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- (54) Title:** ROCKET LAUNCH SYSTEM AND SUPPORTING APPARATUS

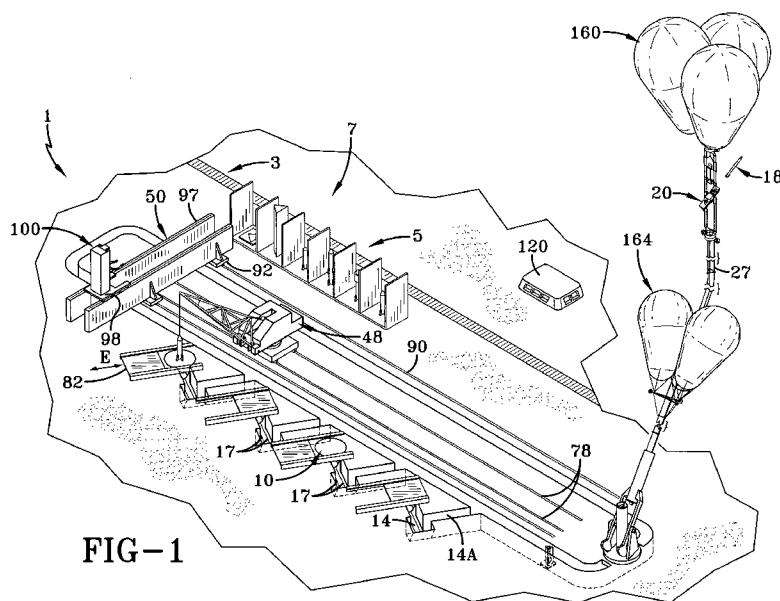


FIG-1

(57) Abstract: A rocket launch system having components held at high altitudes above the earth by lighter-than-air balloons attached to cables. The system includes a tubular rocket launcher carriage with electromotive cableway traction drives conveyed beneath a two axis pivot anchored to the earth, elevated into a co-axial transfer tube leading to three primary tether cables whose weight is offset by lighter-than-air balloons. The carriage is thereafter conveyed to a docking station supported above the earth into the stratosphere by a pair of secondary cables suspended under an attachment frame for tensioning balloons. The carriage is engaged by a carriage end gripper guided by two secondary and two tertiary cables and lifted by a lower hoist guided by the secondary cables. This lower hoist is supported by an upper hoist suspended from the tensioning balloons attachment frame. The carriage, which engages a lift ring guided by two secondary cables, is elevated further, rotated in azimuth and elevation, and rocket ejection occurs from a launch tube during freefall of the carriage down the set of ca-

bles, with engine ignition occurring at a safe distance.