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(81) 指定国 (除另有指明，要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW。

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(54) **Title**: EASY-TO-CLEAN CLAMPING DEVICE AND METHOD FOR THIN-WALLED DISK-SHAPED OBJECT

(54) **发明名称** : 一种易清洗的薄壁盘状物夹持装置及方法

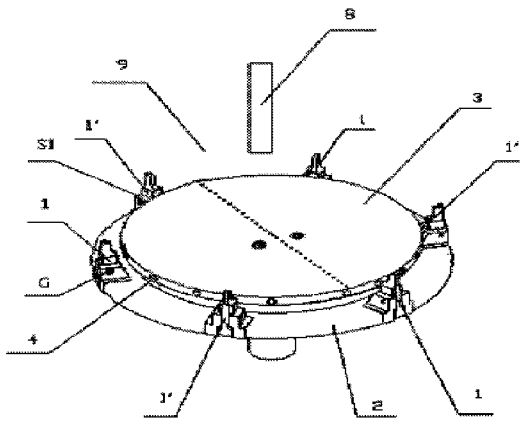


图 1 / Fig.1

(57) **Abstract**: An easy-to-clean clamping device and method for a thin-walled disk-shaped object. The device consists of a rotatable chuck body (3) and at least two sets of clamping components (1, 1') provided on the edge of the chuck body (3). The clamping component (1, 1') can swing with a connection point thereof to the chuck body (3) as a pivot, and a bottom end of the clamping component (1, 1') and the chuck body (3) are connected to a radial compression spring (5). During the cleaning, actions of clamping components in the same set are consistent, and the two sets of clamping components open and lock alternately. Clamping components in the same set are installed with magnets (7) having the same polarity to the outside, and clamping components in different sets are installed with magnets (7) having opposite polarities. Two sets of electromagnets (4', 4") are arranged on the chuck body (3) at uniform intervals. In the early cleaning stage, the two sets of electromagnets (4', 4") are not powered, and the two sets of clamping components are in a clamping state under the action of the compression spring (5), and during the cleaning, the clamping components (1, 1') are enabled to open alternately by changing the direction of a current in the electromagnets (4', 4"). The present invention can clean parts where the clamping components contact a thin-walled disk-shaped object, thereby improving the overall cleaning quality of the thin-walled disk-shaped object.

(57) **摘要**:

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本国际公布:

— 包括国际检索报告(条约第 21 条(3))。

一种易清洗的薄壁盘状物夹持装置及夹持方法，该装置由可旋转的卡盘主体（3）及其边缘设置的至少两组夹持元件（1，1'）组成，夹持元件（1，1'）可以以其与卡盘主体（3）的连接点为旋转中心进行摆动，其底端与卡盘主体（3）连接有径向的压缩弹簧（5）；清洗时同组夹持元件的动作一致，两组夹持元件交替打开和卡紧。同组夹持元件安装对外同极性磁铁（7），不同组夹持元件安装磁性相反磁铁（7）；卡盘主体（3）上均匀间隔设两组电磁铁（4'，4"）。清洗初期两组电磁铁不通电，两组夹持元件处于压缩弹簧（5）弹力作用下的夹紧状态，清洗时通过改变电磁铁（4'，4"）中电流方向来使夹持元件（1，1'）交替打开。本发明可以对夹持元件与薄壁盘盘物接触的地方进行清洗，从而提高薄壁盘状物的整体清洗质量。