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(54) Title: AUTOMATIC TRACTOR TRAILER COUPLING

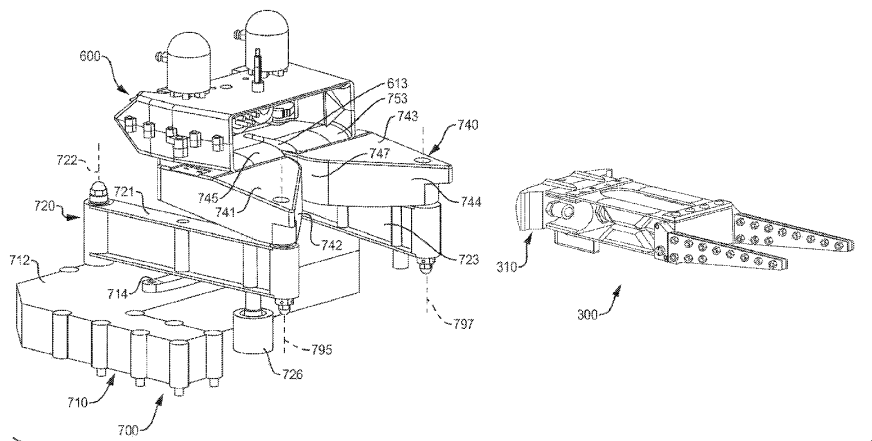


FIG. 11

(57) Abstract: A system for automatically coupling the air and electrical lines of a tractor (12) to a trailer (14). The tractor (12) has a fifth wheel coupling (20) that is configured to be coupled to a kingpin of the trailer (14). The height of the fifth wheel coupling (20) is adjustable. A trailer coupling head (310) is mounted to the trailer (14) and carries air line and electrical connectors. A fifth wheel coupling (20) height control system is configured to automatically control the height of the fifth wheel coupling (20) when it is coupled to the kingpin of the trailer (14), to control the height of the trailer coupling head (310). A tractor coupling head (600) carries air line and electrical connectors that are configured to be operably coupled to the mating connectors of the trailer coupling head (310). A tractor coupling head carrier (710) removably carries the tractor coupling head (600). A tractor coupling head carrier (710) control system moves the tractor coupling head carrier (710) toward and away from the trailer coupling head (310) along a longitudinal axis. A clamping mechanism (959) carried by the tractor coupling head (600) establishes at least two alternative clamping states, one clamping state where the tractor coupling head (600) is clamped to and carried by the tractor coupling head carrier (710) such that the tractor coupling head (600) is moved as the tractor coupling head carrier (710) is moved, and a second clamping state where the tractor coupling head (600) is clamped to the trailer coupling head (310) such that the tractor coupling head carrier (710) is free to move relative to

[Continued on next page]

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the tractor coupling head (600).