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- (84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH,

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- (54) Title: FLEXIBLE LED SCREEN CAPABLE OF BEING FOLDED FREELY
- (54) 发明名称: 一种可自由折叠的柔性 LED 屏幕

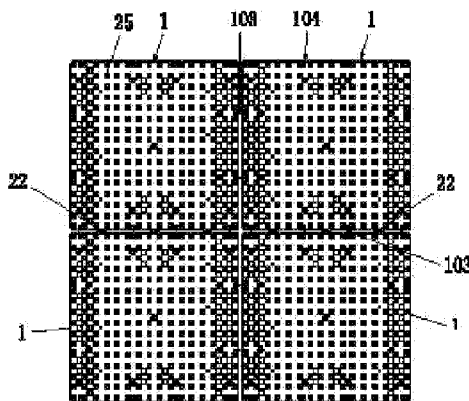


图 1 / FIG. 1

(57) Abstract: A flexible LED screen capable of being folded freely, comprising: a plurality of LED sub-screens (1), PCBs arranged inside shells of the LED sub-screens (1), LEDs provided on the PCBs and conductive wires (22) electrically connected to each PCB. Adjacent LED sub-screens (1) are connected through a connection mechanism (103) which can rotate relatively freely, wherein the connection mechanism (103) comprises a rotary rod (2) and rotary shafts (3) provided on both ends of the rotary rod (2). The shell of the LED sub-screen (1) comprises a front shell and a rear shell, wherein the edges of the front shell and the rear shell are symmetrically provided with grooves (4), and the rotary shafts (3) at both ends of the rotary rod (2) are respectively mounted in one groove (4) of the shells of two adjacent LED sub-screens (1); however, seal covers (5, 6) connected to the rotary shafts (3) are also provided in the grooves (4) of the front shell and the rear shell, and the seal covers (5, 6) corresponding to the rotary shafts (3) are provided with rotary shaft grooves (7) rotationally connected to the rotary shafts (3). A large screen formed by splicing LED sub-screens (1) can be longitudinally or transversely folded, and the folded screen is small in size, light in weight, and convenient to transport and store; in addition, the LED sub-screens (1) can rotate and be folded relatively freely, so that special-shaped, such as arc, sphere, cylinder, etc. screens can be easily achieved.

(57) 摘要:

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— 关于申请人有权申请并被授予专利(细则 4.17(ii))

本国际公布:

— 包括国际检索报告(条约第 21 条(3))。

根据细则 4.17 的声明:

— 关于发明人身份(细则 4.17(i))

一种可自由折叠的柔性 LED 屏幕，包括多块 LED 子屏 (1)，置于 LED 子屏 (1) 壳体内部的 PCB 板、设于 PCB 板上的 LED 和电性连接各 PCB 板的导线 (22)，相邻的 LED 子屏 (1) 之间通过可相对自由转动的连接机构 (103) 连接，连接机构 (103) 包括转动杆 (2)、设于该转动杆 (2) 两端的转轴 (3)；所述 LED 子屏 (1) 的壳体包括前壳和后壳，前壳和后壳的边缘对称设有凹槽 (4)，所述转动杆 (2) 两端的转轴 (3) 分别安装于相邻两 LED 子屏 (1) 壳体的一凹槽 (4) 中，而前壳和后壳的凹槽 (4) 中还设有连接所述转轴 (3) 的封盖 (5, 6)，与转轴 (3) 对应的封盖 (5, 6) 设有与转轴 (3) 构成转动连接的转轴槽 (7)。该由 LED 子屏 (1) 拼接而成的大屏幕可以纵向或横向折叠，折叠后体积小，重量轻，运输存储方便，且 LED 子屏 (1) 可相对自由转动和折叠，很容易实现弧形、球形、圆柱等异形屏幕。