IT 330: Carbonell

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Team Project Report

Section - 02

Executive Brief

The Cocktail Carrier is an innovative take on a cocktail kit. Utilizing a unique layered C-flute corrugated board design, The Cocktail Carrier provides superior protection in both impact and compression forces while maintaining an old fashion aesthetic appeal. The influence behind this idea was the old fashioned book cutout style. Corrugated board was used as the box design to create an interesting effect on something that is not traditionally that aesthetically pleasing.

The team began the concept of The Cocktail Carrier by conducting market research of cocktail kits to identify what kind of packaging was being used currently. Products in the cocktail kit market had a heavy emphasis on aesthetic appeal but did not provide adequate protection for most kits and simply used paper confetti. To compensate the minimal protection for the contents, the primary packaging is thicker and usually serves as cushioning. The team was motivated to take the positive aspects of the current product packaging on the market while improving on the negatives. With this mentality, the team identified The Cocktail Carrier's primary objectives:

- Provide superior protection of glass containers
- Unique design that challenges traditional cocktail kit packaging
- High emphasis on aesthetic appeal
- Strong product identification and visual positioning

Through brainstorming and prototyping iterations, the team narrowed down potential designs and ultimately selected a layered corrugated board approach. A final prototype of the concept was created using C-flute corrugated board - which provided good compression and impact resistance. Measurements of the glasses were taken to determine the placement of the inside components and the number of C-flute corrugated board layers needed. The prototype helped identify areas that needed improvement and changes were made immediately. Graphics were made for the final prototype. The box was converted using a hot glue gun to stack the layers together and double-sided tape to attach the graphics.

Key Findings and Insights

Because packaging concepts must be functional as well as aesthetically appealing, it is important to draw inspiration from pre-existing designs and alter according to your product. Creating a whole new package concept, especially in a single quarter, increases the likelihood that the package will not be functional. The practicality and user experience of the product were critical aspects that the team had to focus on.

There were several takeaways from this project including, learning that it is difficult to create a die line from scratch and by hand, but even when using machines it can be difficult to get it perfect. When the machine cut the corrugated board in the machine direction it pulled the flute with it, defeating the protection aspect of the flutes on some pieces. Many flute columns were torn apart and did not provide the ultimate cushioning it was supposed to. Another cutting mechanism might have been better for this type of packaging. Using innovation and creativity to revamp something that already exists came with a lot of difficulty. It takes a lot of trial and error to see ideas become more than just concepts.

Packaging Concept

The package designed is intended to house a cocktail making kit - complete with ingredients and a removable recipe. The box is intended to provide security and aesthetic appeal, all while remaining cheap to produce and easy to create variations of for different cocktails. This concept was generated through the brainstorming session of the team members. Each team member brought opportunities and needs for repackaging products. The list was filtered down until one final concept was selected. A lot of inspiration was drawn from *The Cocktail Courier* and *Shaker Spoon* that were subscription based boxes for alcoholic beverages. These boxes adopted the opening mailer boxes that is ordinarily used for subscription boxes. It provides protection and convenience for distribution and shipping. However, the team wanted to take on a new packaging concept by providing more protection for the glasses and adjusting the portions.

Packaging Innovation

The Cocktail Carrier's package presents the products inside to the customer in a way that no other cocktail kit does. Most other boxes for cocktails contain the ingredients in shredded paper or other packing filler, which does not provide good cushioning for the bottles inside. Current packaging for this product also includes limited portions for the cocktails - which typically maxes out at 2 drinks. The Cocktail Carrier will make it a primary objective to have this kit group-friendly while creating a nice display for the customer when they open the box to enhance their unboxing experience. The Cocktail Carrier is a line of drinks, and for this project - the classic cocktail Tequila Sunrise was chosen. It will include 2 big bottles for juice, 2 small bottles was the tequila, and 1 small bottle for the syrup. These ingredients will change based on the

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Target Market Segment

The Cocktail Carrier's primary target market is a 25 year old to 45 year old person with disposable income, and a novice interest in mixology. All genders can enjoy the Cocktail Carrier. This would be a great gift for an office party, housewarming gift, wedding, or holiday. It would be theoretically sold in stores that sell specialty craft goods.

Design Process

The design process began with a concept generation to figure out which packaging concept the team wanted to choose. A final concept was selected and the team began examining what other competitors were using as packaging and what areas of their designs could be improved upon. The team decided to distinguish the design by making the opening experience more pleasant for the customer, and by including enough ingredients to create cocktails for up to 4 people. The team originally focused on creating interesting dividers for the ingredients. This idea persisted for a while, and at the same time the team decided to explore interesting exterior shapes for the

box. These shapes included regular polygonal prisms, irregular polyhedrons, and bottle-shaped containers. During this portion of the design process, the team discovered a method of stacking layers of corrugated board to create a rustic look and snug fit for the products inside. This allowed the team to abandon the idea of creating dividers. The final design creates a nice display of the ingredients, and protects them with a sturdy container as well. For a closing mechanism, the team designed a couple different locks that all ended up being too complicated, and they ended up deciding between magnets or a sleeve. The team decided on magnets in order to provide a sleeker user experience.

Materials Selection

The primary material is C-flute corrugated board. C-flute corrugated board provides good crush resistance which is extremely important in the unique design to protect the glass bottles inside. The corrugated board would act as cushioning in distribution as well as shelf protection. The stacked C-flute design has increased column strength and will be less susceptible to bending between the flutes. Additionally, it allows customers be able to reuse the box as decorative or utility. The sleeve used to surround the container are paperboard to provide an enclosing method while providing great printing attributes. To stack the layers of corrugated board, a glue gun was utilized due to its strength as an adhesive. For the graphics, a strong double-sided tape was used for prototyping demonstration purposes.



Figure 1: Glasses from Amazon

The glasses used in the cocktail kit were both sourced from Amazon. The decision of having two 475 mL bottles and three 100 mL bottles directly correlate to the portions of the recipe. The two larger bottles were selected due to its sleek design and large, but still reasonable, capacity. They would hold the orange juice portions, since six parts are required for a serving of two. The three smaller bottles were selected due to its shape of a slim top and thick body - similar to standard alcohol bottles. Two of the bottles holds the tequila and one holds grenadine syrup. They are all clear to showcase the liquids in a sleek and minimalistic manner.

Graphic Design

The product would have a large shelf impact due to the bright graphics and large size. The Cocktail Carrier would be located in different types of stores and this will stand out in the alcohol and spirits aisles.



Figure 2: Cocktail Carrier's Front Design



Figure 3: Cocktail Carrier's Removable Recipe Card

Prototyping

The Cocktail Carrier's initial prototype began with a single 10in x 18in C-flute corrugated board. The team took the measurement of C-flute thickness and divided it by the width of the tallest glass to determine how many layers of C-flute corrugated board were needed. Measurements of the glasses were then taken and stencils of the glasses were created. After finding the optimal placement of the glasses, the team proceeded to cut the outlines into each layer of the corrugated board. Due to the varying glasse widths, a total of 3 unique designs were made. The prototype identified a fitment issue with the 100ml bottle. The team noted the issue and made the proper adjustments necessary.



Figure 4: Cocktail Carrier's 3 unique dielines



Figure 5: Placement of glass bottles in prototype



Figure 6: Fitment of glasses in corrugated container

Manufacturing Process: Dieline



Figures 7-8: Cocktail Carrier's Final Dieline

Manufacturing Converting

After the dielines were measured and finalized, they were cut out using the corrugated die-cut machine. The depth of the bottles were taken into account when measuring the layers. The depth correlated with how many layers for each dieline we needed. The dielines were then stacked and glued together using a hot glue gun. The graphics were placed and glued onto the packaging using double-sided adhesive tape. The group added a ribbon to act as an affordance at the edge of the packaging line.



Figures 9-10: Cocktail Carrier's Final Bottle Placement



Figure 11: Affordance Tab

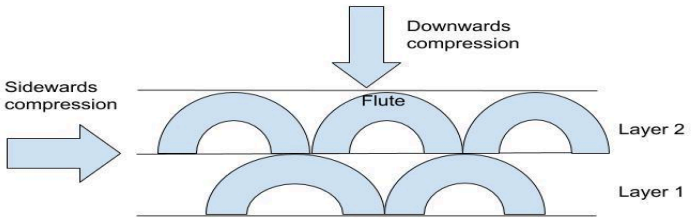




Figures 12-13: Cocktail Carrier's Top Lid and Opening

Protection & Package Performance

The unique layered C-flute corrugated board provides protection to the product under proper use of the product. The layered design provides compression resistance during stacking due to the flutes orientation. The packaging will not bend at the flutes like most corrugated boards due the increased thickness of the stacked layers. The flutes are not perfectly aligned from layer to layer so creasing at the flutes is unlikely.



The package provides protection to the contents inside from the environment. The flat design of the box allows the box to be stackable making it easier for transportation. The package provides an affordance on where the package opens to reveal the contents inside. The package's graphics is easily identifiable providing good visual positioning as well as the product information.

Environmental Impact

The team's decision to choose corrugated board, paperboard, and glass for the materials leaves a minimal environmental impact when concerning energy use. Corrugated board is derived from renewable resources and is completely recyclable, reusable, and energy-efficient to produce. The most energy would come from the corrugated board and glass bottle production. However, these options are still more sustainable than other plastic alternatives. Additionally, this material is easy to recycle since they leave little and clean waste since it contains no bleaches, dyes, or other additives. Corrugated board is the most material in the waste stream but it also held a 93% recyclability rate in 2014. However, the product does include magnets that are not recyclable or biodegradable. The magnets are strongly held in place but they can be removed for better recyclability. This product is only meant to be used once and then disposed of, but the magnets can be reused by the customer.

References

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