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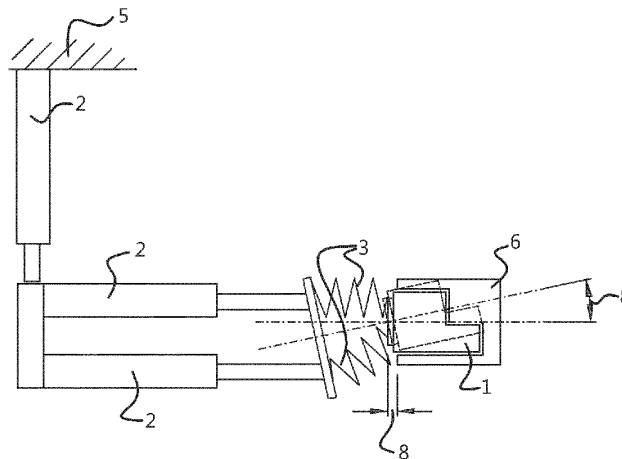
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(54) Title: DEVICE FOR REDUCING THE FORCE NEEDED FOR AUTOMATICALLY INSERTING/EXTRACTING A CON-
NECTOR ATTACHED TO AN ELECTRIC VEHICLE CHARGER INTO AN ELECTRIC VEHICLE SOCKET

Fig. 4A



(57) Abstract: The invention relates to a device for disconnecting a connector of an electric vehicle charger from a socket on an electric vehicle with a supposed position and orientation, comprising a connector handling mechanism, comprising an actuated positioning mechanism, for moving a connector with at least 2 degrees of freedom with respect to a fixed world at least one compliance assembly, configured to allow compliantly moving the connector in at least two degrees of freedom with respect to the fixed world wherein the at least one compliance assembly is connected kinematically in series with the positioning mechanism, between the fixed world and the connector; and has a compliance stroke defined as the effective displacement between the actual connector position and orientation, and the current/momentary virtual position and orientation of the connector; wherein, for disconnecting the connector, the connector handling mechanism is configured for- applying on the connector: a first moment and/or force in the direction of the movement for

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moving the connector in the direction of the movement; and at least a second moment and/or force, superimposed on the first moment and/or force, with a directional component or a direction unequal to the direction of the unique movement, wherein the second moment and/or force is directed towards the unconstrained position and orientation of the connector.