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Designing into Patent Protection: Proactively Protecting the Replacement Component

Legal Update

01.26.2017

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Replacement components can be big business. However, the replacement component market may quickly become crowded with competitors attracted by lucrative profit margins. Accordingly, considering strategies for replacement component patent protection at the product development stage can be critical. By planning at the outset of product development, a company can “design into” patent protection for the replacement component itself.

The Replacement Component Business Model

One of the more well-known examples of the replacement component business model is that of the printer and ink cartridge. While the manufacturer may sell the printer itself for cost, the business model is premised on the expectation of profit from repeated future sales of the replaceable ink cartridge. In fact, in some cases, the cost of a single ink cartridge exceeds that of the printer. The principle here is simple enough—sell the primary device (the printer) at an attractive price in order to acquire future recurring purchases of the more profitable replacement component (the ink cartridge).

The printer and ink cartridge tandem is hardly unique in this sense, as the replacement component business model is employed across a variety of industries. Consider the medical device field, particularly medical diagnostic equipment. Here, the model may take the form of single use consumables for measurement or injection devices. To further illustrate the point, take the automation and process management industry. Here, it may be valve or pump component parts worn over the course of repeated use, but the idea is the same. In addition to accounting for significant portions of the bottom line, replacement components can provide reliable cash flow in a variety of industries.

Profit attracts competition. This is especially true for replacement components. A competitor can wait for the first-mover to take on the risk of proving the market for the primary device. This requires the first-mover to expend considerable resources in researching, developing, and marketing the primary device before seeing returns on this investment. The competitor can later enter the market for the primary device's

replacement component(s), without having incurred the upfront costs. Consequently, the viability of employing a replacement component business model for a product may hinge on the degree to which competitors are excluded from the market.

Protecting the Replacement Component

Many companies consider patent protection at the outset of product development. But the focus of patent strategy is too often solely on the primary device. This is understandable. After all, the primary device is usually where the vast majority of developmental resources are spent. Likewise, it is often the primary device that exhibits innovative features resulting from these extensive development efforts.

In many cases, however, little thought is given to patent strategies for the primary device's replacement component(s). Overlooking replacement components is easy to do, since they can regularly be routine parts. Tubing, patches, and valve parts may not seem to warrant patent consideration. This may be particularly true where these same items did not play a role in overall development efforts (e.g., the next generation primary device will use a substantially similar replacement component as its predecessor). Moreover, common perception may hold that if the primary device is subject to patent protection, it must be that its constituent parts are as well.

However, from a business perspective, acquiring patent protection for the replacement component in isolation can be as important as patent protection for the overall primary device. For one, patent protection of the primary device may not be sufficient to exclude competitors from the replacement component market. Indeed, it frequently is the case that a patent aimed at protecting the overall primary device will not prevent others from making and selling a replacement component for that same device. In this case, a company may end up incurring the costs associated with developing an innovative product, only to later have a competitor enter the more profitable replacement component market without having incurred similar costs of entry. If the replacement component itself is subject to patent protection then the market for it may be shielded from such competitors.

Accordingly, considering strategies for replacement component patent protection at the product development stage can be critical from a business perspective. To achieve patent protection for the replacement component in isolation, the replacement component must be both a new and non-obvious variant relative to previous replacement components. Through planning at the outset of product development, a company can create a unique design for a replacement component itself and thereby "design into" patent protection. This, in turn, may transform what otherwise could have been overlooked as a conventional component into a component that is shielded from competitors.

One option is to consider ways in which a unique replacement component structural design can be created. For instance, most replacement components physically interface in some way with the primary device. A patentable replacement component could be designed by creating a sufficiently different interfacing structure on the

replacement component, such as a unique geometry for attaching to the primary device.

To guide replacement component design choice, patentability searching can be conducted to get a sense of the types of designs most likely to result in patent protection. A benefit to considering replacement component patent protection at the outset of product development is the ability to accommodate a patentable replacement component design into the overall product. Namely, those designs deemed likely to be patentable from the patentability searching can form the set of design options for the replacement component without substantial constraint from an already settled product design. Thus, although patent protection requires a new and non-obvious replacement component design, early attention can keep the door open to distinctive replacement component designs most likely to garner patent protection.

In addition, when “designing into” patent protection for a replacement component, the road to patent protection may be less complex in light of the end goal. In a more typical case, for instance for the primary product, the ideal scope of patent protection is broader than that product’s exact commercial design. Here, the value of patent protection is as much in preventing competitor design-arounds as it is in protecting the exact commercial embodiment.

Contrast this with the case of the replacement component, where the scope of patent protection sought may need not be broader than the new replacement component design itself. In this context, the value of patent protection is in shielding the actual replacement component design so that competitors cannot make and sell this exact component. To the extent design variations are made by a competitor to get around the replacement component patent, the altered design would likely make the component unfit for use with the primary product.

Finally, patent strategy for a replacement component should consider a combination of utility and design patents. A utility patent generally protects the functional aspects of a component, while a design patent generally protects the look of the component. Accordingly, the scope of protection afforded by each of these patents can differ in a complimentary manner, and thereby provide more robust grounds for patent enforcement. Also, in cases where product design and release timelines are expedited, a design patent can provide an avenue for obtaining relatively quick protection. At the same time, the longer pendency of a utility patent application, coupled with continuing utility application filings therefrom, may provide flexibility in targeting competitor replacement components surfacing in the market after release of the primary product.

Takeaway

Replacement component patent strategy is a valuable consideration at the early stages of overall product development. In many instances, patent protection aimed at the primary product may not be sufficient to prevent competitors from making and

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selling replacement components. By considering replacement component patent strategy at the outset, a company can “design into” patent protection for the replacement component and consequently keep it off limits from competitors. Companies across a wide range of industries would be wise to make replacement component patent strategy a routine part of all product development efforts.