

Smart Cane



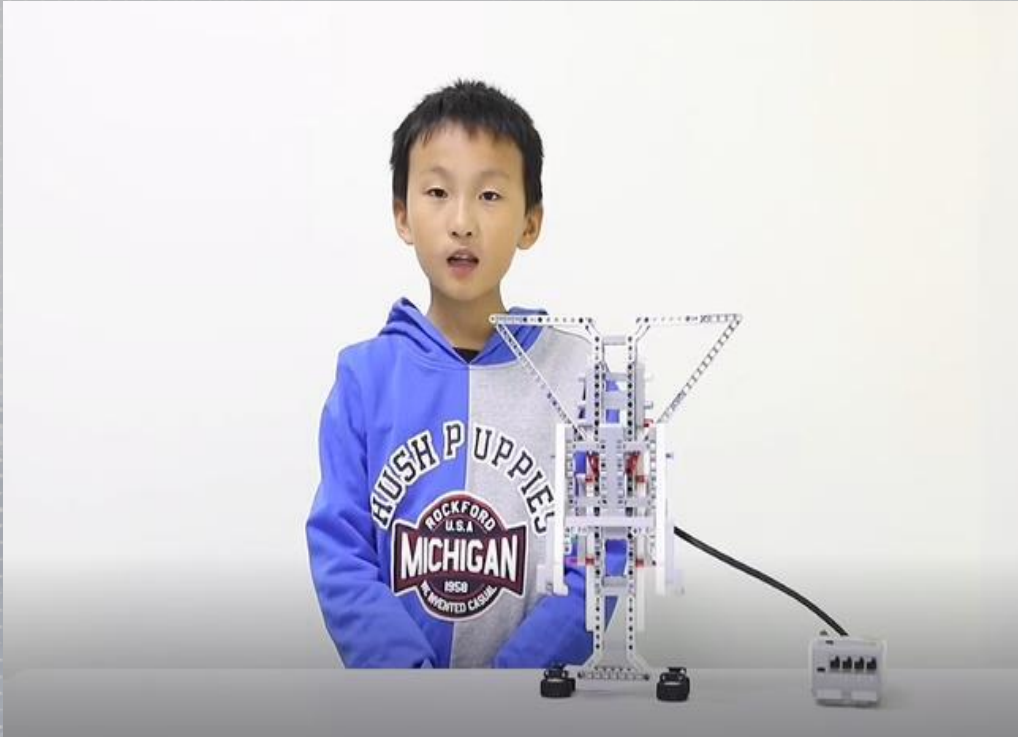
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This smart cane is dedicated to provide some assistance for the disabled when they act independently and some protection for the injured during rehabilitation training.

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01 Background of Invention and Production



Background of Production

The crutch is an important walking aid, including cane, elbow crutch and auxiliary crutch. The cane is mainly used for mild need, such as elderly or climber, and the cane is not used for the disabled. The elbow crutch is used for the moderately lower extremities disabled, and the auxiliary crutch is necessary for the severely lower extremities disabled (sick or injured). Most lower extremities disabled have to use the axillary crutch for life, especially for those who need the short-term walking aid for rehabilitation due to accidental fracture of lower extremity. The axillary crutch is conducive to walking to carry out the rehabilitation training of lower extremity. When the crutch is used, the part contacting with the ground is fixed with an anti-skid rubber block or a triangular support for anti-skid.

Background of Production

It can assist patients to walk and facilitate the actions for daily life.

Background of Production

It can be conducive to walking to carry out the rehabilitation training of lower extremity. When the crutch is used, the part contacting with the ground is fixed with an anti-skid rubber block or a triangular support for anti-skid.

02 Shortcomings of Existing Crutches and Improvement of Invented Smart Cane

In the prior art, the crutch takes the user's armpit as the center of circle for tilting and swinging. When the crutch contacts with the ground, the anti-skid rubber block or the triangular support cannot contact with the ground completely. Furthermore, when the user's body moves, the crutch under the user's armpit takes the contact point with the ground as the center of circle for swinging. At this time, the user's center is still located on the crutch, while the contact surface between the lower end of crutch and the ground begins to decrease, which makes the crutch easy to slide and causes the user to fall down.



Shortcomings of Existing Crutches

The smart cane includes the smart pedometer, telescopic rod and support rod.



Improvement of Invented Smart Cane

03 New Technical Advantages of Invented Smart Cane

A

When users use this smart cane, the fixed block and the rubber block on the top plate contact with the ground first, and the rubber block on the top plate can always contact with the ground fully, so that users will not fall down due to sliding on the ground. It can buffer the force of canes on the armpit, and the height of telescopic rod can be adjusted according to the height of users, so as to improve the comfort during use of the cane.

C

This smart cane is provided with a core host, and the infrared sensor will make effective record for each step they walk. In this way, users can carry out the effective training according to the doctor's advice.



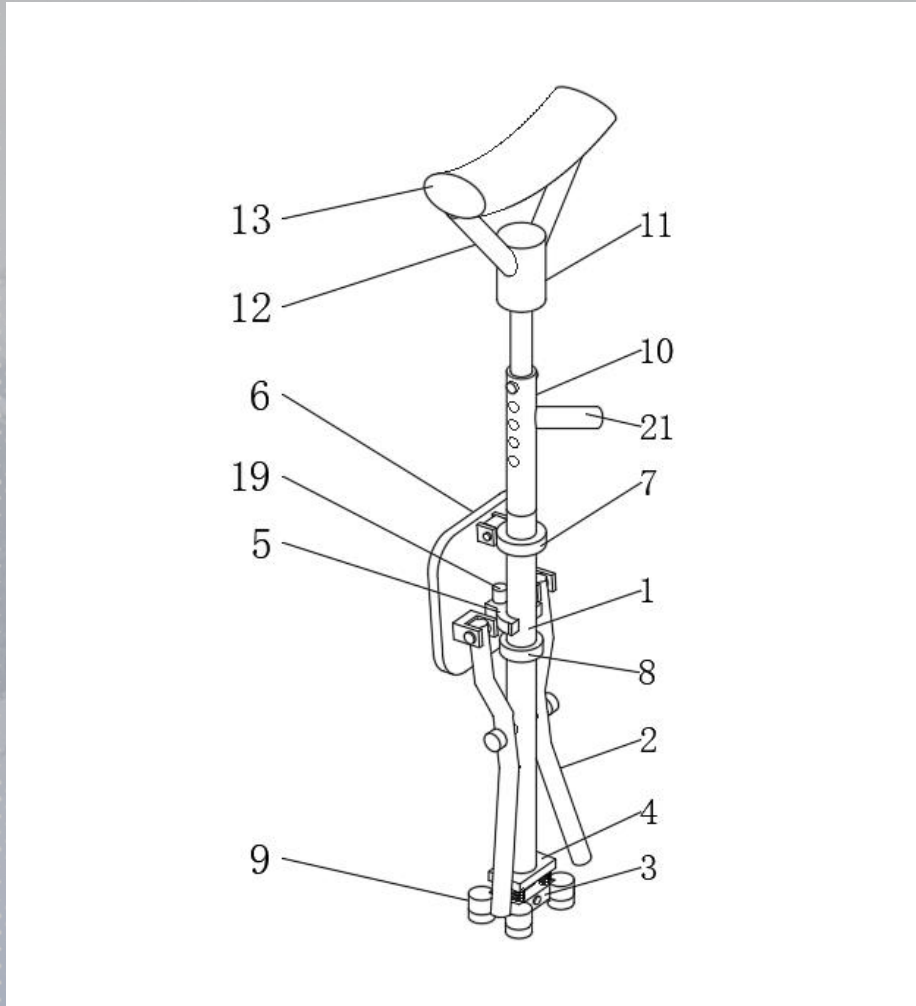
B

Users can use this smart cane to sit down and rest through the support plate when their physical strength drops, so as to improve the practicability of canes.

D

This design can improve the security of users, buffer the force of canes on the armpit, and improve the comfort during use. Furthermore, it is convenient for users to sit down and rest and improves the practicability of canes, and it is energy saving and environmental protection and saves the public resources.

04 Research Achievements and Application Prospects



1
Functions of
Traditional
Crutches

2
With Folding
Chair

3
With
Pedometer

Achievements and Prospects

This smart cane integrates with various functions, such as cane, chair and pedometer. It is convenient and uncomplicated to use, and the height of cane can be adjusted according to the height of users, so it is suitable for people of all ages. We will continue to explore the use of materials, so that the smart cane is lighter weight, and the cost is more competitive than that of existing crutch. Regardless of the disabled or the rehabilitative trainer, it will be the most suitable choice in the future.

Thank You!

Some groups in society are often ignored by us. I have observed that it's very inconvenient for the injured or disabled during use of crutches. We shall pay more attention to such special group and provide them with more convenience. So I come up with the idea of making a smart cane. I use the building blocks in my hand, and combine with my idea to improve it repeatedly, so the rudiment of smart canes appears.

Here, thank you for watching and listening patiently!