

ABSTRACT

OMNI-DIRECTIONAL WHEELS FOR A ROBOTIC SURGICAL CART

A robotic surgical cart (300) is disclosed herein. The robotic surgical cart (300) comprises a set of omni-directional wheels (425) affixed to a base plate (427). Each omni-directional wheel in the set of omni-directional wheels (425) comprises a hub (433), a plurality of roller mounting brackets (435) coupled to the hub (433), and a plurality of rollers (437) each rotatably coupled to at least one of the roller mounting brackets (435). The robotic surgical cart (300) further comprises at least one guiding shaft (429) affixed to the base plate (427), that provides a controlled channel for movement of the set of omni-directional wheels (425). The robotic surgical cart (300) further comprises an actuator (431) affixed to the base plate (427) at one end, defining an axis to provide upward and downward movement of the set of omni-directional wheels (425) in the channel provided by the at least one guiding shaft (429).

Figure 4(c)