

Zipper Got Stuck

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Mentor Statement

This ensemble was part of an eveningwear collection designed and constructed by a student in an undergraduate creative apparel design course. The purpose of the mentorship relationship was to help the student understand the knowledge of draping techniques and eveningwear/couture production techniques. Each student could decide their own inspiration and work independently to develop their design collection and pick one style to make the finished product. As a design mentor, I advised the student on draping, patterning, fitting prototypes, and executing couture construction techniques. Under my advice and guidance, the student made fabric samples numerous times to create an experimental fabric with zippers and obtain a more attractive surface texture, finally achieving the best effect. This ensemble was selected for submission due to the high quality of construction and novelty of the design.

Design Statement

With the worsening of the environment and rise of diseases worldwide, environmental protection has attracted more and more attention from the public and scholars. The importance of sustainable development through sustainable practices is that it protects our ecosystems, preserves our natural resources, and improves our quality of life (Bansard & Schröder, 2021). However, production lines in the apparel industry not only contribute 10 percent of human carbon emissions through mass production, but also cause serious water pollution and water depletion (UNECE,



Figure 1. A wavy texture surface of the fabric consisting of zippers

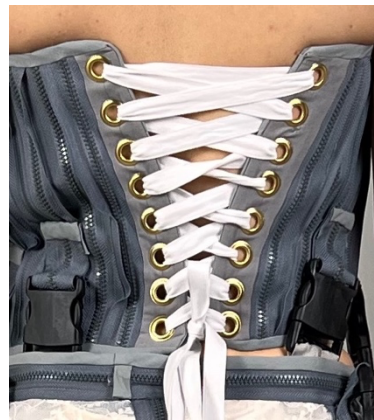


Figure 2. Closure of the corset



Figure 3. Side view of the underskirt

2018). Sustainable fashion creates less waste, reducing CO2 and other greenhouse gas emissions every year (Alves, 2022). Redesigning, recycling, and upcycling are beneficial and valuable attempts to maintain or raise the value of discarded products. In this study, a sustainable design was created using existing textile waste. The inspiration for this design was the theme of the 2022 Met Gala event, Gilded Glamour, which is about the luxurious lifestyle enjoyed by the upper class through the rapid accumulation of large amounts of wealth in American history from 1870 to 1900 (Dangremond, 2022). *Zipper Got Stuck* focused more on a modern adaptation or interpretation of this historical period. The purpose of this design was to create a sustainable design by using discarded zippers as the main material source and using couture techniques to create an ensemble of a corset and a hoop skirt with unconventional material.

The whole ensemble consists of three pieces: a corset, a hoop skirt, and an underskirt. Firstly, a corset was draped, and an experimental textile was created by sewing lots of measured zippers without sliders and pull tabs. The large roll of continuous zipper chain used for this garment was sourced from the donated deadstock from the university apparel production lab to create the garments. A wavy texture (see Figure 1) was created to enrich the surface texture by manually draping and placing every piece of the cut zipper on a mannequin. Playing around with how each zipper strip was draped, the desired design was created and, soon after, taken immediately to the sewing machine to be sewn with wrong sides together. Due to the thickness of the fabric composing the zippers and the fact that the sewing machine could not cross-stitch the zipper tooth, a large amount of hand sewing was used for the edge-finishing of the corset. Double-fold bias tapes were used at the edge to solve the problem that the zipper could not be flatly folded on the hemline (see Figure 1). Except for the shell layer of the zipper fabric, couture techniques were applied by constructing the underlining with boning casing and lining. Spiral steel boning pieces were inserted into the boning casings to provide better support for the corset. Two lines of grommets were attached to create "the teeth" of the corset for the closure (see Figure 2).

Secondly, a basic hoop skirt was draped, and the wrong sides were sewn together out of lace and power mesh for the hoop skirt. Next, the zippers were sewn onto the seam allowances, acting like boning channels. Covering up the seams and raw edges, bias tape was sewn and hand-stitched onto the garment. Some obstacles presented themselves with boning when making the hoop skirt. Originally, spiral steel boning was used, but this was flexible and did not keep its shape. Next, featherweight boning was tried, as it has more structure, but when inserting the boning, it gets caught in the seam allowances of the hoop skirt. The final solution to fix this problem was to cut the boning in half and insert each half into the left and right sides of the boning casing. Since the boning has a breakpoint on the center front and the center back, the boning formed two half-circles, creating a pant silhouette of the hoop skirt.

In addition, an underskirt was created to provide more wearing options for the wearers. Figure 1 and Figure 2 show the plastic side release buckles on the waistline that made it so all three pieces – the corset, the hoop skirt, and the underskirt – could be worn together or in different combinations, depending on the wearer's needs. There are three wearing options now: the corset with the underskirt, the corset with the hoop skirt, or the corset with two skirts together. The possibilities are endless, as more skirts and corsets will be introduced to the collection in the future.

Muslin was draped on the bias on the fold to create this underskirt, and cutouts were made to create the desired look. The piece was patterned, and then four pieces were cut out of crepe fabric. The outer shell and lining were sewn separately and then combined. While combining the outer shell and lining, strips of zippers were sewn in between the layers around the mid-thigh depth of the cutout (see Figure 3). Then, boning channels were sewn at the waistline, and boning was inserted to give structure. Lastly, the buckles were sewn in. A challenge with this skirt was it forming a tube when turning it inside out. One side of the skirt was seam-ripped at the side seam and then strategically sewn back together to fix this challenge. Since there are buckles, the skirts can be interchangeable or worn jointly.

The ensemble *Zipper Got Stuck* contributed to both sustainability themes and the reinterpretation of historical garments in innovative and original ways. Using zippers to create a new piece of textile and using zippers as boning casing is an innovative means of reinterpreting a previously loved or discarded item, a process that helps keep plastic out of landfills. This project successfully created a unique and sustainable design and incorporated couture techniques.

References

- Alves, A. (2022, April 21). *What exactly is Sustainable Fashion & Why is it so important (2022)*. The VOUE. Retrieved May 24, 2022, from <https://thevou.com/fashion/sustainable-fashion/>
- Bansard, J., & Schröder, M. (2021, April 15). *The sustainable use of Natural Resources: The governance challenge*. International Institute for Sustainable Development. Retrieved June 1, 2022, from <https://www.iisd.org/articles/deep-dive/sustainable-use-natural-resources-governance-challenge>
- Dangremond, S. (2022, January 23). *What exactly was the gilded age?* Town & Country. Retrieved May 27, 2022, from <https://www.townandcountrymag.com/society/a38651973/gilded-age-history-meaning/>
- UNECE. (2018). *Fashion and the sdgs: What role for the UN?* Retrieved May 24, 2022, from https://unece.org/fileadmin/DAM/RCM_Website/RFSD_2018_Side_event_sustainable_fashion.pdf

