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Introduction

The objective of this deliverable was to consider and acknowledge any intellectual property that has been patented prior to the creation of our product and discuss how they differ. Exploration into how we would handle the protection of our intellectual property if we were to make this a business is also done.

Similar Products with Intellectual Properties

1. **Dust and Waterproof Casing** which was patented in 2010 by Yamaguchi, Shingo and Watanabe, Satoshi and is a method of waterproofing a case. The product is described as being used to, "seal an internal space of a casing having an upper and lower casing members, a continuous groove with a semicircular cross-section is formed around a dust-and-water proof area of the lower casing member, and a continuous elongated protrusion is formed on the portion of the upper casing member corresponding to the groove, so that the protrusion is inserted in the groove when two casing members are engaged. Spherical sealing members each having the same diameter as the groove width are arrayed continuously in the groove without gaps therebetween. The width of the elongated protrusion is configured to be smaller than the groove width, so that the spherical sealing members compressed when the casing members are fitted are deformed to enter a space defined between the elongated protrusion and the groove, to thereby form a dust-and-water proof structure. Inserting the spherical sealing members in the groove is easy." (Yamaguchi and Watanabe).



2. **The Cochlear Nucleus Activity Case** Owned by the Cochlear Company. Described as having "three separate storage compartments designed to protect your sound processor, accessories, and personal items (e.g. phone or car keys) from damage.

Provides peace of mind that your belongings are protected while you enjoy being out and about." (Cochlear Nucleus Activity Kit Case).

3. **The OtterBox Hard Cases** The Otterbox company has patents on their Otterbox phone cases including the hard plastic component of the case that can be found underneath the rubber exterior.



The Relationship Between the Above Products and Ours

The Dust and Waterproof Casing patent relates to our product in that they are both designed to serve similar functions of protecting what is within from the elements. They are both protective casings, however some key differences are that this casing does not seem to protect against physical damage whereas ours does, and the closing mechanism is different and was designed specifically to keep water and dust out, while ours was not. However, if the patent did not exist, the closing mechanism could be used on our product to protect the closing seal of the case from letting water and other elements through.

The Cochlear Nucleus Activity Case relates to our product because Cochlear is the company that manufactures the hearing devices that we designed our product for, specifically the Nucleus N7. This is also a protective device for these hearing devices, however since it is not meant to be worn and is just meant as a storage case it is different from ours in that way. However, it could work in conjunction with our product since they are both meant for the same company.

The OtterBox Hard Case is a phone case so it is unrelated to our product in that way. However, it is meant to be a protective case for a phone, same as ours is meant to protect the hearing device. A similar material could be employed in the manufacture of our case to improve upon its protective capabilities.

Importance of these Intellectual Properties

The intellectual properties explained above are unlikely to hinder the impact of our product in any way as the function to our product serves differently than to these.

The otter box design is meant to serve phones and handheld touchscreen devices, which is not our design, and the lining that otter box uses is not made of the same material we use, since we used pure silicon and they use a hybrid. Not to mention our system is a three layer system composed of silicon, silipoly, and ABS plastic which is different enough to not worry about infringing on a similar design.

The Cochlear Nucleus Activity Case could have possible infringements as the device being used requires approval by their company to be legally able to store the device within our case such that the user does not risk damaging it and unabling to receive a

replacement. Our case itself however serves a function to be worn, which is not the purpose of the activity case, since this is meant to strictly be stored in and as such should not be much of an issue to be claimed as Cochlear's intellectual property. The design is also very different.

The dust and waterproof casing could serve a potential issue as the patent has the same design as the one we use in our case. This is not different enough to be claimed otherwise, except for the fact that the closing mechanism of the patent is spherical, whereas ours is not, it also does not make the case fully sealable as an O-ring is also used. With this many differences it should unlikely be an issue.

This is important because if any do end up serving an issue towards the intellectual property then the production could be stopped and our company would have to own up for stealing these properties. In order to avoid this, a lawyer could seek to ensure that it does or does not fall under specific circumstances, otherwise the design may have to undergo changes.

Future Management of these Properties

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Managing Intellectual Property

If our team was to manufacture our product and create a business from the sales, there would be some precautions that would need to be taken to protect our intellectual property. Below is a list of the first protections we would hope to acquire.

Design Patent 1

Our team would file for a design patent for our 3D printed case design and specifications. The most important part of our product is the actual case including the use of the clip on the back of it and thus we would want to protect this design.

Design Patent 2

Our team would want to file a design patent for the interior mold of the sound processor inside of the case as this is essential to the sound processor not being damaged. Ideally we would gain a patent for the use of an interior mold of the Nucleus 7 within a case, where it is stored.

Trademarks



Having faith in our product and company, it would be ideal to trademark our company name, Hear Shield Solutions. In addition we design and trademark a logo.

Conclusions

In conclusion, there were few easily found patents on products similar to ours and even fewer on the market. This is most likely due to the fact that this is a relatively new, and niche market. That being said, we were able to find some patents that had features in common with our product in order to compare. During the exploration of how we would protect our product in the future, we decided that it would be best to trademark a logo and patent the design of our product in order to reach as much of the market as possible and increase the possible success of our business.

References

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