GNG 2101 Deliverable L

Deliverable L: Intellectual Property Search for Lightweight Posterior Walker

Submitted by

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Table of Contents

Introduction

Throughout this course, our team has used design thinking to create a lightweight posterior walker for a client with a disability. We have researched different ways of manufacturing our product, drawing heavily on existing products that we found during benchmarking, and we have also examined ways that we would market and sell our product if we intended to take our product to the market.

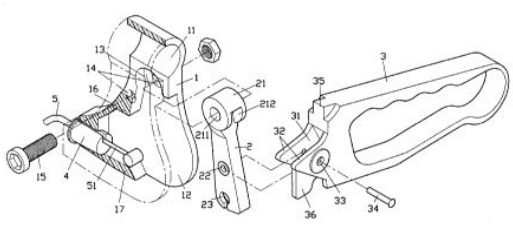
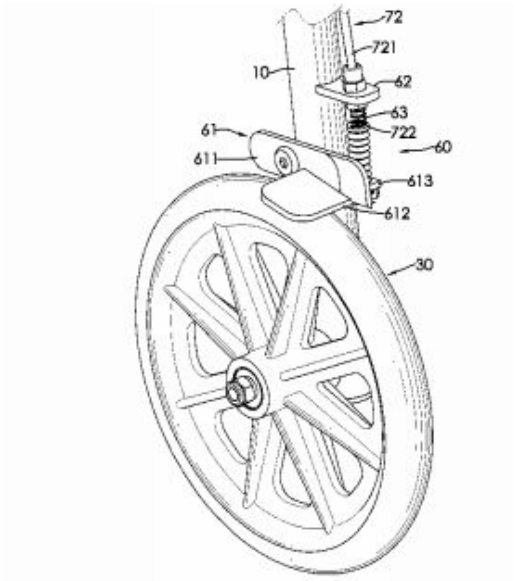
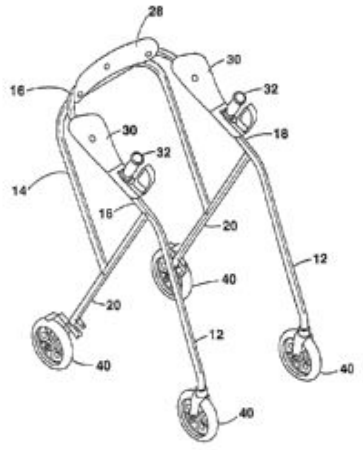
This document bridges the legal gap between inspiration and exploitation, in which we take on the process of researching intellectual property that relates to our product and examine how it would affect our business plan moving forward. It also describes our team approach to how we will deal with our own intellectual property once we have determined that we have new and marketable ideas.

Because our team chose to focus on functional walker design over aesthetic design or brand design, we have chosen to highlight three related patents (as opposed to trademarks or copyrights).

Intellectual Property Related to our Product

We found that there were more relevant patents relating to the braking system of our walker than there were the actual frame or features of our walker. We believe this may be because the design we chose would not be considered novel (ex: chairs and other folding devices).

Table 1 - Patents relating to our lightweight posterior walker.

Patent Description	Representative Image
CA 2260585 - A Rollator Braking Device [1] **Highlighted Features:** - Circumference of grip fits over the handle bar of a walker. - Grip and case are held together by a pin. - "Stopper tongue" prevents brake from disengaging when initially held.	
US 8998223 - Braking system, rollator and transport chair with the same [2] **Highlighted Features:** - Brake is not engaged when the handle is not pushed and wheel can turn normally. - Brake uses a spring to exert pressure on the wheel. - Brake uses a steel cord with a handle device.	
CA 2753693 - Posterior Walker [3] **Highlighted Features:** - Person grips handles from the front with the walker supporting from the back. - Four wheels have two hand-engaged brakes on the back wheels. - User body is also supported by the forewarms by an angle of 25-45º.	

Relationship Between these IP and our Product

Patent 1 - A Rollator Braking Device

The first patent that we have highlighted in Table 1 is very similar to the hand-braking system that we have in place with our current walker. In both designs, there is a plastic case that fastens onto a circular frame so that the handle pulls up towards the frame when someone is pressing it. A separate grip pivots inside of the case by a joint to pull on a steel cable and activate the brake.

This design differs from our braking system because this design, when pulled, will latch a locking mechanism so that the person braking their walker does not have to keep pulling it to keep the brakes locked. While we are not using this system, it could be useful to keep in mind.

Patent 2 - Braking system, rollator and transport chair with the same

This system appears to be the same system that we are using on two of the wheels of our walker. A cable pulls up on a brake that activates a pivoting beam to apply pressure on the wheel. A spring ensures that the brake allows the wheel to spin freely when the brake is disengaged.

Patent 3 - Posterior Walker

This design of posterior walker frame seems very different than our walker at first glance - where our walker relies on hand strength to push oneself upright, this walker uses a back support and forearm support to keep a person upright. It also does not fold.

However, the features of this walker becomes very similar to our own if we were to angle the hand support in the specified range (25º-45º). With enough angle on the handles, a person might naturally rest on their forearms, which would then overlap in function with our own design.

Importance of this IP with Regard to our Product

Currently, our design infringes on one of these patents, namely the “Braking system, rollator and transport chair with the same”. As this is an American patent that does not have a duplicate in Canada, we would be able to sell our product as long as we did so exclusively in Canada.

We could get around this infringement by either changing our current braking system[1], or by appealing to the owner of the patent and reaching a licensing agreement.

[1] Our wheel and braking system was directly taken off of a second-hand walker so that we could focus our design efforts on the frame. If we proceeded with our business, we would likely redesign the braking system anyway.

In-House IP Management Moving Forward

Moving forward, we predict that we will be targeting a Canadian audience to start, however because the population is aging across many countries (ie the number of people with mobility issues is rising), it would likely be advantageous to reach a wider market. Therefore we predict that we will start by filing our intellectual property on the Canadian and US markets.

Conclusion

Because of the simple nature of our walker, we did not find many patents that related to the components of the product that we designed ourselves. However we did find some overlapping IP with components that we took off of an off-the-shelf system.

This seems surprising due to the growing number of people with mobility issues who would likely be interested in a lightweight product like the one we made. This either implies that the market has not caught up to the demand that will likely spring up in the coming years, or the nature of this kind of product is no longer novel.

References

[1] C. Li, “A ROLLATOR BRAKING DEVICE,” CA 2265085, 2000.

[2] L.-S. Chang, “Braking system, rollator and transport chair with the same,” US 2013832696, 2013.

[3] F. Slomp, “POSTERIOR WALKER,” CA 2753693, 2017.