

CAUSEWAY  
IAN BAWTINHEIMER





*Thank you to my advisors Kirsten White and Andrew Reesor*

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*Thank you all for sharing your knowledge, your encouragement, and your patience*

*Sheridan College*

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*2023*



## **TABLE OF CONTENTS**

<i>FORWARD</i>	6
<i>INTRODUCTION</i>	9
<i>CASE STUDIES</i>	10
<i>MATERIAL STUDIES</i>	14
<i>INITIAL IDEATION</i>	20
<i>A NEW TACK</i>	25
<i>NAUTICAL INSPIRATION</i>	26
<i>COASTAL LIGHT</i>	30
<i>SAILOR'S CHAIR</i>	38
<i>THE CAUSEWAY COLLECTION</i>	48
<i>BIBLIOGRAPHY</i>	56
<i>IMAGE APPENDIX</i>	58

## **FORWARD**

*I was born in Prince Rupert. Shortly after my family moved to Squamish, and then to Victoria, where I grew up. When I was born my dad was starting his career in BC Parks and his job was to help maintain public camp sites. He got paid to camp with his friends. It wasn't long before I started going camping, I just wasn't getting paid for it. I remember my dad telling me a story about when we lived in Squamish, I must have been about 6 years old, and his commute to work was through mountain biking trails. I was raised to appreciate these outdoor settings. All of my hobbies growing up revolved around being outside. I biked everywhere I went, I played soccer competitively, I was into skateboarding, skiing, and mountain biking. With such a temperate climate in Victoria I was able to hangout outside year round with my friends.*

*When I was in my mid teens and started working, I gravitated to jobs that allowed me to be outside. It was also the time I started to move towards more creative social circles. I worked a few seasons landscaping, doing exterior painting, and working at the harbour downtown Victoria.*

*The work on the docks was pivotal in engaging me with the ideas of "How Things Work". Talking to sailors all day about their boats and being shown the mechanics really started to peak my fascination with tools and materials. How to put something together and take it apart. Not only was this outdoor, hands on work, but it also had this sense of engineering and mechanics that required some serious designing and thought. I knew that I wanted to work with my hands, be creative, and stimulate my mind with the problem solving approaches that come with designing and building.*

*I had always thought that woodworking was interesting but I had associated it with framing and construction. It wasn't until I took a class taught by Stephen Dalrymple on how to make a cutting board that I began to be interested in the idea of Craft. Stephen was a business partner with Coolican and Co, a small batch furniture company in Toronto. Through him and Coolican, I saw this world of furniture that was beautiful and elegant. It was Stephen who told me about Sheridan College. I owe him a lot.*



fig. 1 my father, brother and I on a canoe trip (summer, 1999)



fig. 2 my father, brother, and I setting up a tent (summer, 1999)





## **INTRODUCTION**

*My thesis year was motivated by learning and understanding more about the craftspeople, designers, and artists that came out of British Columbia. My research started as a look into the history of craft and design in British Columbia and a broad goal of paying homage to my home province through traditional materials, processes, and aesthetics of BC.*

*How do I define the attitudes, landscapes, and craft in BC? How do I reference BC beyond local materials and aesthetics?*

*As I dug into my research I started to reflect on my upbringing and find inspiration from the outdoor activities and jobs that I enjoyed so much.*

*Outdoor gear, from rock climbing belays to sails to tent poles, began to emerge as a dominant interest and source of inspiration for my thesis.*

*As the collection developed I found the inspiration of outdoor gear still too vast. I turned to the summer job on the docks, the job that was pivotal in engaging me with the slow life and the tinkerer's mindset. The job that was filled with obsessive oddball sailors and day drinking yacht dads. It was an interesting world. A world I enjoyed being apart of. The types of people that lived on a sailboat were those that did things themselves. They would take apart their engine just to put it back together again. They had pride in their boat and themselves. They were some of the most interesting people I've ever met.*

*Left; fig. 3*

*The Causeway Marina  
downtown Victoria, BC (2006)*

## CASE STUDIES

*Through research into artists and designers out of British Columbia, I began to see a common thread of approaches to their craft and work. These studies allowed me to begin to understand the qualities possessed in the work of British Columbians.*

*Bertram Charles Binning (known as BC Binning, you can't make this up) was an artist and professor out of Vancouver who typically worked with witty abstracted line drawings and paintings inspired by nautical influences. He founded the Department of Fine Arts at Vancouver's University of British Columbia (Woodcock, 2008). His work was humorous and loving and featured small pops of primary colour. He was incredibly influential on the craft scene in British Columbia and one of the early pioneers of pushing craft to the perceived level of beauty that art was on. It was his exhibition "Design in Living" in 1949 at the Vancouver Art Gallery that posed the question "DOES YOUR HOUSE FIT YOU?"*

*Molly Lamb Bobak, born in Vancouver in 1920, was a teacher, writer, printmaker, and painter. She was the first female to be named an official Canadian war artist (Lumsden, 2012). She used self-deprecating humour in her daily diary entries that were formatted to look like a newspaper. Both political and honest yet clever and humorous. Taking the very serious situation of World War II and laughing over it is empowering, raw, and honest.*

*Axel Ebring was a Swedish potter who set up shop in Notch Hill and later Vernon, BC. He signed his work by location rather than name. He believed it was where it was made that was so important to the piece. He really exemplified the attitudes and work ethic of BC's interior, trying his hand at farming and mining before turning to pottery. He dug his own clay, created his own wares and market, and wood fired his clay (Studio Ceramics Canada, 2013).*



*Does this House Fit You?  
A cartoon drawn by Ruth Killam (Massey) for the Design for Living exhibition.*

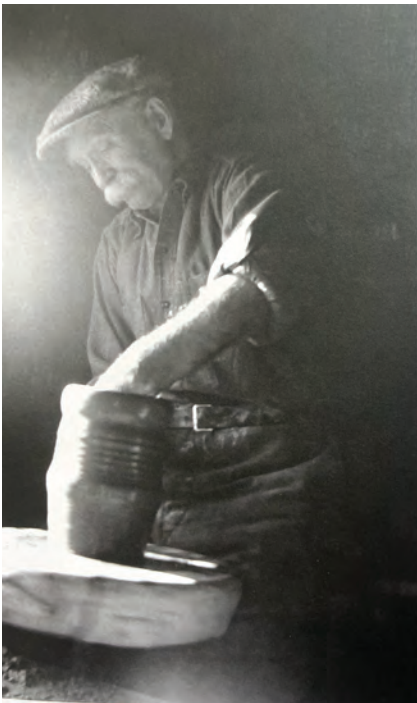
figW. 4



fig. 5  
BC Binnings, Fairweather Signals (1956)



fig. 6  
Molly Lamb Enters the Army,  
November 22 (1942)



Above; fig. 7  
Ebring's Notch Hill BC signature (n.d.)



Left; fig. 8  
Axel Ebring in his Vernon studio (1943)

*Fred Herzog, born in Germany in 1930, raised in Vancouver, was a street photographer that helped push colour photography in an era that was predominantly black and white. He shot from the hip, a technique used to not alert a passerby that he was taking their photo. He took candid shots of real people in real moments in time. He called Vancouver “engagingly colourful and seedy” and was drawn to photographing the Downtown Eastside which was populated by the city’s working class and minorities. He understood that interesting people make for interesting photographs. The new, clean, honest neighbourhoods gave him boring photos. There was a grit, a reality about the folks that engaged in grimy pubs, parlours, and public transit (Mackie, 2017).*

*These case studies helped me define techniques, moments, and influences that inspired British Columbian based artists and informed their craft. They all used an off kilter approach, put emphasis on their location, and featured personalities that summed up the attitudes and outlooks of many British Columbians.*

*Below; fig. 9  
Right; fig. 10*

*Fred Herzog, Man with Bandage (1968)  
Fred Herzog, Boat Scrapers (1964)*





*BC Binning used the surrounding landscapes of the province and his hobby of sailing with his wife to inform the compositions of his work.*

*Molly Lamb Bobak used humour and her own eccentric personality as a vehicle for making light of heavy subjects. Her paintings had a childlike nature in their lines and cartoonish approach in their newspaper-esque delivery.*

*Axel Ebring had a DIY method where he did every step of the process himself. He insisted that an old man with enough experience was better than the technology of a thermometer. He found the setting where his pieces were made so inspiring that it was how he catalogued and signed them.*

*Fred Herzog captured the spirits of ordinary moments long before Seinfeld. He shot from the hip in order to be subtle and therefore trusted instinct of where he had the camera pointed as he could not take the time to line up a perfect shot. His photos have a low angle and feature traditionally imperfect compositions.*

*These artists produce work that feels durable, tells a story, references the land, and comes across as unique, empowering, and unfiltered. These are qualities that I want to infuse into my work.*

## **MATERIAL EXPLORATION**

*With the themes of outdoor gear and nautical culture floating around in my head, I started exploring textiles with the thoughts of incorporating them into my thesis collection. Outdoor gear and sailing equipment must hold up under the elements. It has a very specific purpose.*

*I started by dying and tinting paper, starting to understand colour and the interaction colour has with light. From there I moved to dyeing cotton canvas with wood stains (without proper access to a dye lab, I had to dye fabrics with the materials and tools I had nearby) and hardening fabrics as a potential stiff fabric door idea with resin. I experimented with fabric-mache, fibreglass, dacron sailcloth, ripstop nylon, and waxed canvas.*

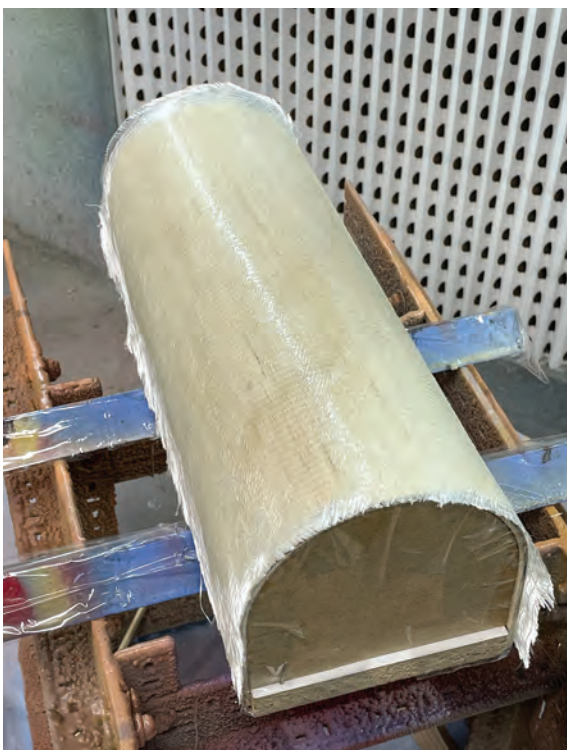


fig. 11 Fibreglass wet with resin



*fig. 12*

*Dyed canvas colour samples*



fig. 13 *dyed paper over light*





fig. 14 cheesecloth fabric-mâché with resin



fig. 15 synthetic mesh fabric-mâché with glue



fig. 16 cheesecloth fabric-mâché form idea



fig. 17 cheesecloth fabric-mâché over light



fig. 18 early material and colour palette



## **INITIAL IDEATION**

*I came into this year knowing that I wanted to design and build a cohesive collection of furniture that was situated within a living room. I wanted the collection to contain a floor light, a lounge chair, and a small side table or shelving unit.*

*Early in September I thought the light would have a fabric diffuser and the chair was going to have a sling seat. I decided to continue incorporating fabrics into each piece and started sketching a small cabinet with fabric doors that was inspired by tent flaps.*

*With the light, I had envisioned a tall column with a large tactile wooden knob that was inspired by the large scale of the trees out west and rock climbing holds. Later iterations and sketches included exposed cords and lines resembling climbing belays.*

*The lounge chair was designed around a detail of how the sling seat was pulled through the rails and sewn around a dowel, taking inspiration from tent poles. The back rest worked in a similar way. Ultimately these details led to a very square construction and left me feeling boxed in and unsatisfied with the rest of the design.*

*These initial concepts and ideas were inspired by outdoor gear and pulled from a broad range of activities including rock climbing, sailing, and camping. This was apparent at the final critique of the fall semester as it was clear I had some exciting ideas but overall a divided collection of pieces that did not read as cohesive as I wanted.*

*After the first semester, I worked hard to refine this collection and make it one that was cohesive in nautical influence and aesthetic.*

*Through this thesis year I really dove into model making. I find a crude model will give me a better idea of what the object could be as my brain really needs to see ideas in a 3D space. It also serves as a more permanent record of design ideas. A sketch on paper I will misplace and lose in a day. These models are nice to have, as maybe it's not the right idea for this project, but it's an interesting idea for a future endeavor. I got a lot of those through my design phase this year.*

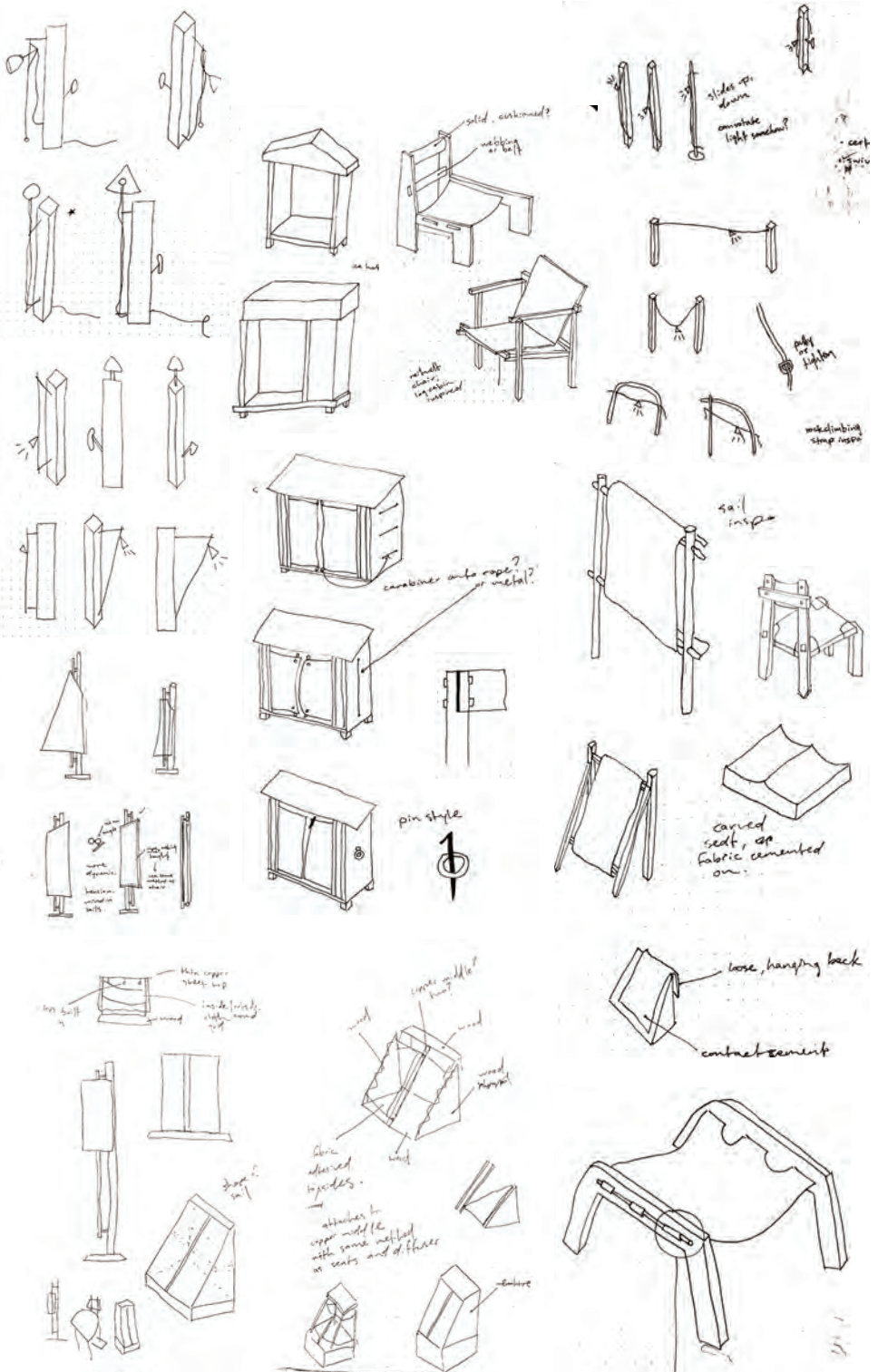


fig. 19 Ideation sketches



fig. 19



fig. 20



fig. 21



fig. 25



fig. 26



fig. 27



fig. 31



fig. 32



fig. 33



fig. 22



fig. 23



fig. 24



fig. 28



fig. 29



fig. 30



fig. 34



fig. 35



fig. 36



fig. 37 *mock up of backrest detail*



fig. 38 *mock up of potential seat to leg joinery*



fig. 39 *light mock up for final fall critique*

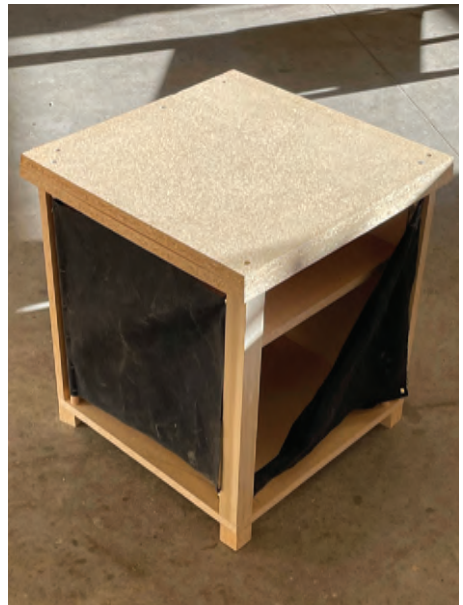


fig. 40 *cabinet mock up for final fall critique*



## **A NEW TACK**

*Learning to let go is an important aspect of designing. I let go of the table/cabinet in entirety and focused on finalizing the light and chair. The light kept moving forward, the chair was redesigned, and the table just never felt quite right. I let go of the table and focused my attention to refining the stronger two. With a focused concept and direction now in place, I started to lay out the nautical design references that would inspire the furniture.*



*fig. 41 chair mock up for final fall critique*

## **NAUTICAL INSPIRATION**

*With the concept narrowed down to referencing nautical culture as a way to pay homage to BC and an influential job in regards to my interest in the ideas of craft and how things work, I selected the visual language and references I wanted to make.*

*The mast; a tall vertical pole that supports the sails.*

*The lines; the steel wire or natural fibre ropes that run up and down sailing vessels and are used to help rig up the sails and moor the boat to the docks.*

*The anchor; A heavy object attached to a vessel by a cable, rope, or chain and dropped into the water to keep the vessel in place either by its weight or by its flukes, which grip the bottom.*

*The Lumber Yard Skiff; a flat bottomed work boat that I used to clear debris from the harbour. These boats are inexpensive to make and feature simple construction. I was influenced by the simplicity and straightforwardness of these boats for my capstone objects. I removed excess details and overdesigned elements for a straightforward design with no hidden tricks.*



fig. 42 A lumber yard skiff

*General boat detailing; edge treatments and the contrasting durable and delicate elements. Boats truly are a craftsmanship marvel. Surviving the open ocean is a challenge. Boats need to be durable, but they also feature some incredibly fine detailing and precision.*

*The sail and the seat; the textile materials used in the Causeway Collection are Dacron sailcloth for the diffuser and a natural cotton canvas for the seat cushion and backrest.*

*Construction materials; Douglas Fir is a commonly used wood species for boat building. It has a very high strength to weight ratio, ideal for boat building. Although there are other species used in boat construction, The coastal variety of Douglas Fir grows (within Canada) exclusively in BC.*



fig. 43 The Empress Boat Co.

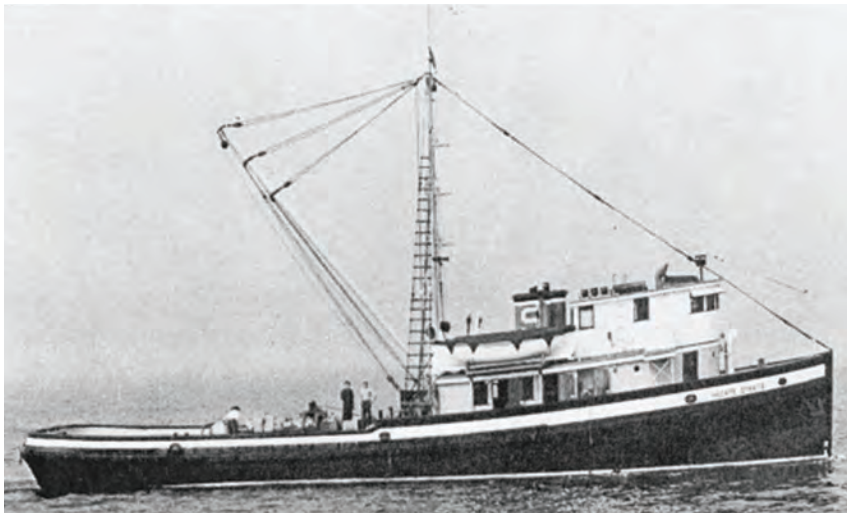


fig. 44 The vessel Hecate Straits (I)



fig. 45 Final full scale mock ups



*fig. 46*

*Faculty Andrew Reesor and Kirsten  
White critiquing my mock ups*

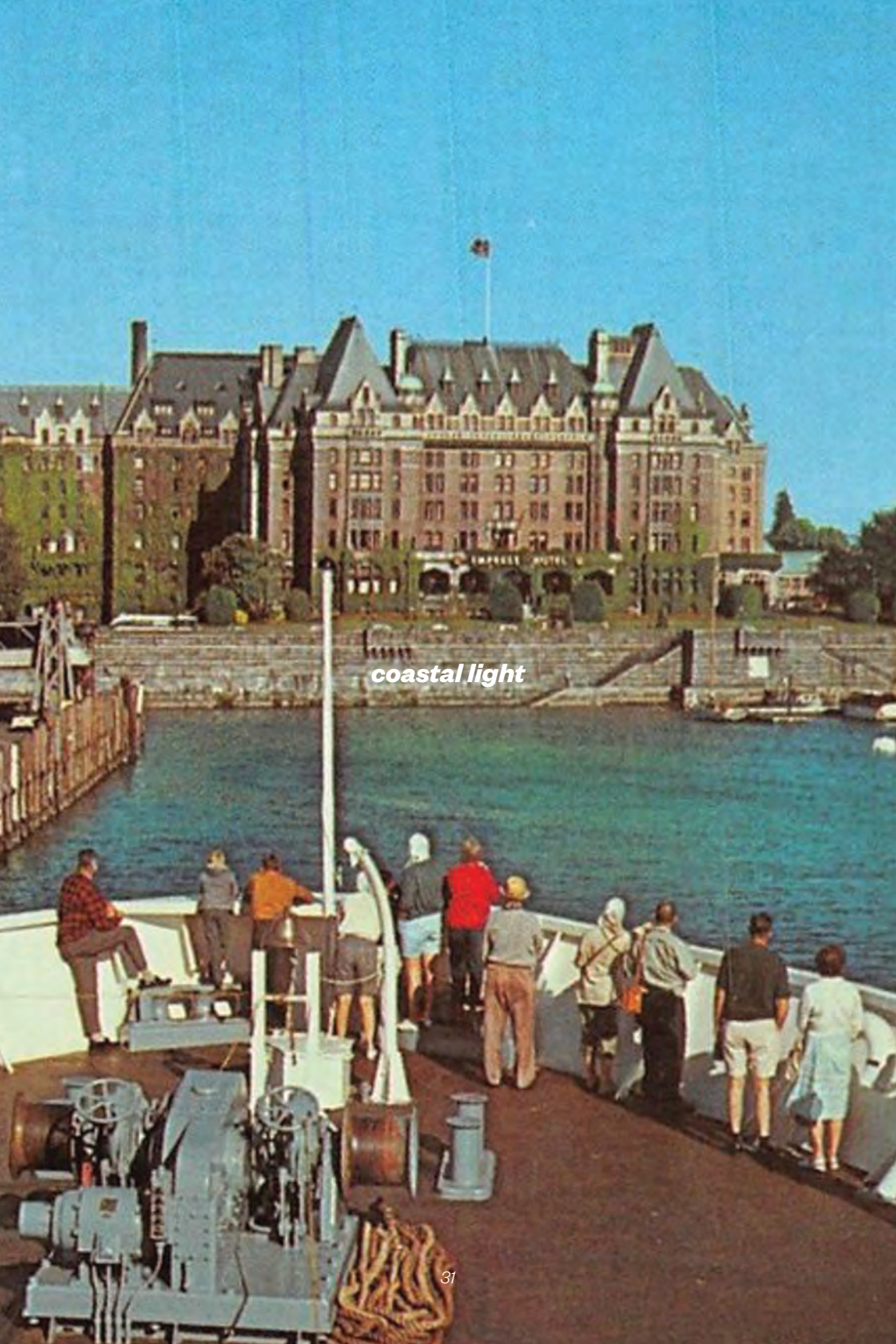


*fig. 47*

*Classmates Daniel Mercier (left) and Joel Galenkamp (middle)  
discussing and testing ergonomics*



**CAUSEWAY**



*coastal light*

## **DESIGN PARAMETERS**

**The mast;** *the thick tall member that houses the LED strip. The light features a secondary mast that helps support the Dacron sailcloth diffuser.*

**The lines;** *the thin connecting dowels.*

**The anchor;** *the anchor is weighted with a 2.5 pound weight to ground the light and prevent toppling.*

**The lumber yard skiff;** *while the seat of the chair featured as more of a planer element for edge details, the ends of the dowels and taper of the anchor got their form through the Lumber Yard Skiff*

**General boat craftsmanship;** *the contrasting thickness of the dowel members reference not just the lines of a boat, but this balance of durable where needed and delicate where allowed.*

**The sail;** *the Dacron Sailcloth is exactly that, the actual material that sails are made of.*



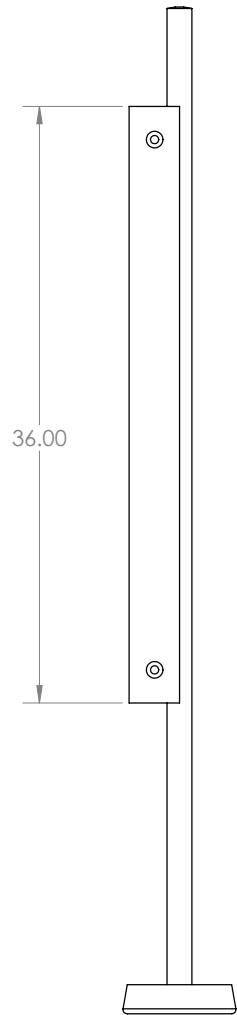
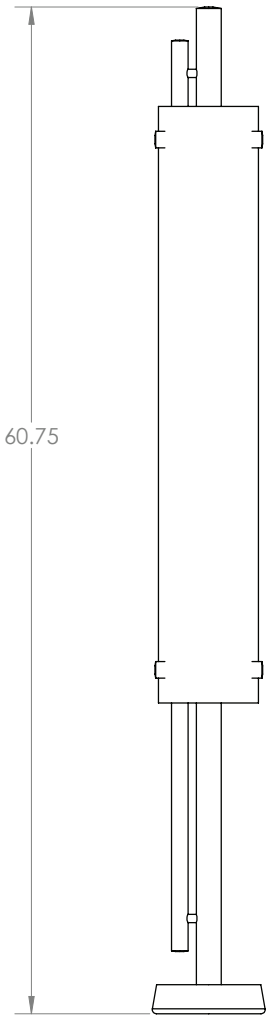


fig. 48 Orthographic drawing of the light

## LIGHT PROCESS

*Building the light started with breaking out all the individual parts and drilling the joinery with the stock still square. On the router table I cut a stopped groove so the light strip could sit flush with the wooden dowel. With the joinery done, I began to round over the square stock on the router table.*

*The next step was to drill the holes for the wiring through the lower third of the main mast. the light starts about two feet above the bottom of the mast and drilling the hole proved to be a bit of a challenge. First I started the hole on the slot mortiser to drill a perfectly straight and centred hole in the base. The drill bits for the slot mortiser only extend a few inches so the rest was done with a handheld drill. On the first attempt, the drillbit loosened off while in the mast and, like sunken treasure, buried itself deep inside the wood unable to be removed. I had to remake the piece.*

*The main mast is tenoned into the base. I created the tenon by spinning the piece over a dado blade.*



fig. 49 Mast set up on the slot mortiser



fig. 50 A sunken treasure, a drill bit dislodged and embedded in the mast



fig. 51 Setting up the router table for round overs

*I cut the parts to length and dry fit them before taking them to the disk sander to shape a shallow 10 degree chamfer on the ends.*

*I laminated two boards for the base of the light and created a CNC file for a flip cut that would hollow out the bottom and make room for the driver and weighted plate. With that cut, I flipped the piece and ran a file that shaped the 10 degree angle on the base. I touched up the base with some hand tools, filing and smoothing out the tapered base.*

*With the parts all made, I assembled the pieces and realized the hole at the base of the groove for the light that connects with the hole for the wiring up the mast at a 90 degree angle. I had difficulty getting the wiring down through that turn and tried using the suction of the vacuum before going fishing with a piece of twine tied in a loop that I pushed down and hooked with a long thin piece of bent copper. I taped the wiring to the end of the twine and pulled it through with the copper rod.*



fig. 52 Dry fitting of the two masts

*With the wiring in place, I glued the light up and applied three coats of Osmo Clear before soldering the light strip to the wires, attaching the wires to the driver, the driver to the board, and the cord to the plug. Only shocked myself twice.*

*The final task for the light was to cut and attach the diffuser. The horizontal dowels that hold up the diffuser have a 3/8" turned tenon cut on the ends. The diffuser gets a 3/8" diameter hole drilled through it which allows it to slide on and is held in place with a cap, creating the illusion of a single piece of wood.*



fig. 53 Bottom of the light base on the CNC



fig. 54 Top of the light base on the CNC

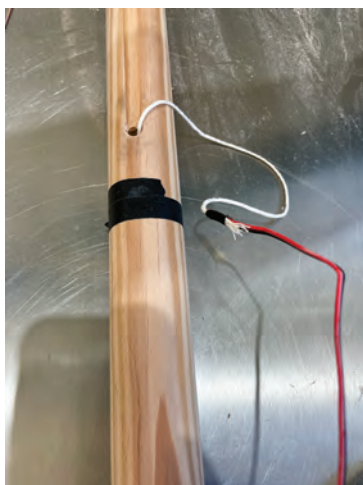
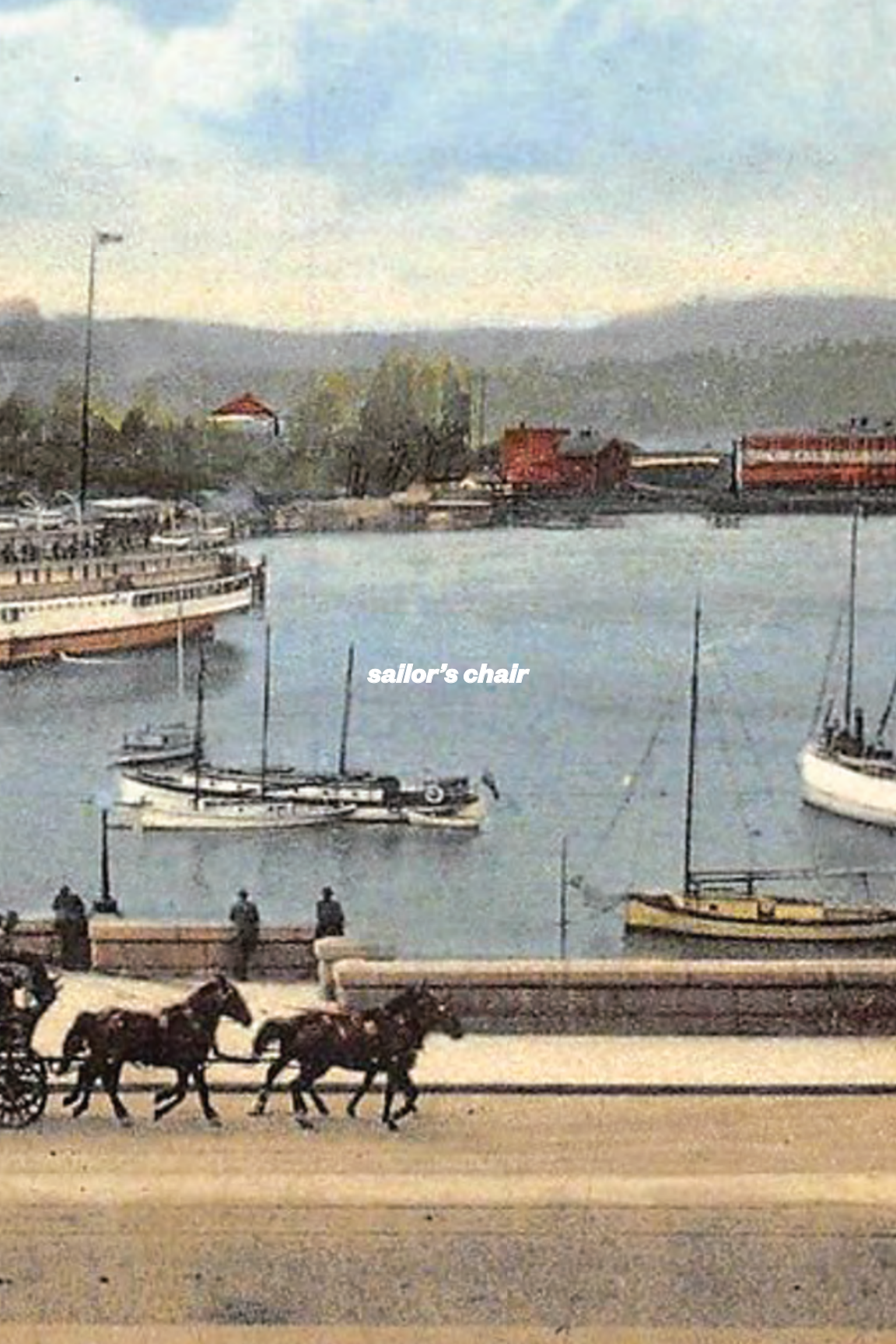


fig. 55 Fishing the wires through the mast



**CAUSEWAY**



*sailor's chair*

## **DESIGN PARAMETERS**

**The mast;** *the position of the backlegs in the chair mimic the positioning of the two masts in the light.*

**The lines;** *the thin rails connecting the back legs to the front.*

**The anchor;** *the base attached to the back legs. It acts as a weight to help counter the potential tippiness of the heavily tapered footprint.*

**The lumber yard skiff;** *edge detailing taken from the lumber yard skiff is visible in the final design. the 10 degree angles on the seat, dowel ends, and anchor reference the trapezoid shape of the stern of the boat and the subtle curve into the flat bottomed hull are seen in the seat edge details.*

**General boat craftsmanship;** *contrasting durable and delicate, fine edge shaping, and the subtle curves of a boats hull.*

**The seat;** *the natural off white cotton canvas references the cleanliness and typical upholstery of boats.*



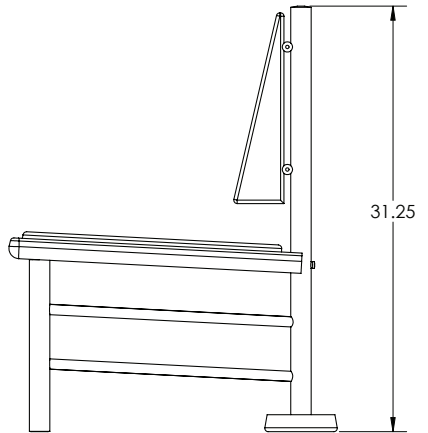
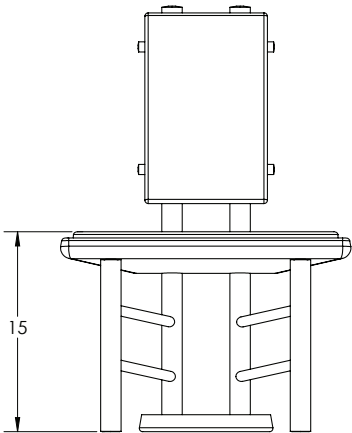
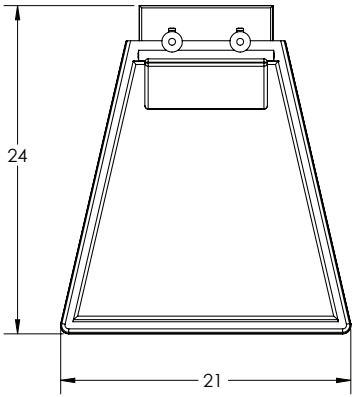


fig. 56 Orthographic drawing of the chair

## CHAIR PROCESS

*Building the chair started with creating the legs and rails. After rough milling the lumber and letting it air for a few days, I cut out the individual parts and began to pencil out the joinery.*

*Using the same construction methods as the chair, I drilled and cut the joinery in these pieces on the drill press and table saw before rounding them over on the router table. The front legs have a wedged tenon cut by spinning the piece over the table saw. They also have two holes drilled for rails that connect the front and back legs. While the rails come out at a heavy angle, I could drill the joinery holes at 90 degrees and simply turn the leg until the hole lines up with the rail that comes out of the back legs at a 13 degree angle. The back legs rail mortises are set at 13 degrees out and 3 degrees up to match the subtle 3 degree seat angle. The back legs also have essentially a half lap backrest rail where I drilled into the very edge of the back leg with a scrap piece clamped to it to avoid tear out. Finally, they have a 3 degree dado groove cut for the back of the seat to slot into.*



fig. 57 Drilling holes for the back rest rails



fig. 58 Chair parts turned with joinery



fig. 59 *Birds eye of joinery cut in the legs*

*I cut the anchor out of a single piece of wood with the same 10 degree angles on all sides before drilling the holes for the back legs to sit in.*

*Next came the seat. I was originally planning for a solid wood seat but moved to a veneered frame and panel construction due to worry of wood movement effecting the upholstery that sits within. I jointed some vertical grain Douglas Fir veneer and glued it onto both sides of a piece of 3/4" thick plywood. I cut the seat panel to size on the panel saw and moved onto creating the solid wood edging. Using the domino machine, I cut joinery for the seat frame and panel and glued it up. At this point, I had the chair dry fit and everything coming together. The next step was upholstery.*



fig. 61 Jointed veneer ready to be glued



fig. 62 Seat panel and solid wood edging



fig. 60 Drilling holes in the anchor



fig. 63 Chair and light parts on my bench



fig. 64 *Myself, gluing up the chair*



fig. 65 *Templates and fabric being cut*



fig. 66 *Paper templates and fabric cut to size*

*My studiomate and friend Joel Galenkamp was doing upholstery for his thesis as well, and through his connections of working at Hamilton Craft Studios we were able to get a crash course in sewing and upholstery from one of the founders, Dayna Gedney. I had picked out a clean, lightly textured and speckled thick off white canvas a few weeks prior at Affordable Textiles in Toronto and Joel purchased foam for us through a shop in Hamilton. Dayna showed us how to template the upholstered pieces with a seam allowance first onto paper, and then use that paper as the template to cut material out of scrap canvas to test the dimensions, fit, and our sewing skills. Both the seat pad and backrest are made with a 1/4" plywood backing, the foam, a layer of cotton batting, and the fabric. After doing a few test cushions and iterations, I sewed the real piece with a combination of a sewing machine and hand sewing. The seat pad is placed within the frame and screwed in from the underside of the seat. I screwed through the backrest rails into the upholstery, and the screws are hidden by being positioned where the back legs cover them.*

*The chair is finished with three coats of Osmo Clear.*



fig. 67 *Spray adhesive on the foam and plywood*



fig. 68 *Test upholstery*

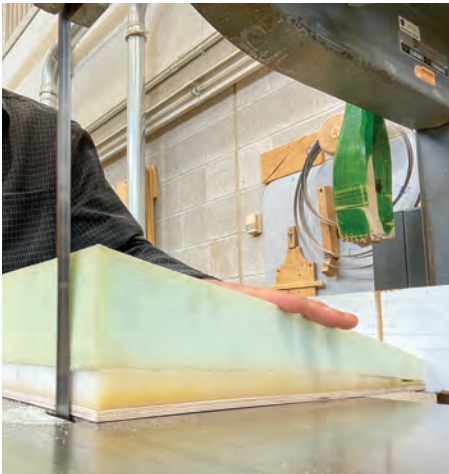


fig. 69 *Trimming the backrest on the bandsaw*

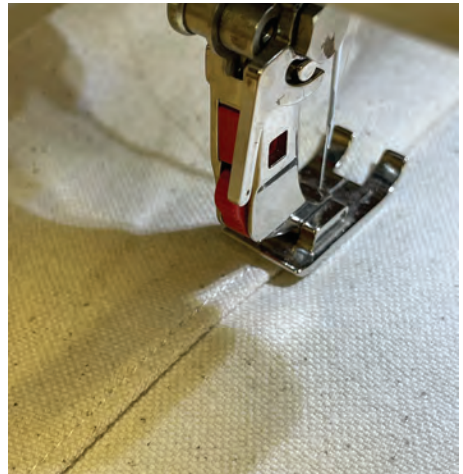


fig. 70 *Top stitching detailing*

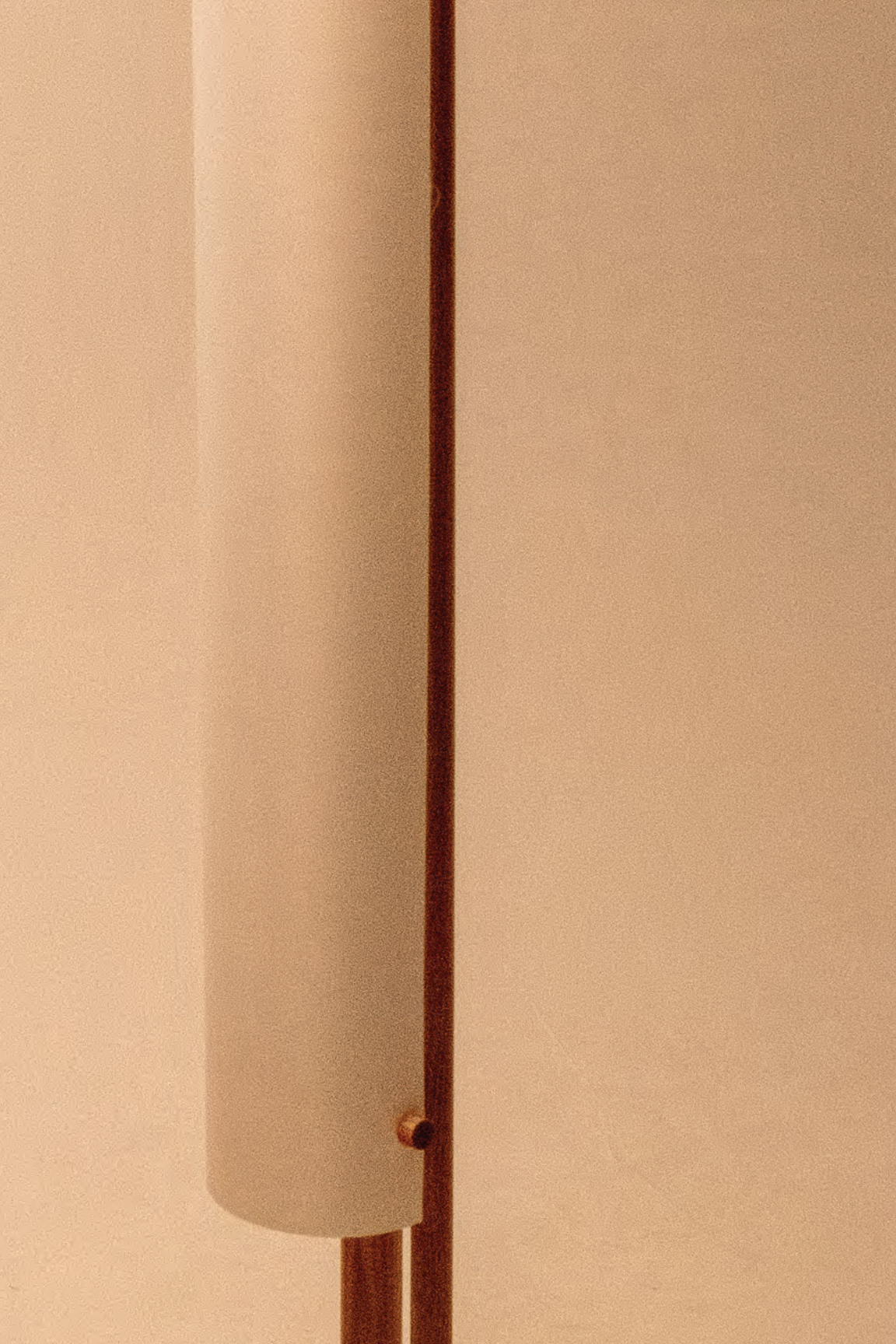


fig. 71 a (too tight) test of the seat pad

C A U S E W A Y  
*Coastal Light & Sailor's Chair*



















## **BIBLIOGRAPHY**

*Augaitis, D., Collier, A., & Rebick, S. (2020). Modern in the making: Post-war craft and design in British Columbia. Vancouver Art Gallery.*

*Lumsden, I.G. (2012). Molly Lamb Bobak, The Canadian Encyclopedia. Available at: <https://www.thecanadianencyclopedia.ca/en/article/molly-joan-bobak> (Accessed: March 5, 2023).*

*Mackie, J. (2017). Canada 150: Fred Herzog, Colourful Street Photographer. The Vancouver Sun. Available at <https://vancouversun.com/news/local-news/canada-150/canada-150-fred-herzog-colourful-street-photographer>(Accessed March 5, 2023).*

*Morrison, B. (2013). Axel Ebring Capsule. Studio Ceramics Canada. Available at <https://studioceramicscanada.com/axel-ebring/> (Accessed February 28, 2023).*

*Woodcock, G. (2008). Bertram Charles Binning. The Canadian Encyclopedia. Available at <https://www.thecanadianencyclopedia.ca/en/article/bertram-charles-binning> (Accessed February 28, 2023).*





## IMAGE APPENDIX

- fig. 1 Tracy Bawtinheimer. (1999) *My brother, dad, and I* canoeing. Sourced from personal archives.
- fig. 2 Tracy Bawtinheimer. (1999). *Family camping trip*. Sourced from personal archives.
- fig. 3 Photographer unknown. *The Causeway Marina in Victoria, BC.* (2006). Sourced from [marinas.com](http://marinas.com)
- fig. 4 Ruth Killam. (1949). *Does Your House Fit You?* Sourced from the Community Arts Council of Vancouver.
- fig. 5 B.C. Binning. (1956). *Fairweather Signals*. Sourced from Equinox Gallery.
- fig. 6 Molly Lamb. (1942). *Molly Lamb Enters the Army, November 22*. Sourced from Art Canada Institute.
- fig. 7 Axel Ebring's *Notch Hill BC signature* (n.d.). Sourced from Studio Ceramics Canada.
- fig. 8 Axel Ebring in his Vernon studio (1943). Sourced from *Modern in the Making: Post War Craft and Design in British Columbia* (2020)
- fig. 9 Fred Herzog. (1968). *Man With Bandage*. Sourced from the Laurence Miller Gallery.
- fig. 10 Fred Herzog. (1964). *Boat Scrapers*. Sourced from the Laurence Miller Gallery.
- fig. 11 Ian Bawtinheimer. (2023). *Layered fibre glass with resin*.
- fig. 12 Ian Bawtinheimer. (2022). *Dyed canvas colour samples*.
- fig. 13 Ian Bawtinheimer. (2022). *Paper died with wood stain*.
- fig. 14 Ian Bawtinheimer. (2022). *Cheesecloth fabric-mache with resin*.
- fig. 15 Ian Bawtinheimer. (2022). *Synthetic mesh fabric-mache with glue*.
- fig. 16 Ian Bawtinheimer. (2022). *Cheese cloth fabric-mache form ideation*.
- fig. 15 Ian Bawtinheimer. (2022). *Synthetic fabric-mache with glue*.
- fig. 16 Ian Bawtinheimer. (2022). *Cheese cloth fabric-mache form idea*.
- fig. 17 Ian Bawtinheimer. (2022). *Material samples; leather, canvas, brass, Douglas Fir, Western Red Cedar, Ripstop*.
- fig. 18 Ian Bawtinheimer. (2022/2023). *Ideation sketches; ink on paper*.
- fig. 19 Ian Bawtinheimer. (2022). *Light model 1; Douglas Fir, Canvas, String, Copper*.
- fig. 20 Ian Bawtinheimer. (2022). *Light model 2; Cedar, Pine, Paper, Copper, String*.
- fig. 21 Ian Bawtinheimer. (2022). *Light model 3; Pine, Waxed Canvas, Copper, String*.
- fig. 22 Ian Bawtinheimer. (2022). *Light model 4; Pine, Canvas*.
- fig. 23 Ian Bawtinheimer. (2022). *Light model 5; Pine, Canvas, Copper, String*.
- fig. 24 Ian Bawtinheimer. (2022). *Light model 6; Pine, Canvas*.
- fig. 25 Ian Bawtinheimer. (2022). *Chair model 1; Pine, Canvas*.
- fig. 26 Ian Bawtinheimer. (2022). *Chair model 2; Pine, Canvas, Pencil*.
- fig. 27 Ian Bawtinheimer. (2022). *Chair model 3; Birch Dowel, Canvas*.
- fig. 28 Ian Bawtinheimer. (2022). *Chair model 4; Pine, Waxed Canvas*.
- fig. 29 Ian Bawtinheimer. (2022). *Chair model 5; Pine, Canvas*.
- fig. 30 Ian Bawtinheimer. (2022). *Chair model 6; Pine, Birch Dowel, Wiggleboard, Foam, Canvas, Copper*.
- fig. 31 Ian Bawtinheimer. (2022). *Table model 1; Pine, Birch Dowel, Copper*.
- fig. 32 Ian Bawtinheimer. (2022). *Table model 2; Douglas Fir, Birch Dowel, Copper, Canvas*.

- fig. 33 *Ian Bawtinheimer. (2022). Table model 3; Douglas Fir, Birch Dowel.*
- fig. 34 *Ian Bawtinheimer. (2022). Table model 4; Pine, Dyed Canvas, String.*
- fig. 35 *Ian Bawtinheimer. (2022). Table model 5; Pine, Leather, String..*
- fig. 36 *Ian Bawtinheimer. (2022). Table model 6; Pine, Canvas, String.*
- fig. 37 *Ian Bawtinheimer. (2022). Full scale mock up of potential backrest detail.*
- fig. 38 *Ian Bawtinheimer. (2022). Full scale mock up of potential fabric seat to leg joinery.*
- fig. 39 *Ian Bawtinheimer. (2022). Final full scale light mock up for the fall critique.*
- fig. 40 *Ian Bawtinheimer. (2022). Final full scale table/cabinet mock up for the fall critique.*
- fig. 41 *Ian Bawtinheimer. (2022). Final full scale chair mock up for the fall critique.*
- fig. 42 *Old Wharf Dory Co. (2008). The rear view of a lumber yard skiff boat mid build. Sourced from Small Boats Magazine.*
- fig. 43 *S. P. Hanna. (1935). The Empress Boat Co shed on the Victoria Waterfront. Sourced from the Robert Hanna Collection.*
- fig. 44 *S. C. Heal. (1943). The sailing vessel Hecate Straits (I) built by Victoria Motor Boat & Repair Works LTD. Sourced from the Virtual Maritime Museum of Western North America.*
- fig. 45 *Ian Bawtinheimer (2023). Final full scale mock ups.*
- fig. 46 *Madi Knott. (2023) Faculty Andrew Reesor and Kirsten White critiquing my mock ups. Sourced from Madi Knott.*
- fig. 47 *Madi Knott. (2023). Classmates Daniel Mercier and Joel Galenkamp discussing and testing my mock ups. Sourced from Madi Knott.*
- fig. 48 *Ian Bawtinheimer. (2023). Digital orthographic drawings of the light.*
- fig. 49 *Ian Bawtinheimer. (2023). Drilling the start of the hole for the wiring in the light.*
- fig. 50 *Ian Bawtinheimer. (2023). Dislodged and embedded drillbit in the mast.*
- fig. 51 *Ian Bawtinheimer. (2023). Setting up on the router table to round over parts.*
- fig. 52 *Ian Bawtinheimer. (2023). Dry fitting the two masts.*
- fig. 53 *Ian Bawtinheimer. (2023). Dishing out the bottom of the light base on the CNC.*
- fig. 54 *Ian Bawtinheimer. (2023). Tapering the sides of the light base on the CNC.*
- fig. 55 *Ian Bawtinheimer. (2023). Fishing the wires through the mast.*
- fig. 56 *Ian Bawtinheimer. (2023). Digital orthographic drawings of the chair.*
- fig. 57 *Ian Bawtinheimer. (2023). Drilling holes for the back rest rails.*
- fig. 58 *Ian Bawtinheimer. (2023). Chair parts turned after drilling and cutting joinery.*
- fig. 59 *Ian Bawtinheimer. (2023). Birds eye view of the chair legs with joinery cut.*
- fig. 60 *Ian Bawtinheimer. (2023). Drilling holes in the anchor.*
- fig. 61 *Ian Bawtinheimer. (2023). Jointed veneer ready to be glued.*
- fig. 62 *Ian Bawtinheimer. (2023). veneered seat panel with solid wood edging.*
- fig. 63 *Ian Bawtinheimer. (2023). Various chair and light parts being sanded.*
- fig. 64 *Flora May. (2023). Gluing up the chair. Sourced from Flora May.*
- fig. 65 *Ian Bawtinheimer. (2023). Custom paper templates being used to cut out fabric for the test upholstery.*
- fig. 66 *Ian Bawtinheimer. (2023). Paper templates and fabric cut to size.*
- fig. 67 *Ian Bawtinheimer. (2023). Spray adhesive on the plywood backing and foam of the seat.*
- fig. 68 *Ian Bawtinheimer. (2023). Upholstery samples and tests hanging in the sun of Hamilton Craft Studios.*
- fig. 69 *Ian Bawtinheimer. (2023). Trimming the backrest to size on the bandsaw.*
- fig. 70 *Ian Bawtinheimer. (2023). Top stitch detail on the upholstery.*
- fig. 71 *Ian Bawtinheimer. (2023). A too small upholstery sample.*



*thank you*

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