

Team 15

WALKING STICK

PART 01 **BACKGROUND**



Picture created by: new.qq.com

In Russia, a considerable number of elderly individuals grapple with leg-related mobility issues, stemming from conditions like arthritis, osteoporosis, muscular dystrophy, or the lasting effects of injuries.

Daily tasks, such as walking, standing, or maneuvering stairs, becomes a daunting challenge due to these ailments.

The unforgiving climatic conditions prevalent in various Russian regions further compound the difficulties, especially for seniors navigating icy or uneven terrain with leg troubles, causing discomfort or pain.

Amidst these challenges, there emerges a pressing need for innovative design solutions. Introducing creative walking aids and inventive mobility equipment can revolutionize the lives of Russian seniors with leg difficulties.

Innovative walking sticks, ergonomic supports, or adaptive equipment that harmonize functionality with artistic flair can significantly enhance mobility, independence, and the overall well-being of older adults. Such designs aim to empower them, enabling them to navigate their daily lives more comfortably and confidently ignored their leg-related impediments.



Picture created by: mid

PART 02

DESIGN CONCEPT



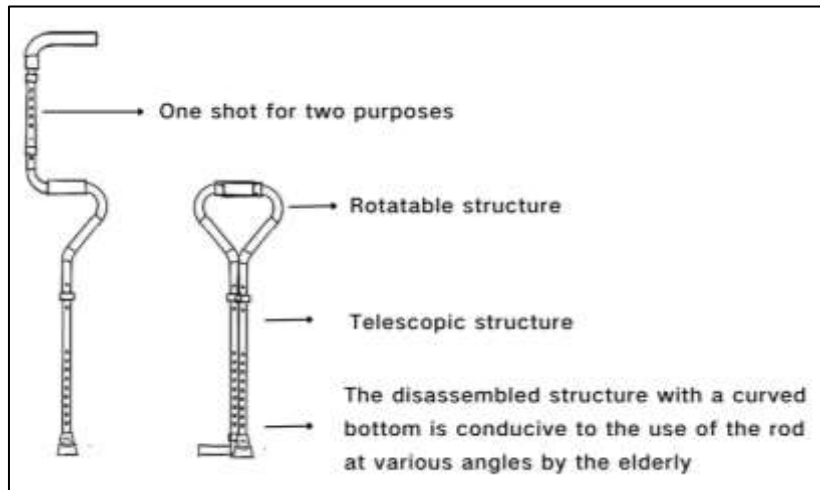
Picture created by: <https://utrecht.remonstranten.nl>

An innovative walking stick engineered to address the challenges faced by individuals navigating icy conditions in Russia.

This concept revolves around adaptability and stability. The stick boasts an adjustable height feature, catering to users of varying statures, while its specialized anti-skid materials ensure stability on slippery surfaces. Also, it adaptable to various situations with interchangeable shapes for enhanced versatility. We want the walking stick aims to empower individuals, providing them with a reliable and adaptable mobility aid to confidently navigate through the challenges presented by icy conditions in Russia.

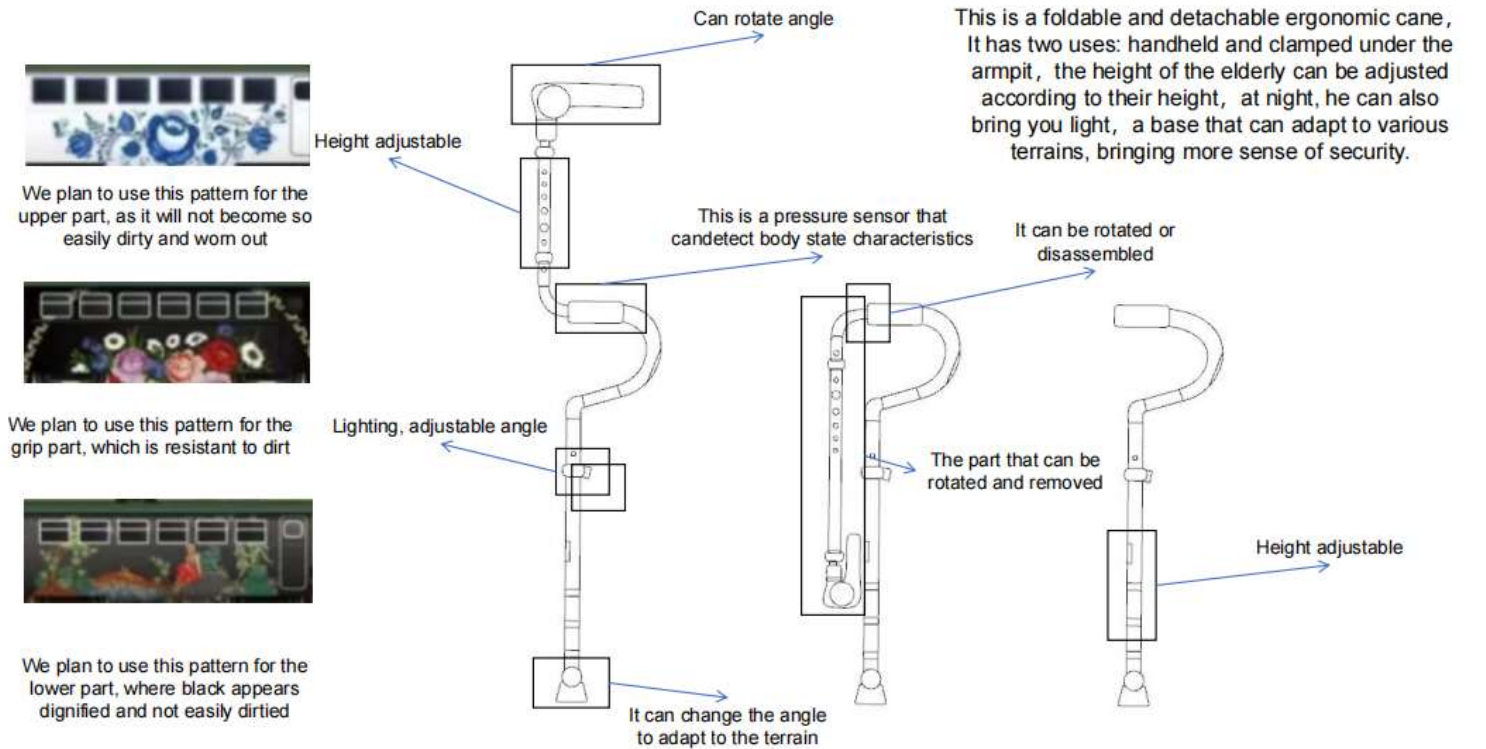
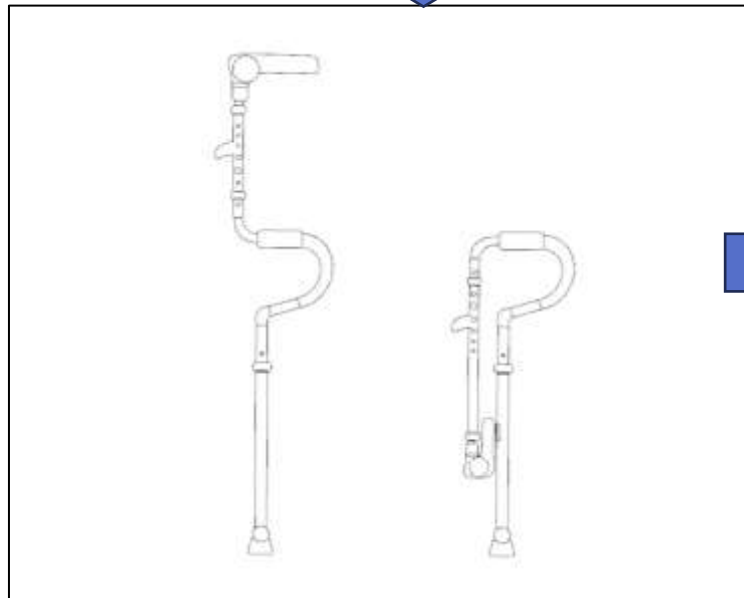
PART 03

DESIGN SKETCH AND IMPROVEMENT



It can transform, and then the elderly have two ways to use it: one is under the armpit, holding the hand under the walking stick; The second is to hold the stick directly. Also, it can change its length so it can fit all different types of height.

Following our decision, we've incorporated enhancements and details into the design. To improve visibility and aid the elderly, we've integrated lights onto the walking stick, illuminating the path during use. We've also refined the structure, optimizing its shaping for the stability and ergonomics, ensuring ease of grip and support.



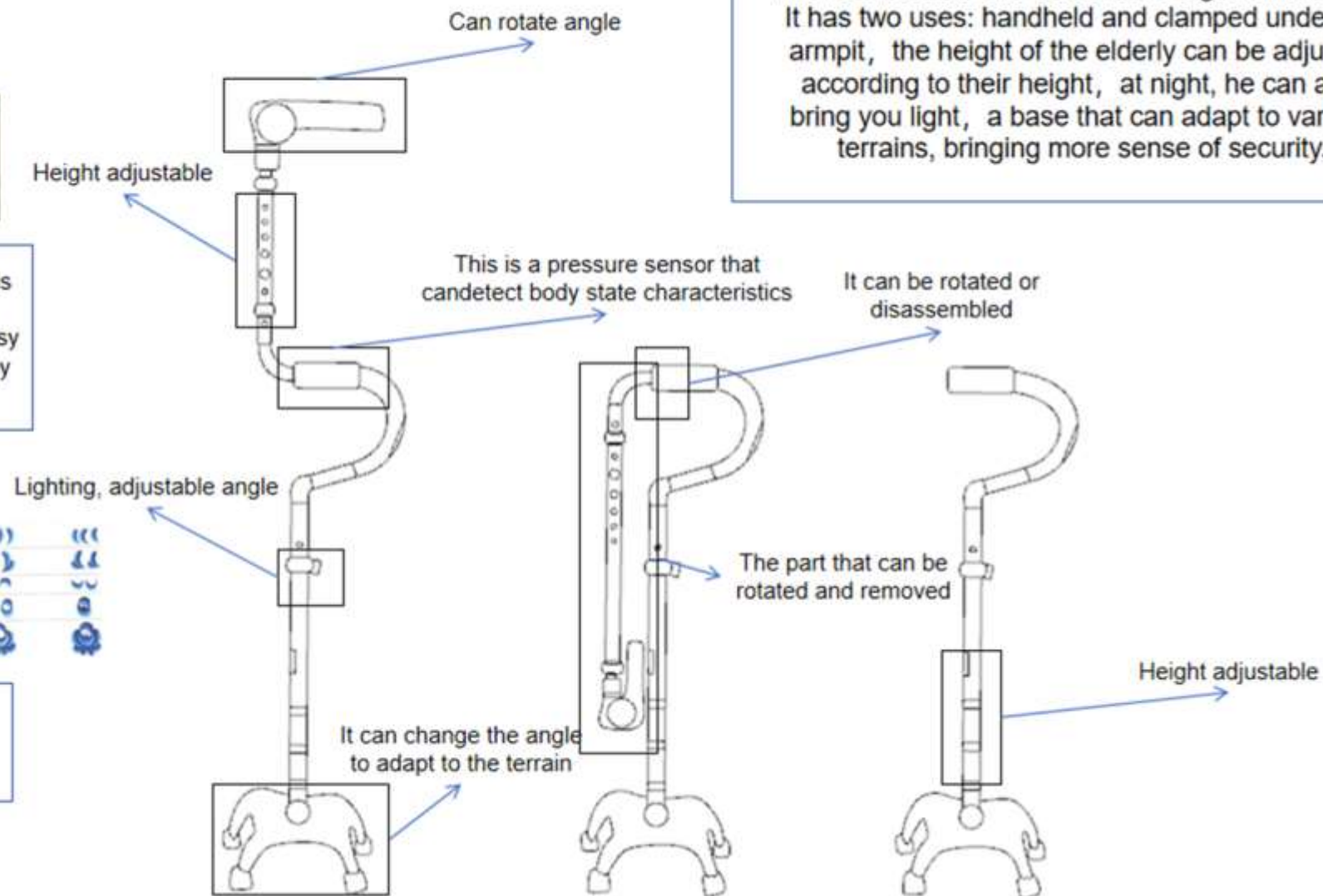
THE FINAL DESIGN



The overall color scheme adopts this color tone, with green being more vibrant, indicating vitality. It is not easy to get dirty, and the stains caused by wear and tear are not obvious



Select some texture patterns that Russian elderly people like to print on their crutches



This is a foldable and detachable ergonomic cane, It has two uses: handheld and clamped under the armpit, the height of the elderly can be adjusted according to their height, at night, he can also bring you light, a base that can adapt to various terrains, bringing more sense of security.

The Size

After we received the informations from team7, we design and determined the size for the stick.

2. Heights

As a person ages, he becomes somewhat shorter. For example, men aged 25-29 have an average height of 178.6 cm, and women - 165.9 cm- At the same time, Russians over the age of 80 have it noticeably smaller – 170.7 cm and 158.7 cm, respectively. The average height of people varies from region to region

Ramp

According to GOST R 51261-99, the ramp should be made according to the following parameters: The angle of inclination of the surface should be about 5°. The ratio of height to length of the inclined area should be 1:12. This means that when the height of the threshold is 1 meter, the length of the ramp should be 12 meters.

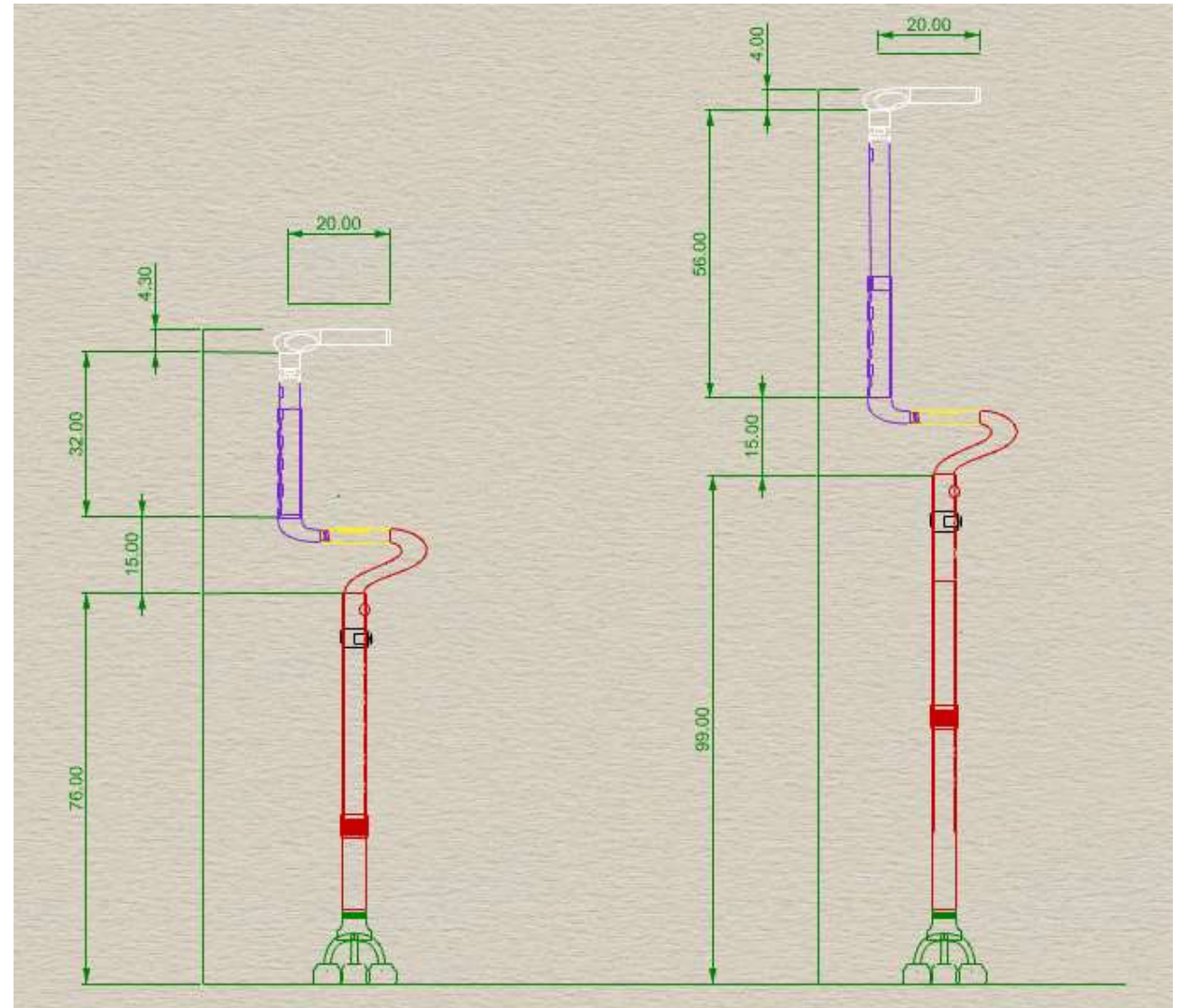
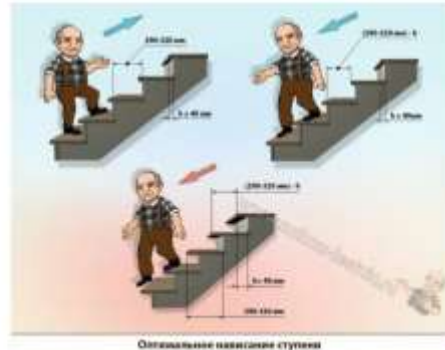


Real examples of ramps in Russia (2)



Steps

the height of the step, according to GOST, should be at least 12 and no more than 25 centimeters; the minimum width should vary between 70-80 centimeters; the optimal design is considered to be 1 meter wide; the width of the stairs, according to the norm, should be 27-30 centimeters.



PART 04
THE 3D MODEL

View 1



View 2



View 3



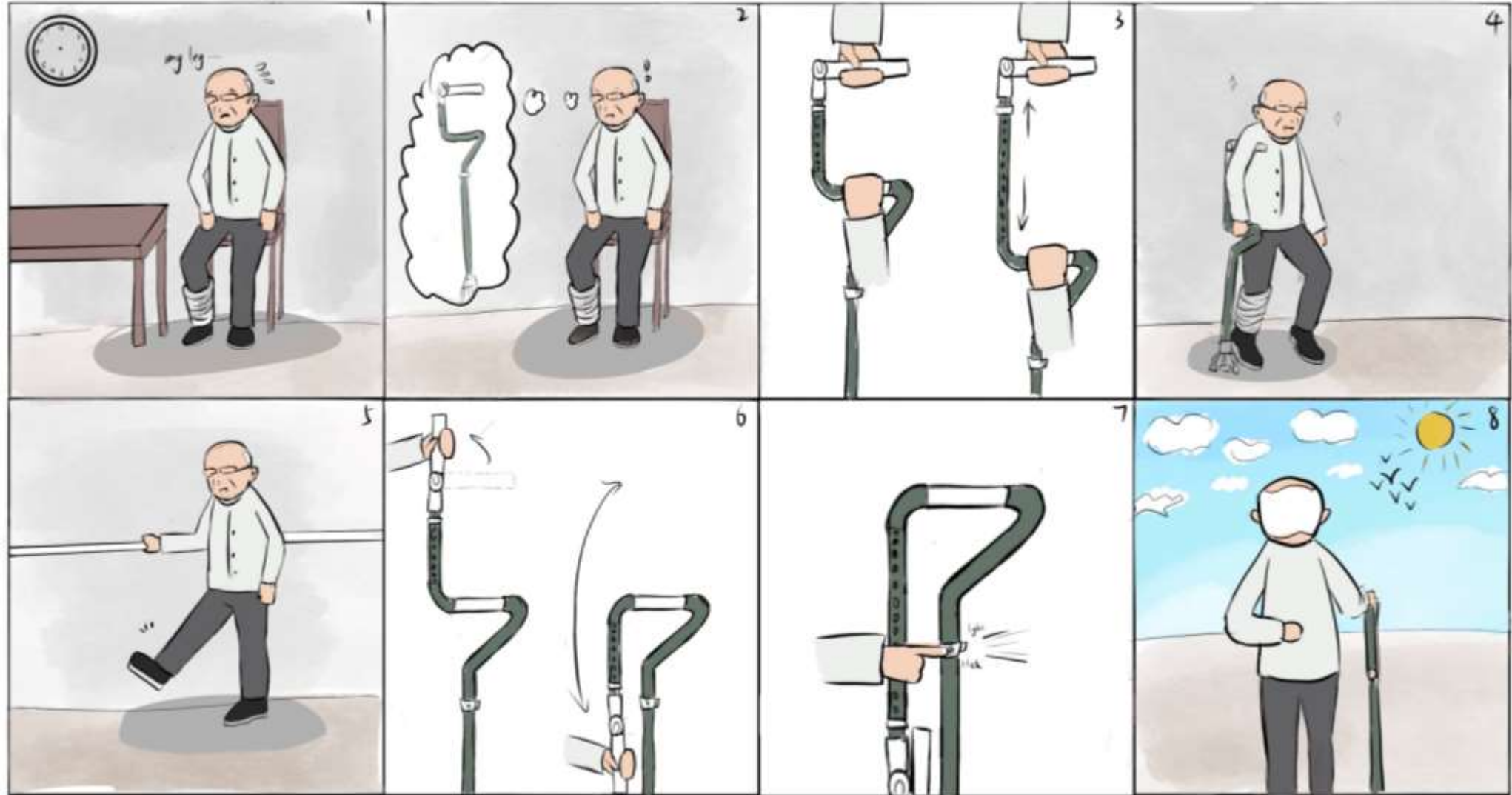
THE MODEL'S VIDEO

*Show how to use,
how it transform,
how it longer its
length, and show
the color.*



PART 05

STORY BOARD



Client and helps: team7 Desgin: team15

Thank you for all the hard works!