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(54) Title: TAKE-OFF AND LANDING SYSTEM AND METHOD FOR FIXED-WING UNMANNED AERIAL VEHICLE

(54) 发明名称: 一种固定翼无人机起降系统及其起降方法

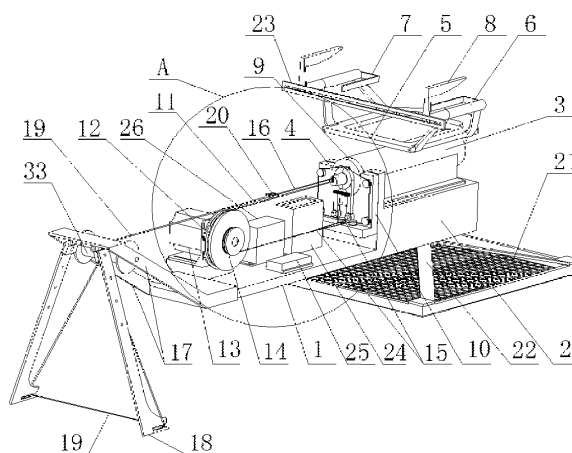


图 1

(57) Abstract: Disclosed are a take-off and landing system and method for fixed-wing unmanned aerial vehicle. The take-off and landing system comprises a base (1); an energy storage device is mounted at the front end of the base (1); the energy storage device includes an outer sleeve (3); a catapulting member (4) is nested inside the outer sleeve and can slide along the outer sleeve; an adjustable launching cradle is mounted at the front end of the catapulting member (4); a baffle plate (9) is arranged on the rear end surface of the outer sleeve (3); a lock mechanism is mounted on a groove frame (10) on the outer end surface of the outer sleeve; the end of the catapulting member (4) penetrates through the baffle plate (9) and is clamped in the lock mechanism; the end surface of the catapulting member (4) is connected with a driving control mechanism by a rope I (11), and is connected with a blocking recovery mechanism by a rope III (16); a signal transmission and control device is mounted in the middle of the upper surface of the base (1); and a blocking net (21) is hung under the front end of the base (1). The take-off and landing system has a compact and reasonable structure, can be

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根据细则4.17的声明:

— 关于申请人有权申请并被授予专利(细则4.17(ii))

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easily operated, can realize the catapult-assisted take-off and stable blocking landing of fixed-wing unmanned aerial vehicle in various sizes, and has the advantages of good disguise performance, cost-effectiveness and good adaptation.

(57) 摘要: 一种固定翼无人机起降系统及其起降方法, 包括基座(1), 基座(1)前端安装有能量储存装置, 能量储存装置包括外套筒(3), 其内部嵌套有沿其滑动的弹射件(4), 弹射件(4)前端安装有可调式发射架, 外套筒(3)后端面处设有一块挡板(9), 其外端面的槽架(10)上安装有锁止机构, 弹射件(4)的末端穿过挡板(9)并卡入锁止机构; 弹射件(4)末端面上通过绳索一(11)与驱动控制机构连接, 通过绳索三(16)连接阻拦回收机构; 基座(1)上表面中部还安装有信号传输及控制装置, 基座(1)前端下方吊装有阻拦网(21)。起降系统结构紧凑、合理, 操作方便, 可以实现多种尺寸的固定翼无人机弹射起飞和平稳阻拦降落, 具备弹良好的隐蔽性、经济性和适应性等优点。