

Title (en)

KEY STRUCTURE, KEYBOARD AND ELECTRONIC DEVICE

Title (de)

TASTENSTRUKTUR, TASTATUR UND ELEKTRONISCHE VORRICHTUNG

Title (fr)

STRUCTURE DE TOUCHE, CLAVIER ET DISPOSITIF ÉLECTRONIQUE

Publication

EP 4350728 A1 20240410 (EN)

Application

EP 22827121 A 20220407

Priority

- CN 202110716213 A 20210625
- CN 2022085484 W 20220407

Abstract (en)

Embodiments of this application provide a key structure, a keyboard, and an electronic device. The key structure includes a key cap (10), a support assembly (20), and a base plate (50). The base plate (50) includes a membrane circuit board (40). Two ends of the support assembly (20) are respectively movably connected to the base plate (50) and the key cap (10). The support assembly (20) includes a frustum-shaped elastic part (30), and the elastic part (30) is disposed between the membrane circuit board (40) and the key cap (10). The elastic part (30) stores energy when the key cap (10) is pressed, and resets the key cap (10) when the key cap (10) is released. When an upper bottom part (33) of the elastic part (30) abuts against the membrane circuit board (40) on the base plate (50), a contact part (41) of the membrane circuit board (40) is triggered. A first avoidance groove (11) is provided on a back surface of the key cap (10). When the elastic part (30) is compressed and deformed, an upward protrusion part (31a) of the elastic part (30) may be accommodated in the first avoidance groove (11), to reduce fatigue damage of the elastic part (30) caused by interference between the elastic part (30) and the key cap (10), improve a service life of the elastic part (30), and reduce impact on a key function caused by thinning of the elastic part (30). This ensures that the key structure has a long enough key travel when the electronic device is light and thin, and improves a touch feeling of the key structure.

IPC 8 full level

H01H 13/7073 (2006.01)

CPC (source: CN EP)

H01H 3/125 (2013.01 - EP); **H01H 13/705** (2013.01 - CN EP); **H01H 13/7065** (2013.01 - CN EP); **H01H 13/7073** (2013.01 - CN EP); **H01H 13/85** (2013.01 - CN EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4350728 A1 20240410; CN 115527792 A 20221227; WO 2022267618 A1 20221229

DOCDB simple family (application)

EP 22827121 A 20220407; CN 202110716213 A 20210625; CN 2022085484 W 20220407