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(54) **Title:** AUTOMATIC TRACTOR TRAILER COUPLING

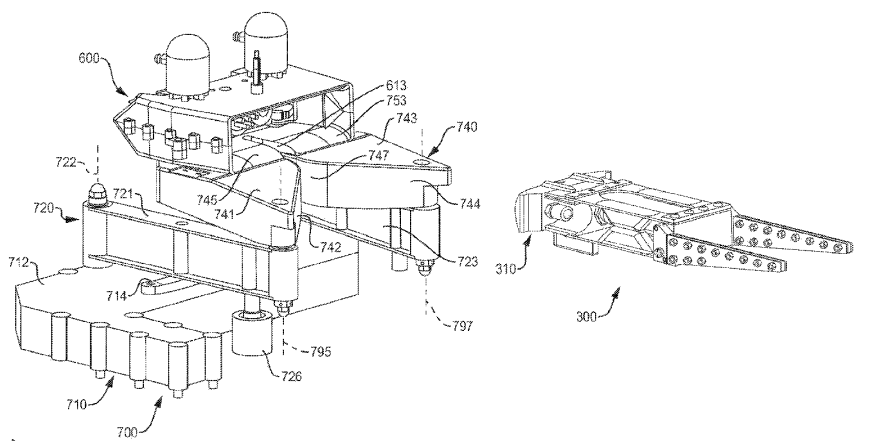


FIG. 11

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

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