

# Fleetwood



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## Abstract

Fleetwood is a classical designed sofa. In addition to the smooth rounded wooden sections, the seat is designed with the objective to use a maximum of space and volume it's occupying. Metal and wood, angles and curves, plain and colored surfaces are weaving together with the main goal to find the connections between a sitting and a storage furniture.

A sofa is one of the largest pieces of furniture in a room and speaks volumes. My goal was to create a sofa rather than a storage furniture. This gives the project a chance to break new ground for usage in modern homes. I tried to include as many aspects of the problematic that could accrue in smaller apartments. Creating a piece of furniture is very much about solving a problem and meeting the human needs. A good sofa would be one that appears to be seamless in the space it occupies. The starting point of my degree project is a concept for storage of materials that we have around us. Everything from books, shoes, clothes and things that we have in our home.

**Keywords:** sofa, storage, simple handling, space, volume consumption.

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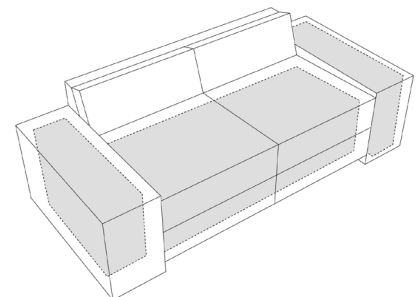
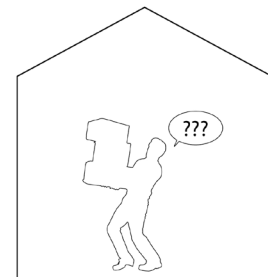
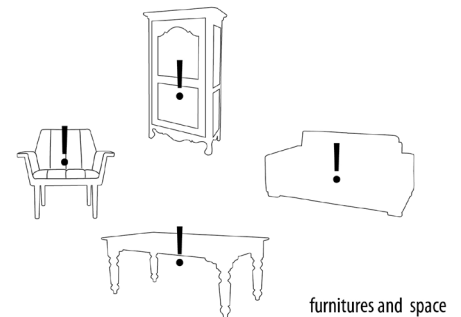
## Introduction

We often think of how we furnished our homes or what we purchased in terms of furniture and every day items throughout the years. When these thoughts come to mind, it occurs a range of conflicts between what we have around us and how much space it has taken in the room and the room in itself is something that must remain without any changes due to it is a rented apartment, and the changes that permitted are very small. So there is not much that remains to be changed in the apartment for a better feeling of the room. Normally this led to having a couple of questions that recurrence quite frequently. Questions such as, what is it we have around us in the room? What is it that we would like to change? How can we make these changes? Is there anything that can be changed in a simple way? Can these changes be something as simple as tilting of the furniture to change its appearance? Can we use this furniture after the modification or does this create new problems?

Creating a piece of furniture is very much about solving a problem and to meet human needs. The starting point of my degree project is a concept for storage of materials that we have around us. Everything from books, shoes, clothes and things that we have in our home.

Where a change of the accessibility can play an important role.

A storage environment or location can be identified as the location that you will store some things or items for a while or for a longer time. And most of the times it's a room, a cupboard, a desk, or just an old shoebox. We tend to think spontaneously that a storage is in a limited area in the room where a storage or placement possibility exists, but from my own opinion such is not always required an enclosed placement or area that will be put aside or covered. A storage environment or location can be identified as a space or a part of the room.



## Aim

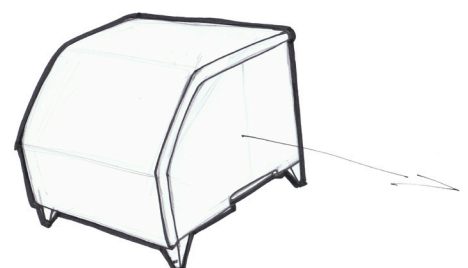
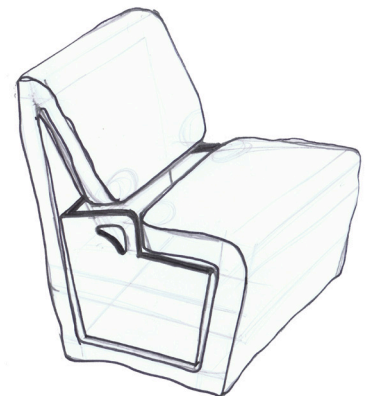
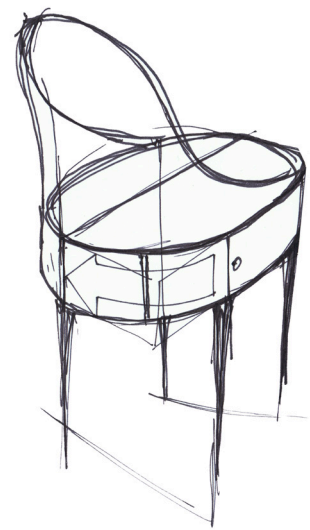
The project goal is to create a piece of furniture for the home. With a flexible and a good accessible placement of the storage space. In addition to creating a piece of furniture that can positively effect the home environment and serve a purpose by creating a storage possibility. I think it is important to get an understanding in how we design our homes and what we need to give it as additional element. For me to reach up to certain requirements and answers, I would like to address several questions and later in the project attempt to answer the questions by my own design. I want my furniture to offer good design that speaks pure and simple language, but it is also important that you feel comfortable and near to organize and reach all of its contents.

## Purpose

In my masters project I would like to find out if there is a new way of thinking or re-designing the required space we need or that is needed in a storage possibility or space in a furniture.

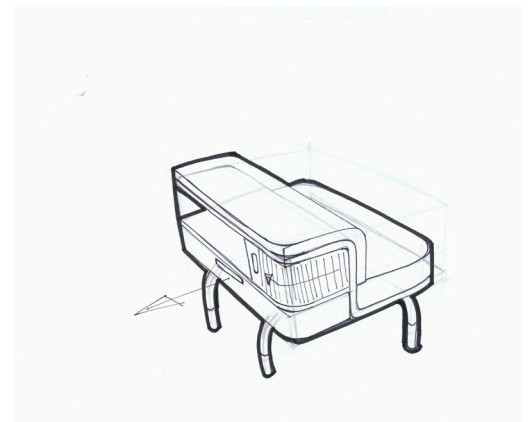
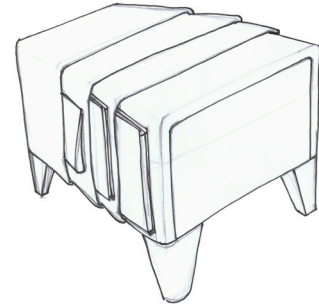
I would like to investigate the importance of the main factors that makes a room a ergonomically designed, and try to apply the requirements in my own design and directly find the comparison between a ergonomically designed room and a room that is not.

I would like to design a home furniture, a storage furniture that should be kept simple in who it's designed and with its simplicity should be easy to use. The reason why I would like to work with storage furniture is that I have friends and family who have lived for a longer time in smaller apartments. I would like to investigate why we feel that our apartments are getting smaller and if the reason is because of how we have furnished it.



## Question

- What is it we have around me in the room?
- What is it that we would like to change in the room?
- How can we make these changes?
- Is there anything that can be changed in a simple way?
- Can these changes be something as simple as tilting of the furniture to change its appearance?
- Can one use this furniture after the modification or does this create new problems?
- What is important in a working storage space?
- Why do we need some storage space more than others?
- What kind of visible, open and hidden storage space in the room are existing?
- How have one addressed these issues before?
- How would we like it to look in a storage area? (Structure/ predetermined placements of things).

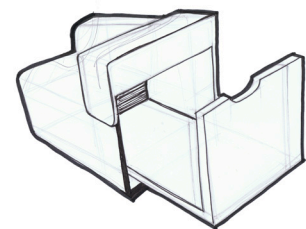


## Implementation/ Delimitations

Limitations had to be made with reference to that the needs for storage are very personal and the needs can differ widely from one situation to the other. Furthermore, there was not enough room for all solutions in the limited storage. In order to find a design that was appealing and interesting to study further. I started with making small models in cardboard, modeling clay and steel-wire.

Earlier in the project there were additionally limitations made on the sofa dimensions to a approximately 1700 mm in length and 900 mm in width, this in order to simplify the selection of how large it would be allowed to become. Working with the analysis and small design workshops has been on going continuously throughout the project and has not been placed in a separate timeframe.

On the basis of how the folded cardboard and the curved steel wire interacted with each other, I discovered the inspiration for the surfaces, space and gaps the sofa would be composed of. After this came the next step and that was to design the parts or rather determine how



the sofa would get divided. This to get a better understanding of how I could change the sofa without having the need to apply more material and components on the design that exists in the market today.

## Investigating with the models

By cutting and folding carton and bending of steel wire, I managed to create the changes and gaps that could design the sofa and give an appealing end result. Models have been studied so the following task in the process was computer generated CAD drawing and 3D models for further changes. The interaction between lines, material features and proportions has been studied on different levels and has been ongoing throughout the period. The computer-generated 3D model has been effective tool for changing the models in a time effective manner. An important aspect of the project was also to think about the needs, which I wanted to fulfill, with the reference to those issues, and needs that the storage space has to fulfill. Once these requirements were set, I realized that my project would be focused in the finding solutions for a sofa where the storage will have an important role in how the sofa will be design. Also to review the aesthetic design so the sofa could bring it's surrounding something positive. A sofa with solutions that allow the user to have some of their items and stuff available and be able to reach the items stored in the sofa in a convenient manner with a comfortable, easy motion. The process to create the final model of the sofa is made up of three different steps.

## Finding storage space

In the first part, I tried to create a furniture that has storage possibilities unseen for the eye but can still be present. This resulted in two types of storage with a large volume consuming and not as elegant in as the aim previously described. The outcome felt more like a storage furniture rather than a sofa. I learned a lot to from this part of the process. Even though the first outcome did not become the final shape for the sofa. To give a proposal based on solving the storage issue, I had to study the subject on a deeper level.

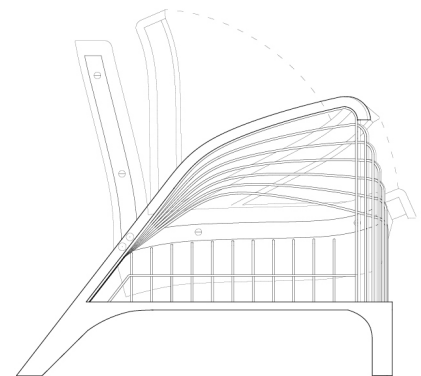
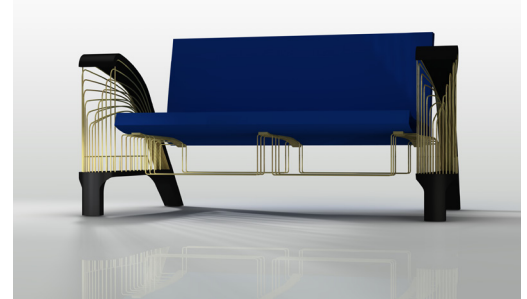


## Accessibility

In the second part, I tried to find a different way of looking at the individual needs, in order to that the sofa would become simple in its design and fulfill the requirements for storage. By this I mean how easily everything falls in place and to make it clear for the user on how it is used. Not restrictions, but rather that it is so simple and therefore it can be used in various ways. This resulted in a sofa that was divided into two storage units. The first part nearest to the user became a storage box that can be pulled out when needed. The other unit, which was embedded in the back part of the sofa, is a storage that can be taken out with a horizontal motion. Therefore creating a simpler closed storage, which are both difficult to test and expensive to produce. By studying the 3D model, new approaches appeared to further develop and refine the final design.

## Refine

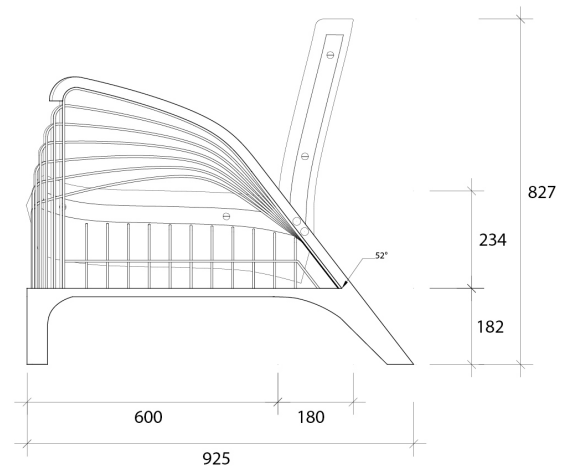
In the third and final stage, it was necessary to refine the earlier models and re-evaluate the decisions that had occurred. My working process has led to, that I constantly have worked out a proposal and then revalued and reworked them. As a result of these proposals the furniture storage area got a new splitting, in a way that has not been presented in my previous models. The sofa gives the opportunity to keep items separated, but still offers greater storage space for larger objects, such as a laptop. The two equal large storage surfaces are located on the underside of the sofa. By folding up the seat cushion you can reach easily the storage. It's convenient and does not require inconvenient movements that can be easily causing damages. But in order to try once again to reinforce the light, airy and upstanding design language, I decided to create these storage spaces on the inside of the furniture and not adding more to the form and design. This makes it possible to minimize the dimensions and also the material. The whole time I have tried to maintain a clear eco-conscious attitude and the human in the environment he finds himself in, is the main aspect to take in all contexts.





## Near end

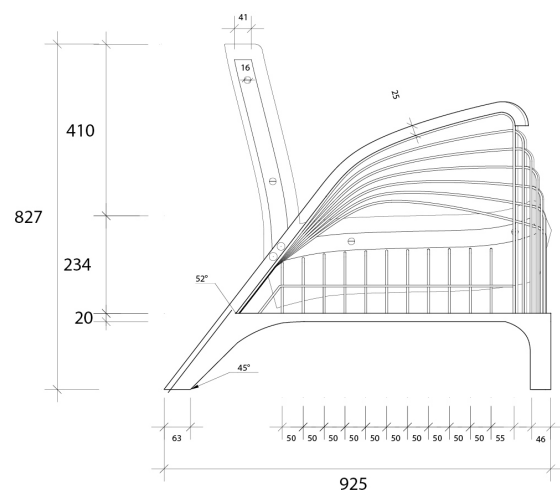
In order to access the things kept in the storage, while the other are visible in the sofa armrests, I had to keep in mind that the boxes which create the storage should move in a horizontal direction. Without being an obstacle for others things or be forced to move the items in front of sofa. Even in a normal sized home the space is limited, so that a box that goes beyond the sofa volume can not be used when a coffee table or footrest is something quite common. In previous suggestions, the solution was a steel structure that apparently is very beautiful. But would it be possible access the storage with a comfortable motion? This is where the beauty became the beast. The solution had to be a sliding cushion, which could also be used as a seat. The cushion can be pulled forward with an upward gradient, it is immersed and well integrated into the sofa seat surface. The changeovers between fixed and variable parts of the sofa are mostly hidden in order to achieve a beautiful and precise design. In order to prevent the cushion from falling off it's tighten with a plug, which moves freely in a slot along the direction. This makes the covers very surface-effective and offers an incredible overview of the storage, which is also evenly divided, this due to the entry that is accessible from above.



## Result

The workshop and studies I have done during the project has been fruitful and functioned as something of a test about my knowledge. The design has constantly seemed simple and hand on as I always worked with physical and computer generated models in scales ranging from 1:50 to 1:5. Working on a model to find the answers for the questions that has posed, has been the method I worked mostly with. I started very early to work with a sketch model in 1:50 scale. The model changed as the work progressed. Although the timing has not been an advantage when working with such large designs, I am nonetheless very pleased that I have tested and for the suggestions that I found by working in scale.

Since all changes in a chaotic situation, which I tried to analyze, the changes were seen as potential solutions and positive results.

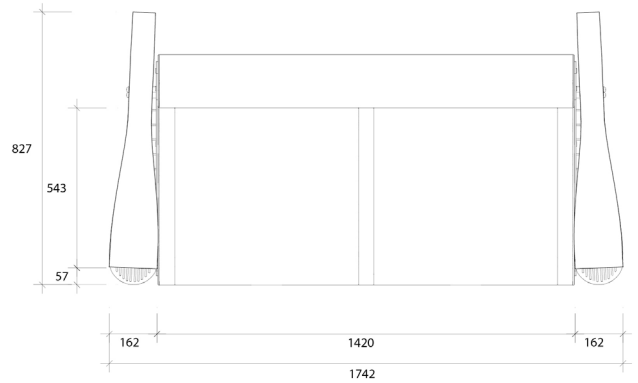


Analyzing and working with the issues, thoughts, ideas and especially to focus on the problem solving situations was mind challenging. To be able to modify the basic structure to that level I had in my expectations and questions was a joy for me. This resulted in a piece of furniture that retains its simplicity, in many ways but still extends slightly beyond the conventions through its design language. The intended user for this piece of furniture might be living in a smaller home with limited space but also a multiple children family with ambitions of having a sofa with storage.

As I mentioned, the work of computer-generated model have been a very important tool for the design process in this project, 3D modeling was a central part of the work, this due too that it would be an advantage to use my 3D modeling in my presentation for my project. I think that the furniture I have created fulfills several needs and requirements that are essential for a functioning sofa. Furthermore to provide simpler suggestions of storage functions. As for the aesthetic qualities I wish to address, it is naturally difficult to decide the outcome, because for the most of the time it's about the subjective opinion. If I can say that I personally like the result of this project and I think that the furniture is responding to numbers of specific targets and requirements established. The specific outcome is a sofa with 1700 mm in length and 900 mm in width, including two storage locations. The visual storage, which is located in the armrest and the other one that is hidden under the seating position.

## Evaluation

It appeared to be difficult to find clear guidelines for the outcome of the sofa, and whether it would be appealing for the user. A number of qualified guessing and common sense has been the basis for many of the choices I faced during the development which have been ongoing. In order that the sofa would function properly, I think my furniture design still has much that could be improved. What it has resulted in, leads me to the feeling that I have reached parts of the targets I had aimed for in my project. The schedules for the different parts were hard to follow, this because of the knowledge I had and what I brought with me to the starting point of



the project. The issues I have had and those I reached during the working process have constantly been changing. I also know that there are some remaining parts that have to be answered. A further development of the sofa would be to investigate in how it may be produced for a more sustainable manner. There would also be an interest to continue the development of the storage, but also including the aim to find new solutions that complements the design expressions and functions.

## Examination

My experience of the examination was very positive and I have also got a constructive feedback for my project. My opponent, Sami Kallio were well informed in the project which made his questions highly interesting and appropriate. It was clear that Sami has been working with furniture and the discussions we had about the furniture finished in a level that was worthy. My presentation as I mentioned earlier were not one of the best and I am aware that some parts were left out because of various reasons. I was criticized for this, which I definitely understand. I believe that 30 minutes are just the right amount of time for present a work of that size.

## Reflection of experience

There were times I experienced that it was difficult to move forward in the design process, this due to of the lack of experience. I have tried to find out in various directions the outcome of the sofa. Even design ideas that at first seemed interesting have been thrown around when they passed the filters for functionality, aesthetics and sustainable evaluation. I have always tried to return to the simplicity in the design, which always got in conflict with the issues I tried to address. This because of the design I have attempted to achieve does not always agree with the solutions which I have found. I think personally that the development of a very important issue were unfortunately affected, which was my target group of user. My target group of users should have been younger people living in tight accommodation with less room for furniture and not receiving a final product that is too expen-

sive to have. A costs that accrued when the design language of the sofa became a key part in the process.

Something which I believe now was a mistake that should have been studied more carefully during the process. When this issue between the design and the results I have wanted to achieve accrued, I were in a very deep level of the process and was forced to take the decision to proceed or to suspend my process with a U-turn. A simple piece of furniture may possibly be experienced as neutral. This has caused me to hesitate several times, but since I always tried to go back to the issues that accrue in the design process. I realized that I have to rely on solving some of the issues and try to find a design that serves both functionality, aesthetics and may be looked on as a strength through the project. In the beginning ideas and design resulted in into an expression that resembled other pieces of furniture that are already exist on the market. The fact that others have reached similar result confirms that I was not on the wrong track. But clearly that in addition to this I will always be having the desire to come up with an idea that is different from what is already tried and tested. When it came to the storage functions several of questions and ideas appeared throughout the entire project. I studied and made myself an impression of the common solutions for the storage that are available on the market. Neither one of these solutions occurred to me as true in taste.

I argued with the principle of how the storage appeared instead of how it appeared in design. That is, if the storage was solved as drawer unit, mounted on wheels or integrated as drawers in the base. There for this could not offer that many particularly solutions, for the transparency and close on hand design I would have liked, or for the storage that I wanted to fulfill. A clear tendency in this project as well as in several previous projects is that the process was made over and over again, due to this the orientation of project, was changed as well.

The ideas and visions that are available in the early stages are always based on the experiences we have when everything starts. When one immersed within one area and in different ways looking for new information, it is easy to

see that many of the early thoughts has given way for new ones. That is exactly what the design process is all about for me. The timetable was for various reasons, difficult to follow, but it was nevertheless useful to have as something to relate to.

The goal was originally to have some gaps in the process to taking a step back and look objectively at the project. Truly it has not been like that when the project have been going on constantly. Development of new ideas and the search for new information has affected one another constantly. Nothing seemed to stop without continuously renewing and was seen on with the new approaches in pace with the new discoveries that were made. Working with physical and computer generated models appears to be a method that suits me. It makes no difference how hard I sketch, fantasize or visuals an object or the sense of space, the answers always lead to another level in the process when achieved. I believe that the combination of working with information, sketches and physical experiments is my way towards a conclusion.

In this scenario, it has also resulted in a great deal of understanding of the furniture and materials, which it is based on. Based on this project, I've received a variety of small discoveries, which I will be taking with me into the next project. For some purposes, I had to manufacture my own ways and tools. I'm not a cabinet-maker, but I believe I became a better designer by learning practical aspects about the manufacturing and materials. Thereby I learn how to adjust the product to the real world and will gain knowledge that makes it easier to communicate with the potential user and producer.