim 1, further comprising a wire rope tensioning mechanism (142) to maintain tension on the wire rope (140), the wire rope tensioning mechanism (142) connected to at least two separate parts of the wire rope (140).