

# **Introduction to Inventions and Creations**

Title of Work: Smart Pillow

Field: Home and Life

Source of inspiration for invention:

From life--I found that the elderly and pregnant women are inconvenient to get up at night, and bumps are prone to occur during the process of finding the switch; while ordinary people are easy to fall off the pillow when they sleep, causing stiff pillows; in addition, everyone has trouble with the pillow. The height requirements are different. Improper pillow height will directly affect people's sleep quality; thus, it is difficult for people to get up in the morning, and the effect of the alarm clock is not obvious, causing the phenomenon of being late for work or school.

Improve life--so I plan to invent a pillow suitable for everyone.

Production process:

- (1)Purchase circuit boards and parts required for lifting devices online;
- (2) Use programming software to write appropriate programs and make adjustments;
- (3) Draw a three-dimensional model diagram on the computer according

to the size of each component;

(4) Use a 3d printer to print out the three-dimensional model;

(5) Install the parts in the three-dimensional model, fix them with hot melt glue, and conduct subsequent tests.

The function of the work:

Design a gravity switch in the pillow. When the function is activated, when the person's head leaves the pillow, the LED inside the pillow will automatically light up, which is convenient for people to find the light switch in the room to avoid bumps. It can also leave the pillow unconscious when the person's head At the same time, the light reminds people to sleep on the pillow again to prevent stiff neck; the height of the pillow can be adjusted manually, and the user can adjust the height that is most suitable for them to improve the quality of sleep; it can also preset the reminder to wake up in advance to reach the pre-determined Set the time, the pillow wakes up the user through ringtones and vibrations to avoid being late.

Advantages of the work:

(1)A new gravity switch is added, which activates the light switch of the pillow when gravity is lost, giving users light in the dark and ensuring the safety and convenience of special people in getting up at night;

(2)The height of the pillow is designed to be adjusted in a personalized way, everyone can find the best height of the sleeping pillow and improve the quality of sleep;

(3) There is also an intelligent wake-up service every morning to avoid being late.

Remarks:

(1) This work is a 3D printed model, which cannot clearly reflect its soft characteristics at present, but in actual products, the pillow will be designed to be more comfortable;

(2) The adjustment method of this work is manual adjustment, which is more precise and safer.

