

# THE GLASGOW SCHOOL OF ART

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**CHARLES AND HIS CHAIRS**

A study of his chairs

**KHEAN SHENG TEOH**

**SPECIAL SUBJECT**

**GLASGOW SCHOOL OF ART**

**MACKINTOSH SCHOOL OF ARCHITECTURE**

**DIPLOMA IN ARCHITECTURE**

**MARCH 2006**

## Preface

My years as a student at the Mackintosh School of Architecture have motivated me to do a piece of research regarding the founder of our school. Charles Rennie Mackintosh is a man of many talents and skills, whereby he was mostly well known as an architect and designer, of which he was particularly renowned for the chair designs.

Thus, I thought it would be interesting to see how Mackintosh managed to transform a simple chair into valuable pieces of art work, that is world renowned and a precedent for furniture design. Also, he was a man who used inspiration in whichever project he was undertaking or objects he was designing. In fact, I was intrigued to read that Mackintosh even designed a Chinese inspired chair for The Chinese Room for Miss Cranston's Ingram Street tea room.

This dissertation encompasses a set of drawings to illustrate the findings and understanding of Charles Rennie Mackintosh and his chairs. The purpose is to inform of the technical aspects as well as illustrate the process of structure and built form of the Mackintosh chairs. It describes the processes, measured drawing recordings and the analysis of his chairs.

### **Acknowledgements**

I would like to thank Mr Peter Trowles, the Glasgow School of Art curator for his time, <sup>ce</sup>patients, and knowledge for advising whilst arranging the time for me to measure up the chairs. This dissertation would not have been as successful without his guidance. I would also like to thank Mark Baines for his advice throughout this study.

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## **Introduction**

Charles Rennie Mackintosh was a Scottish architect and designer who was well known for his chaste, functional style especially in his chair design. He made a lasting impression to the 20<sup>th</sup> century architecture and interior design. Probably the greatest architect and designer Scotland has ever produced, he attempted to create a native style for the modern era. Mackintosh's decorative and graphic works are some of the finest manifestations of Art Nouveau while also being beautiful examples of early modernism. As a designer, Mackintosh was influenced in his early work by the English Arts and Crafts movement and, like the members of that school; he strove to integrate architectural and decorative elements in his work. Among his finest interiors were those executed for several turn-of-the-century Glasgow tea rooms. The sole survivor, the Willow Tea Room (1904), was restored and reopened in 1983. Many of his designs, often incorporating squares and stylized roses and other plant forms, were created in collaboration with his wife, Margaret Macdonald Mackintosh. Best known of his stark, elegant, and often beautifully detailed furniture designs are graceful wooden chairs with extremely high backs. Besides this, he also designed other furniture, stained glass, murals, and clocks. His work influenced such important 20th-century figures as Josef Hoffmann and Frank Lloyd Wright.

### **The Intention**

The aim of my study is to explore the story of his chairs as a chronological catalogue of his earliest chair until the last one. The intention is to see how his chairs are designed and put together, which will hopefully become a useful resource of relevant architectural information to the School and Academia.

By doing so, with the aid of technology, it will enable me to share this information with other people, especially collectors and enthusiasts. It will allow individuals the opportunity to understand, learn or even build from it. Another intention is try to understand Mackintosh's vision of how he constructed and assembled the design of his chairs.

## **The Proposal**

The approach was to use the computer as a tool to generate his chairs to enable us to visualize the design and its construction. The computer is a three dimensional creative medium, in which we can learn to manifest and communicate the design philosophies in a single and pure statement. This chosen form of technology also allowed for the manipulation of different forms of mediums such as shape, structure, and material. It therefore allows for investigation into the technical limitation for a better quality study.

Numerous chair designs of Mackintosh have been illustrated, for example in *"Charles Rennie Mackintosh; The Complete Furniture!"* By Roger Billcliffe. Unfortunately, it tells us minimal information about his chair, rather it is more of a general outline about his furniture and interiors relating to his architecture. Another published example is *"Charles Rennie Mackintosh as a Designer of Chairs"* By Filippo Alison. This book gives us plans and sectional drawings of the chairs, however there is not much information on the designs or technical details of its construction and the way it is put together.

## **The Outcome**

After much research and investigation, the number of chairs he produced is endless. (*Fig. 11 on p16*). Although it would be ideal to study all his chairs, it would be a difficult task due to time constraints. Mr Peter Trowes (*Curator of Mackintosh Furniture*), who has been extremely instrumental in my research, had wisely advised me to narrow down the number of chairs to study and investigate, and instead pick a number a key chairs to research. This allowed me to capture the more important features of these chairs, which in turn improved my research and detailed study of these chairs.

Through this study, it became more evident how difficult it would be to study all of his chairs. I found that by cataloguing his chairs into groups of 'specific differences and particular kinds' made the task easier and more manageable. As a matter of fact, most of his chairs can somehow be said to be of similar intent by design. As such, I've categorised 6 distinctive chairs, with 6 distinctive characteristics.

Consequently after much consideration, the idea was that it would be more appropriate to study these chairs in depth and detail, through the investigation of drawings.



## Background



*Fig. 1: Charles Rennie Mackintosh*

Born in Glasgow on the 7<sup>th</sup> June 1868, at the age of sixteen, Charles Rennie Mackintosh (*Fig. 1*) became an apprentice to the architect John Hutchinson and began to study art and design at evening classes at the Glasgow School of Art. It was there that he and Herbert MacNair, another apprentice, met the Macdonald sisters, Margaret and Frances.

'The Four', as they became known, were soon collaborating both artistically and romantically - Herbert married Frances and Margaret and Charles followed suit in 1900. Margaret, a gifted artist in her own right, worked with Mackintosh on many of his interior designs, contributing gesso panels and insets which were incorporated into many of his designs for furniture and fireplace surrounds.

He designed the interiors of a string of Glasgow Tearooms for patron and friend Catharine Cranston, and worked on a number of private houses, two of the most famously Hill House in Helensburg and Windyhill at Kilmacolm.

He is renowned for his great attention to detail, laying out the gardens at Windyhill and Hill House and designing everything down to the teaspoons, menus and the waitresses' uniforms at the Willow Tearoom.

Walter Blackie, the commissioner and owner of Hill House, testified to Mackintosh's broad view of his architectural duties –

*"every detail received his careful, I might say loving, attention: fireplaces, grates, fenders, fire-irons; inside walls were treated with a touch of stencilled ornament. Even the pantries and utilities cupboards were carefully designed to meet the housekeeper's needs".*

Mackintosh's obsessive need to design everything right down to the household clocks has made him a collector's delight: the heavily-lacquered chairs, iron lamps and other furnishings he designed for private houses and for the tearooms are now among the most sought-after of Mackintosh artefacts, for their beautiful proportions and finish, and because they are all either one-off designs or limited editions for specific locations.

To understand Charles Rennie Mackintosh, and ultimately to understand his work, it is necessary to look carefully at his view of the native tradition, which he valued so highly.

*"It was..... the architecture of our own country, just as much Scotch as we are ourselves – as indigenous to our country as our wild flowers, our family names, our customs or our political constitution."*

- Charles R. Mackintosh (Macleod, Robert; CRM Architect and Artist)

*Here in debt to Pugin and Ruskin, is the foundation of 'valid' style-its relation to the land and the society in which it grows. But Mackintosh had carefully qualified his interpretation of 'indigenous'. He pointed out that many of the features of the native style may well have originated elsewhere, but they had become native by 'absorption'.*

- Macleod, Robert (CRM Architect and Artist)

Charles Rennie Mackintosh was indeed a man who had made a bold statement in his living works. While no one at that point of time could appreciate his buildings, he was nevertheless later known as the pioneer of modern architecture and design. In spite of this, he received almost no local recognition of his work that he left Glasgow and passed on to London in total obscurity.

While the Greek and Rome architecture philosophy were in vogue that time, Mackintosh stood solidly with Scottish tradition, arguing that the former philosophies were unsuitable for the climate and needs of hilly Scotland. He held that a revival of the Scottish Baronial style, adapted to modern society would meet contemporary needs. His buildings clearly demonstrated this belief which he later influences in his furniture and chair design as a spatial importance in his architecture.

Mackintosh created buildings, so it is evident that the elegance and clarity of spatial concepts were reflected in his furniture and chairs, and needless to say skilful detailing. He felt that each design should work as a whole, combining all elements of design, spatial quality and detailing, to which each carefully contrived detail contributes.

As an architect, most of Mackintosh's early works incorporated the traditional styles. Thus, his love of the old is clearly illustrated in the way in which he handled the surface forms, with panels of foliage and little cartouches. They also demonstrate his developing tastes in line and imagery, which were later to become forms of obsessive individualism.

## The Chairs

Charles Rennie Mackintosh's talent was devoted to the production of what could be perhaps one of the most important architecture of the late nineteenth and early twentieth centuries. Hence any future study regarding the artist's works, in particular the drawings of interior furniture and his beautiful chairs, for which he was renowned for, should be catalogued for permanent reference.

The survey of drawings presented here is my attempt to present a record of that glowing period of Charles Rennie Mackintosh and his Chairs from years 1890-1910.

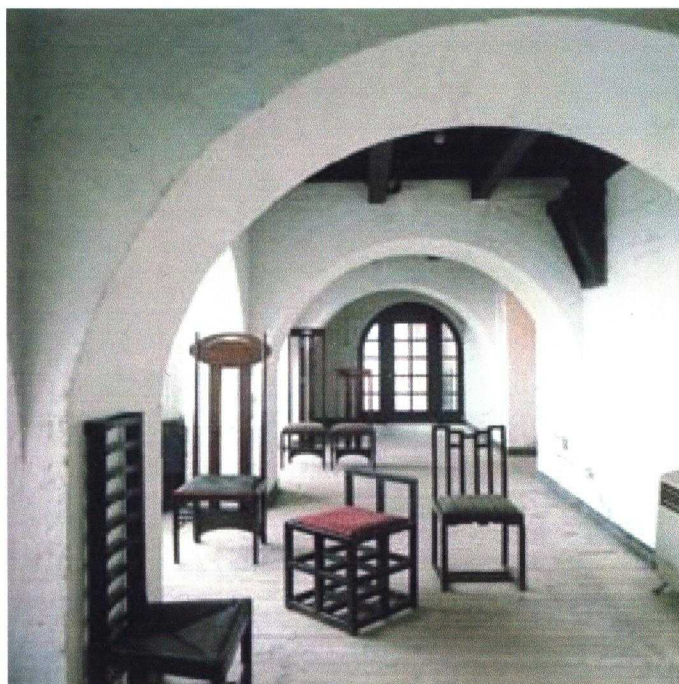


**Fig. 2 : Mackintosh Furniture Gallery in the Glasgow School of Art**

For this survey drawing, I studied in detail the original and actual chairs exhibited in the Mackintosh Furniture Gallery of the Glasgow School of Art (*Fig. 2*). It was my intention to investigate his chairs by physical analysis and measured drawings of as many chairs as possible. Subsequently I intended to create a 3d visualisation of his chairs using computer generation as a tool, which would enable me to express the details of the construction of chairs. In

doing so, I hope to uncover his personal thoughts and intentions, both logically and architecturally, leading to the design of his chairs.

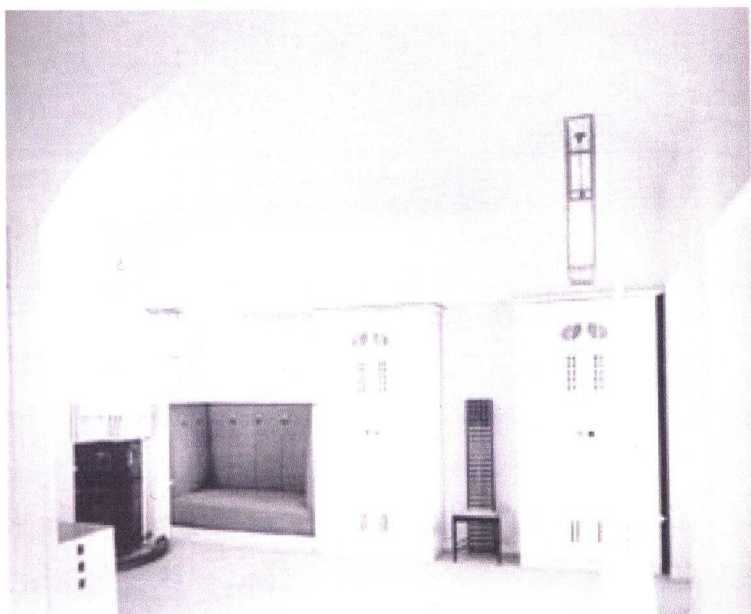
This is one of the best and most effective methods of rediscovering and expressing the Mackintosh Chairs in their original forms. This method of narration would also enable the unique quality of his chairs to be displayed in their accurate proportions and dimensions. In an artistic sense, it also exhibits the reflective play of masses and spaces, the tensions of the curved lines and the orthogonal geometrical rhythms, as well as the subtle combination of materials, carvings and colours in his weaving methods (*Fig 8*).



***Fig. 3 : A variety of high backed and low backed chairs designed by Mackintosh***

As a general guide, Mackintosh chairs falls into two main categories: the high backed and low backed chairs (*Fig. 3*). At first glance, they usually appear geometrically linear and thus, look equally uncomfortable and unconventional. His tall backed chairs are usually about 4 feet 5 inches high, which quite often has resulted in criticisms about its unpractical uses. Nevertheless, however unpractical they may be, but to anyone familiar with the architect's work in the minor arts especially with his use of drawings, water-colours and posters, they would not be incomprehensible.

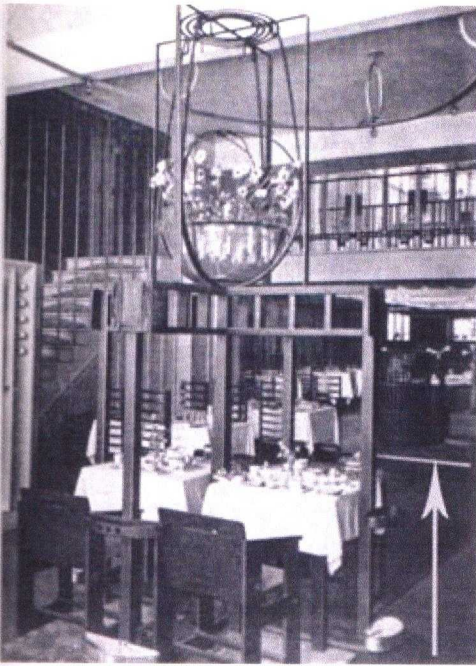
Mackintosh's high backed chairs are usually vast in height with oval insets and pierced patterns of squares and crescents in its motifs. They all tell the same story of growth, signifying upward surging vitality. Such chairs were always designed for a particular setting where vertical emphasis was required. When used slightly or in small groups, they provided invaluable decorative elements in a large, high room just like the Ladder back chair in the Hill House, Helensburgh (*Fig. 4*).



**Fig. 4: Ladderback chair in the private bedroom of the Hill house Helensburgh**

*"You will never earn to walk so long as there are props. The Props of art are – on the one hand – the slavish imitation of old work – no matter what date or from what country – and on the other hand the absurd and false idea –that there can be any living emotion expressed in work scientifically proportioned according to ancient principles –but clothed in the thin fantasy of the author's own fancy"*

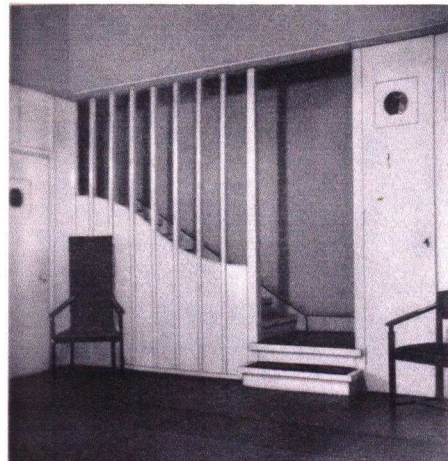
*- Mcleod, Robert (CRM Architect and Artist)*



**Fig. 5 : The Willow Tea Room and how the Willow Lattice Chair sits in (look at arrow at the side of picture).**

### **The Design**

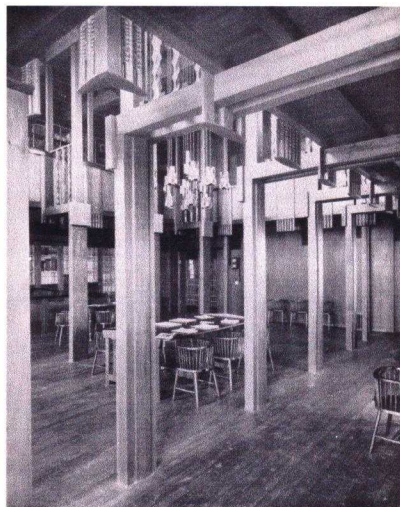
Mackintosh's tall and low backed chairs all had similar characteristic in designs that is they were all very linear and upright. These weren't chairs for slouching, that makes it uncomfortable. Besides this Mackintosh's chair can be said to stand out like a visual icon, like the Willow Tea Room chairs, the curved Lattice chair (*Fig. 5*). This chair is placed in a room where is for the waitress order-desk. Architecturally it divides two different spaces in the Willow Tea Room.



**Fig. 6 : Two armchair's in the Director's room of the Glasgow school of art.**

He has also designed two armchair for the Director's Room (*Fig. 6*). One tall back and one low back, the tall back chair stands at 1.3 meters high and was designed to be a significant piece of furniture. It not only complemented the design of the room but more importantly, it was almost as though it was created specially to reflect the importance of the person who was using it. This is why

Mackintosh might have used size as an alternate reason to reflect its situation. In contrast, small chairs were also designed for different circumstances like in the library of the Glasgow School of Art, The Windsor Chair (*Fig. 7*). These chairs were used by students at that time, which once again can be said to reflect the hierarchy of the person using it. This might appear to be more iconic and decorative than functional.



**Fig. 7: Library of the Glasgow school of Art where the Windsor Chair sits**

### **Seat Design**

Upholstery is usually used for the design of the seat. The types of upholstery used can be of three types: drop-in seats, lightly upholstered, and covered with linen or stout haircloth and even weaving methods. These types can be either be chequered in pattern or made of rattan (*Fig. 8*). Mackintosh also used rush-seats for main dining-room chairs in the Tea room but it was never his style to use deep, comfortable upholstery.



**Fig. 8: Material for Seating for the Ladderback Chair in the Willow Tea Room,(weaving methods**



**Fig. 9: Ladder Backrest, a type of backrest commonly used**



### **Construction**

During the years 1890-1910, the number Mackintosh designed chairs produced were innumerable. His chair material was often made of wood, either oak or pine; and the colours used were normally stained green or more usually, white and wax polished in colour. One of his more popular characteristic type of chair, on the backrests part are made from wood, either in a grid or in a type of ladder form (Fig. 9). They are all geometrical, where the elements of construction create rhythms of an almost musical nature. Mackintosh preferred to leave the structure simply bared and reduce the upholstery to a minimum. The chairs, of course, boldly proclaim their originality and most readily attract attention, as the parts of his chairs are somehow unconventional.



**Fig. 10 : Willow Tea Room Mass Produce Chairs.**

## **Constraints**

Many of Mackintosh's chairs can be said to have variations in terms of its quality and quantity, and this might be indicated by the different types of uses and purposes of his many chairs. The Hill House for example is an architecturally superior piece of work with its elaborate detailing of its furnishings, fittings and even the landscaping. As such, Mackintosh would have placed more attention and emphasis on creating a single, elaborately designed chair to suit the appropriate standards of Hill House, in contrast to the mass production of chairs like in a particular tea room setting (*Fig. 10*).

Technical limitations were some of the reasons affecting Mackintosh's chair designs. When chairs are produced in numbers, for example the Ladder back chairs for tea rooms, there is usually minimal attention given to the design of these chairs. As such, usually the first edition of these chairs would be more easily damaged and broken, due to lack of structural and constructive design. Thus the second edition of chairs would be brought in to replace them, and these chairs would be even simpler in design, less technical and also cheaper to make which features additional add-on to the first edition. Furthermore, as these working chairs were being produced and used in numbers, they had to be economical and fast to construct, which meant that the working chairs, such as those in tea rooms were not so elaborately detailed and designed.

The materials used by Mackintosh also depended on the type of chair he was designing. Just like the quality of chairs for the tea rooms, such as the Ladder back chair in the Willow Tea Room (*Fig.10*), the materials used were not of a substantial quality. These chairs were more practical, less decorative and may be even without any upholstery. Due to the practical nature of these tea room chairs, they would have a shorter life span in terms of its frequent usage. On the other hand, specially designed chairs such as the Armchair for the Director's room at the Glasgow School of Art, would be an iconic piece of furniture, and hence would be made of quality wood material and upholstery, with definite attention to its detailing.

Cost implications was possibly another factor contributing to his chair designs. The budget would probably determine the extent of designing or detailing of the chair, as well as the types of quality of the materials and upholstery, if any, to use. Individual pieces would undoubtedly reflect the cost of the chair, involving the materials and more importantly the unique design and detailing of that chair. Templates of mass produced pieces using lesser quality materials with less attention to the design would clearly be reflected in the price, as compared to the cost of a unique, individual piece.

The issue of ergonomics was never a factor in the late nineteenth century. However it is now an important and impending factor in the twenty first century. It can be said that most of Mackintosh's chair was not designed nor intended for maximum comfort, even though it must have been a factor to consider in designing his iconic chairs. However due to the geometrically vertical nature of his chairs and of its solid wood material, it would be almost impossible to achieve much comfort from his chairs. Nevertheless, it cannot be faulted that what Mackintosh lacked from the comfort of his chairs, he achieved much more in the intricate design and detailing of them.

*"There can be no doubt that in the majority of these designs Mackintosh was seeking primarily to create an aesthetic effect, to stimulate the observer spiritually rather than to provide for his bodily comfort"*

*- Howarth, Thomas (CRM and the Modern Movement)*

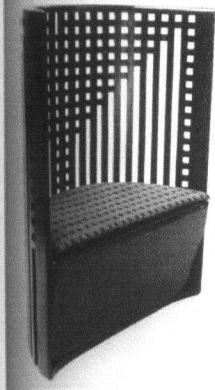
## **The Chairs Chosen**

I began by studying the actual chairs, and subsequently creating the drawings for the chairs in two dimensional form, that is in plan, section and elevation. Studying the actual chairs and then exploring them via the drawings gave me a good initial idea of how the chairs might have been put together. Following that, I then proceeded to explore the construction of the chairs in three dimensional form. Exploring the chairs in three dimensional form gave a more critical understanding of the construction of the chairs, in terms of its structure and composition. It also enabled the various forms, shapes, sizes, and the individual characteristics and qualities of the chairs to be compared and documented.

Mackintosh's chairs are often designed in a way which tells a particular story for each unique piece. It became apparent after studying the chronology of his chairs that each chair is always specially and specifically designed according its various uses and purposes. Therefore, the selection of his chairs that I will be focusing on can be categorised into six types from a chart consists of the Evolution on Mackintosh's chairs (*Fig.11 the next page, p16*). This is based from six main characteristics of his chairs that I have found. They are:-

- A single piece
- A mass produced piece
- A big piece
- A small piece
- A piece designed for a private commission
- A piece designed for a specific tea room

**A Chair Produced in a Single Piece (Chair 1):**  
**The Willow Tea Room Chair for waitress order seat (1904)**



***Fig. 12 : Curved lattice back chair  
(please refer to Presentation Drawings,  
Analytical Survey Notes and sketches on page 31-35)***

*Description: Curved lattice back chair. Material made of Ebonised Oak.*

*Dimensions: Height 1190mm x 940mm x 420mm wide at front edge and 420mm from front to back. The height of the seat is 395mm.*

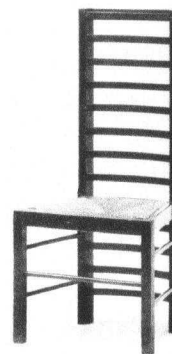
Mackintosh designed this chair for the Willow tea rooms for Miss Cranston in 1904. The back of this chair is as well designed as the front of the chair. This is a very individual piece that is likely to create interest and intrigue. This design in the curved back appears to be a stylized tree and a play in the name of the tearoom.

It is one of Mackintosh's most recognisable pieces of furniture. This Settle was designed for the cashier as an order desk at the Miss Cranston's Willow Tea Rooms in Sauchiehall Street, Glasgow. The stylised willow pattern on the back of the Settle not only picked up on the name of the tea-rooms it was designed for, but also created a screen from the cashier; thus offering the patrons of the tea-room some privacy to enjoy their beverage. It was placed in a position between the front area and the rear area, and served visually as a separating point, separating the white front saloon from the darker back one. The chair was used by the tea room supervisor who took orders from the waitresses and passed them to the basement kitchen by dropping coloured balls, coded to each dish on the menu, down a tube to the kitchen below.

This piece has a fragile design and the amount of work in the construction of this chair is considerable. This meant the production of this piece of furniture during that time would have probably have been limited to about a few only. The Chair is not semi-circular but can be said to be segmental. The design itself appears to be straight-forwardly based upon simple geometrical forms, but has other details, which become apparent on closer inspection. As mentioned earlier, the geometric chequer-work of the curved back forms the stylised pattern of a willow tree, whereby the lattice is made from short horizontal insets between the continuous verticals, as opposed to the use of alternate checking of the slat. It has an inbuilt storage on the front of the seat part. It projects beyond the two sides and then slopes gently backwards towards the bottom until it finishes within them. The base runs along this front panel, but at either end curves out to meet the side members.

**A Mass Produced Chair (Chair 2):**  
**Ladder back Chair for the Willow Tea Rooms, Glasgow (1903)**

**Fig. 13: Ladder back Chair**  
**(please refer to Presentation Drawings,**  
**Analytical Survey Notes and sketches on page 36-40)**



*Description: Material made of Ebonised Oak. Seats made of Rush.*

*Dimensions: Height 1048mm x 455mm wide at front edge and 412mm from front to back. The height of the seat is 422mm.*

Another of this design for Miss Cranston's Willow Tea Rooms is an altogether more modern and successful adaptation of his earlier ladder-back chairs including the one designed for Windy hill two years earlier.

The Willow ladder-back chair is still clearly based upon a traditional, vernacular design but has been simplified and rationalised to create a stylish icon for the early 20th century. This chair was designed to be used in various locations throughout the Willow Street Tea Rooms. It is Mackintosh's most successful version of the traditional ladderback chair. It is interesting to note that the one of the earliest chair thought to have been designed by Mackintosh was a ladderback designed for the bedroom of David Gauld in 1893 (*Fig.11*). He also used the same ladderback in 1901 (*Fig.11*) in Windyhill, Kilmacolm, for which he designed a second ladderback. However, unlike this present model, both of these earlier chairs are very traditional and show very little of Mackintosh's style.

One problem of the chair was its stability. However, after the chairs had been in use for a while, reinforcement was added to the back of each chair behind the ladder. Shortly after the chairs were introduced into the Willow Tea Rooms a small cross-piece of wood was fixed to the top of the uprights behind the

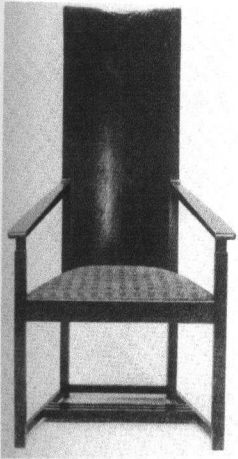
ladder, to hold the uprights position hidden by the final ladder rail. This prevented the ladder-back from twisting and guaranteed the chairs' stability.

This reinforcement was added to the chairs in use in the Tea Room and, consequently, all existing examples show this modification. There is no evidence to show that Mackintosh suggested or approved this modification. In fact, it appears that the clients very often repaired, reinforced and reproduced the furniture originally designed by Mackintosh without asking for his intervention or approval. Additionally, all the early photographs of the Tea Room show this chair before the addition of this reinforcement and it is obvious that such an element is different to Mackintosh's initial design. Consequently, this present reproduction is without this additional piece. The chair looks strong yet simple, with rear uprights and front legs of made rectangular and square section. The uprights are set slightly splayed and the bar which are again rectangular in section, are curved along their length and set into the leading edge of the uprights.



### **A Big Piece (Chair 3)**

#### **Armchair with High back for the Director's Room, Glasgow School of Art (1904)**



***Fig. 14: Armchair with high back  
(please refer to Presentation Drawings,  
Analytical Survey Notes and sketches on page 41-45)***

*Description: Material made of Oak, Stained dark*

*Dimensions: Height 1300mm x 680mm wide at front edge and 652mm from front to back. The height of the seat is 420mm.*

There were no records for this chair but it was used in the original Board Room, of the Director's Room (Fig. 6) which was eventually taken over as a studio. There was a large table which may have been designed for meetings for the Board of Governors, who rarely used the originals in the Board Room. It was designed with two high-backed armchairs and twelve low-backed armchairs.

A unique structural plan realized in stained oak upholstered seat intended to offer greater authenticity to the chair. The arm rests are tilted in the angle, making the awareness of sitting on the chair. It looks simple on the whole but details on the legs are exquisite, which bends in section while the seat is shaped in a wedge-liked geometry.

I would suggest that he designed the backrest using a two piece joint with a tongue and groove. Also judging by the relationship between the design and craftsman, he would have probably put the two faces of wood together rather than using just one piece, and connect it with a '+' junction wood piece, as it is difficult to bend the wood and create it as a half. This chair is big and

substantial with strong cross bracings that ties the base legs of the chairs together.

The seat is made from comfortable upholstery of the drop-in seats type and covered with linen.

#### **A Small Piece (Chair 4)**

#### **Windsor chair for the Library ,in the Glasgow School of Art (1910)**



**Fig. 15: Windsor Chair**  
**(please refer to Presentation Drawings,**  
**Analytical Survey Notes and sketches on page 46-51)**

*Description: Material made of varnished pine*

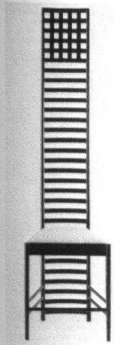
*Dimensions: Height 660mm x 435mm wide at front edge and 365mm from front to back. The height of the seat is 403mm.*

The Windsor Chair was originally design for the Dutch Kitchen (1906). Its design piece for this chair is rather small but elegant. The design looks rather fragile with no rails to support the seat, but a wood piece seat with legs holding it, a frame of spindles and curved arm support at the top. The Spindles of the frame are slightly tapered which is rather closed to each other that supports the backrest. The backrest currently is part of the arms which is metal bolted in 3 different segments to the wooden seat for more support added as reinforcement for the design.

Initially there were 3 timber spindles which was added on to the back rest but it was still very insecure, thus could not support one's weight at is original conditions. It shows a lack of strength as to consider this piece of chair very weak in support and that's why the bolted metal spindles were replaced in three different segments of the chair currently. The legs of the chair are spread slightly apart from the seat compare to the timber frame of the body. It is also braced at base, 2 by 2 of horizontal spindles at each side.

The chairs is said to be an unsuccessful functional piece. As it lacks of strength and support. It is more of a decorative piece when placed in the setting of the Library of the Glasgow School or Art at this moment.

**A Chair for a Private Commission (Chair 5)**  
**The Hill House Ladder Back Chair (1903)**



**Fig. 16: Ladder back Chair for the main-bedroom Hill House, Helensburgh (please refer to Presentation Drawings, Analytical Survey Notes and sketches on page 52-56)**

*Description: Material made of Ebonised Oak*

*Dimensions: Height 1405mm x 405mm wide at front edge and 335mm from front to back. The height of the seat is 420mm.*

Mackintosh regarded the space in and around furniture to be as important as the wood and upholstery. Originally painted white, Mackintosh's high, narrow Hill House chair was meant to be decorative and not to be actually sat on. It was designed in 1903 for the publisher Walter Blackie. The original still resides in the bedroom of the Hill House in Helensburgh. This piece was designed as a bedroom chair and is known as a piece of art and as a design statement rather than a functional chair.

This is perhaps one of Mackintosh most remarkable chair. It is a tall and bold structure, which appears superior, yet elegant at the same time. Its elements are simple but dynamic. The seat fans outwards, a bit like a truncated wedge that has its sharper end towards the backrest. It couldn't accommodate a large bottom and it would seem whoever sat on it would feel awkward and unable to relax due to the thin backrest shooting up behind you.

Underneath the seat, the construction is low and light, with fine stretchers acting out the tensile energies of support. The nimble backrest rises with a ladder pattern and ends at the top with a grid like icon. So the chair is in three parts, a base, a body and a head. This classical structure gives the chair its presence, its air of looking outwards - just

like a person - and addressing the space of the room. Along with the totemic formal presence, this Mackintosh chair is enhanced with an aura of high historical prestige.

The Hill House Ladder back chair has no real function other than decoration. It can be said to be a delicate design in which the chair stands on elliptical back legs with a series of ladder-rails linking them. The seats are too small while the joints are fairly weak to support anyone sitting on the chair.

**A Design chair for a Specific place in the Tea Room (Chair 6)**  
**Chair for the Chinese Room, Ingram Street Tea Rooms, Glasgow (1911)**



**Fig. 17: Chair for the Chinese Room  
(please refer to Presentation Drawings,  
Analytical Survey Notes and sketches on page 57-61)**

*Description: Material made of Ebonised pine*

*Dimensions: Height 832mm x 438mm wide at front edge and 407mm from front to back. The height of the seat is 409mm.*

In 1911, Mackintosh was commissioned by Catherine Cranston to redesign the gentlemen's tea room in her Ingram Street establishment. Mackintosh lined the walls with a blue painted cloth and used lattices and fretwork screens to create a Chinese feel to the room, and installed a pagoda-like canopy over the doorway.

The Chinese Room was Mackintosh's penultimate interior for the Ingram Street complex. The blue lattice screens which were either backed with rush painted in a contrasting pale blue or filled with strips of leaded mirrored glass or red or green plastic. Mackintosh linked the chairs to the room by replicating the Chinese-style detailing in the fretted back and at the base of the front and side rails to engage the furniture, including this oak chair with a blue seat to match the walls. This fretted back and side rails match the Chinese style motifs of that room. The chairs are painted following the woodwork in the Chinese room, of bright blue or red to complement the room.

The legs of the chair are linear which is connected like a square, when look from the side. The two back legs rises up to the body of the chair as the front leg stop at seat level. It consists of square sections legs that hold up and connected a separate piece of wood of the fretted rails on the back, front and two sides. The bottom part of the tip of the leg connects the sides of the back

leg and front leg. It is braced in the middle of the base of the chair. It gives maximum strength to the whole of the chair which can said to be quiet stable.

Overall the chair's purpose feel that is part of the Chinese Room in the Ingram Street Tea Room background as what it is design to do.

## Conclusion

It is a strange but enlightening feeling to contemplate a chair as if it were a piece of artwork. Mackintosh's chairs have left a lasting impression on me. His chairs bear his signature, and are in every sense unique, with each and every one having their own special characteristics.

A chair has always been mostly just a piece of furniture to me prior to this study of Mackintosh's chairs. Now I realise that a chair is no longer just an individual object but rather can be about an object in context. An object which encompasses form, structure, use of materials and individual characteristics, such as chairs of the great artist, Charles Rennie Mackintosh.

His chairs represent a decorative as well as a functional place in my mind. In his design of chairs, it is being thought of an integration of an interior space. It is as though one is in a space, by using the composition of the chair to try to create a unique spatial quality and to bring out an awareness of the interior space that surrounds you. From a macro to micro setting, just as from the setting of the room to the chair where the attention is been held to the micro details of the chair. Additionally the texture and tone of the interior enhances the space that surrounds it. The colour plays an important role, like in a white room the chair brings out a totally new experience. It can be perceived like a sculptural ornament for decorative purposes as compared to its uses in a conventional way.

Mackintosh seems to me, to have an articulated mind, because he is well versed in the uses of the different materials in his pursuit of the construction of a chair. His character seems to delve deep into details, where the joints are not necessarily made complex but simple and effective. His methods can be very economical; he does not like the complicated use of colours, structures and materials. His chair comes from the legacy of the Arts and Craft movement, as the design of his chairs being dexterity itself is impressive in its own right.



He uses the basic, fundamental joinery skills to create his chairs and in doing so creates his own identity and character. He makes it an enjoyment of putting different pieces together and by doing that it seems that the whole piece is being crafted out by a single piece of wood, but in actual fact it is being composed by many different components and techniques.

Mackintosh's chairs are not necessarily the most comfortable chairs around, nevertheless there is a feeling of being overwhelmed when you get to see his chairs or better yet experience sitting in one. Like his architecture, his chairs leave a lasting impression, from his clever use of materials, structure, and the details of proportion to its aesthetic qualities. I personally feel that Mackintosh's wonderful chairs are a true aesthetic expression of beauty.

**Presentation Drawings,  
Photographic Details,  
Analytical Survey Notes and sketches.**

**The Willow Tea Room Chair for waitress order desk (1904) :**  
**Curved Lattice Back Chair**

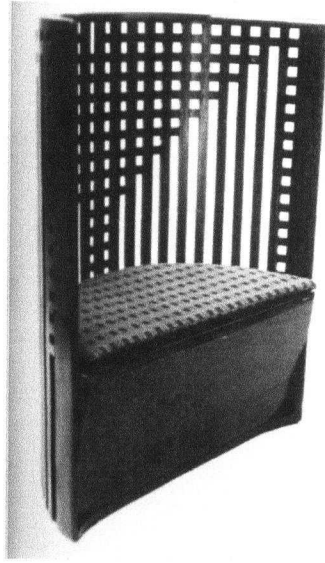
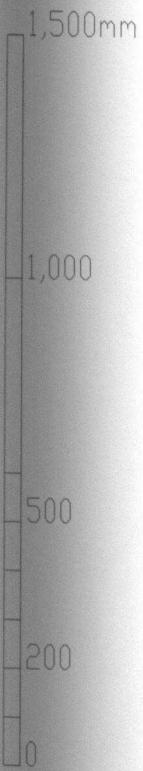
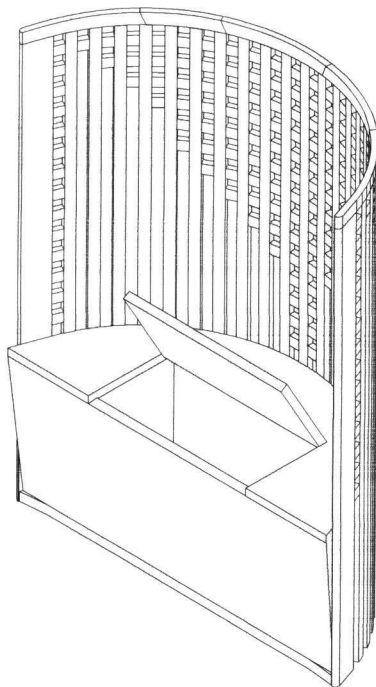


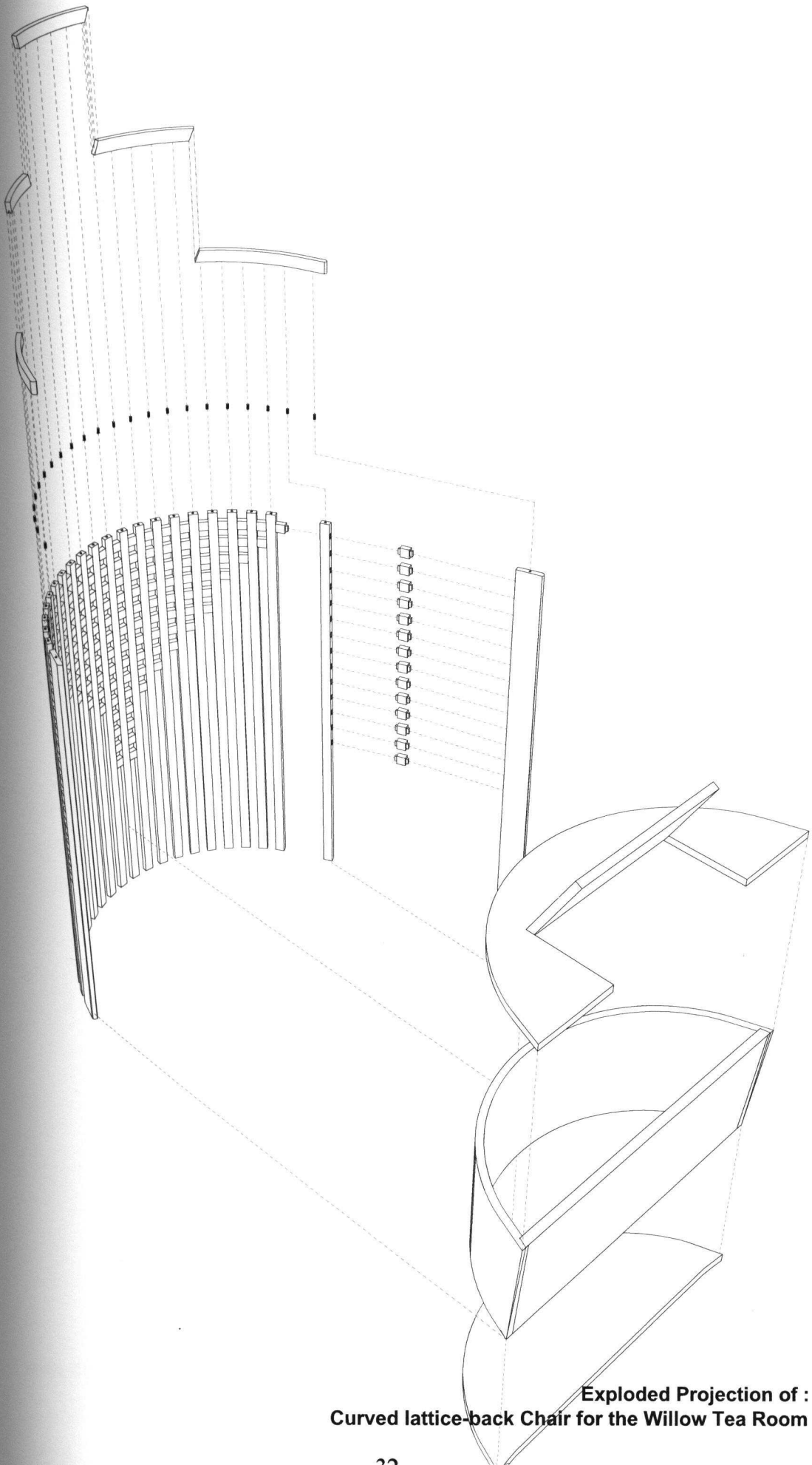
Image of Chair



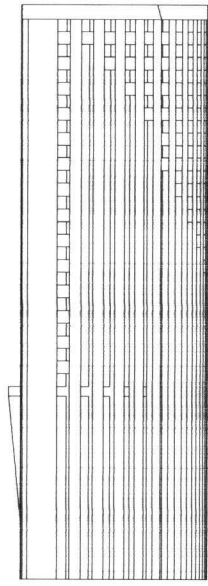
Axonometric view

Detail view

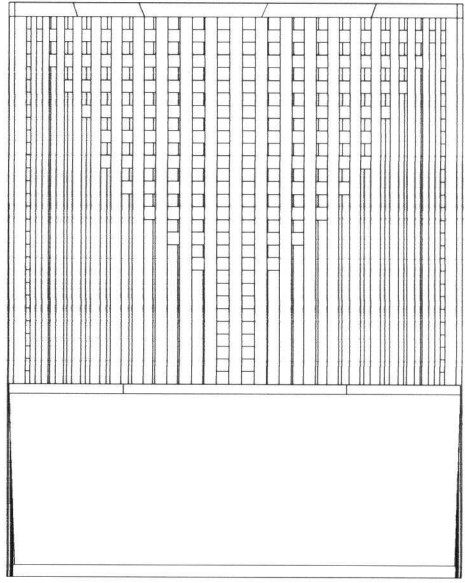




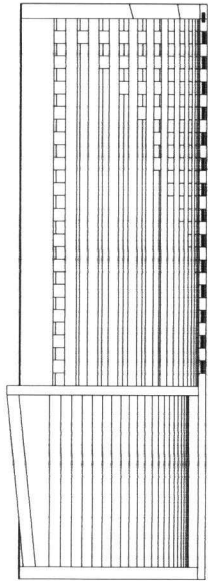
**Exploded Projection of :  
Curved lattice-back Chair for the Willow Tea Room**



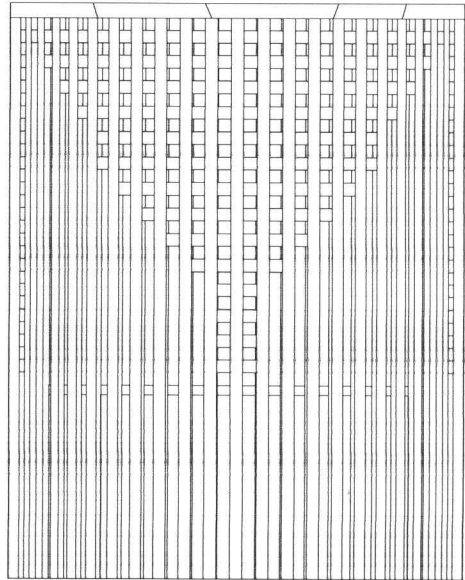
Side elevation



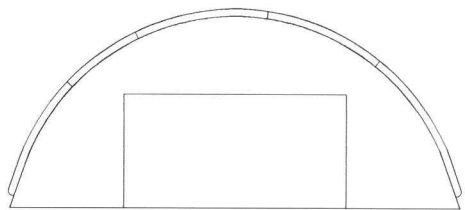
Front elevation



Section elevation



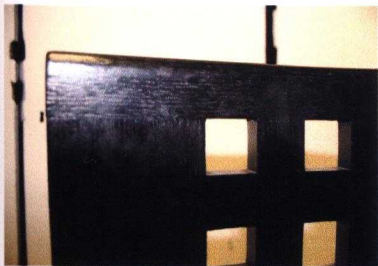
Back elevation



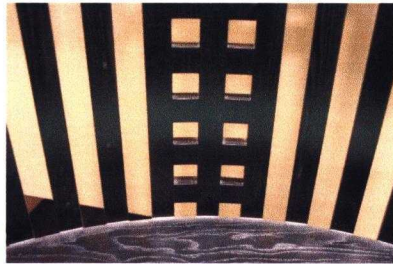
Plan at seat level

**Scale drawing, Willow Tea Room:  
Curved Lattice Back Chair**

**Curved Lattice Chair for the Willow Tea Room (Chair 1):- Presentation Drawings, Photographic Details, Analytical Survey Notes and sketches.**



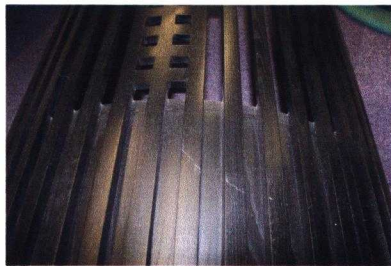
head of chair where the joints intersect



body of chair  
intersection of the middle squares



the seat  
inside the chair: openable door for storage



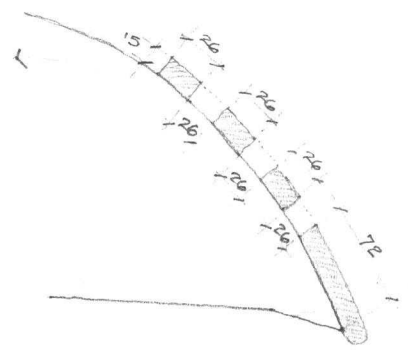
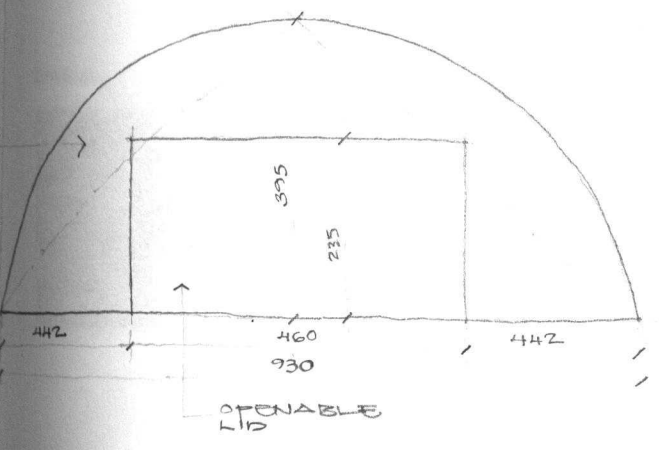
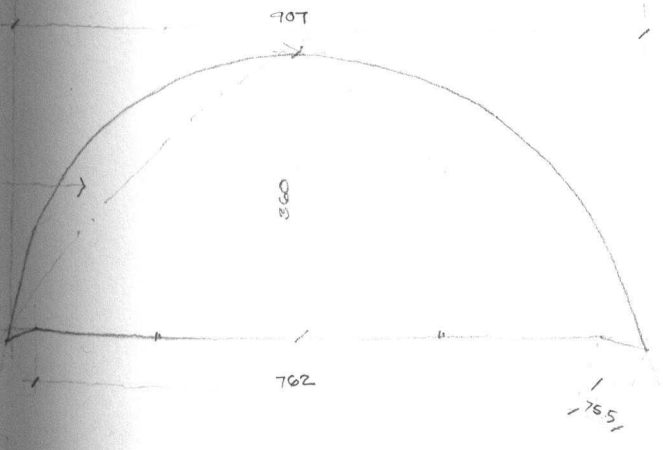
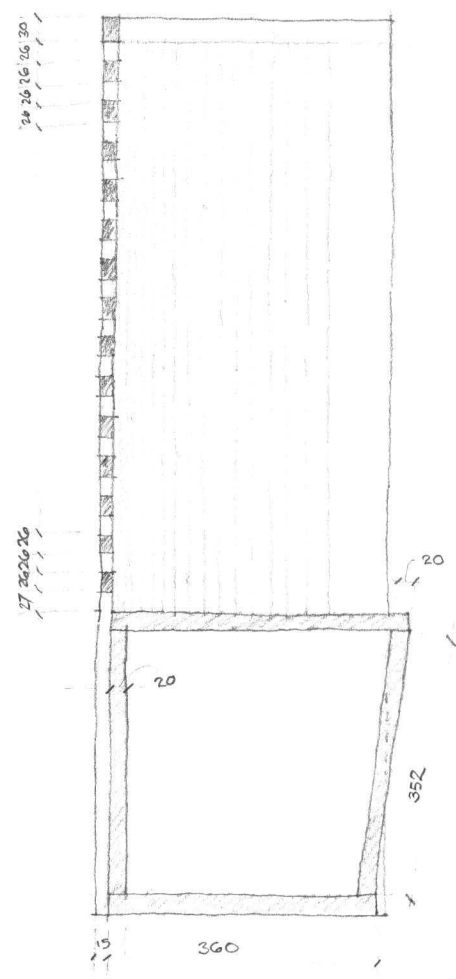
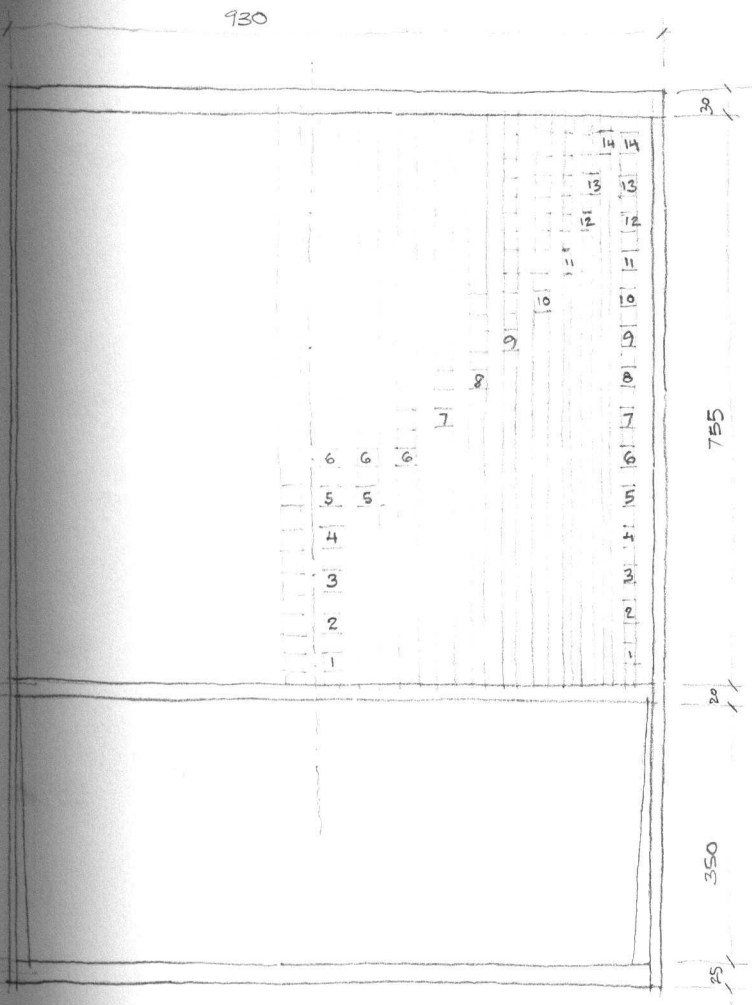
behind chair



detail of the curved lattice



where it touches the ground



***Ladderback chair for the Willow Tea Rooms, Glasgow (1903):  
Ladderback chair***

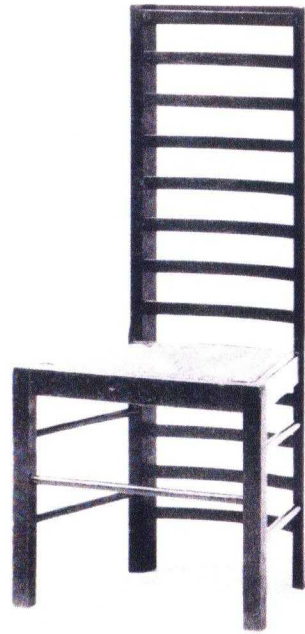
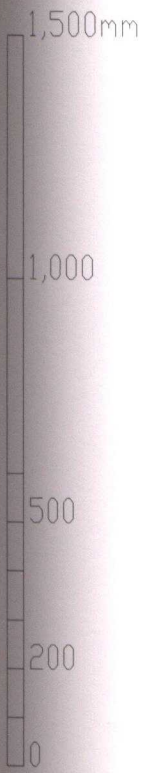
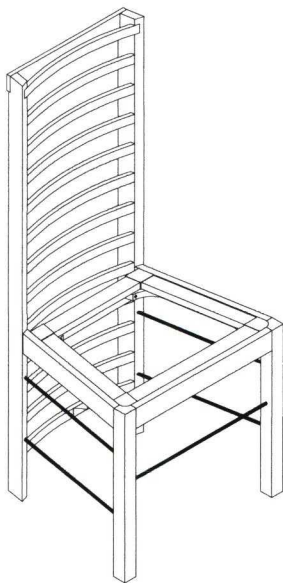


Image of Chair

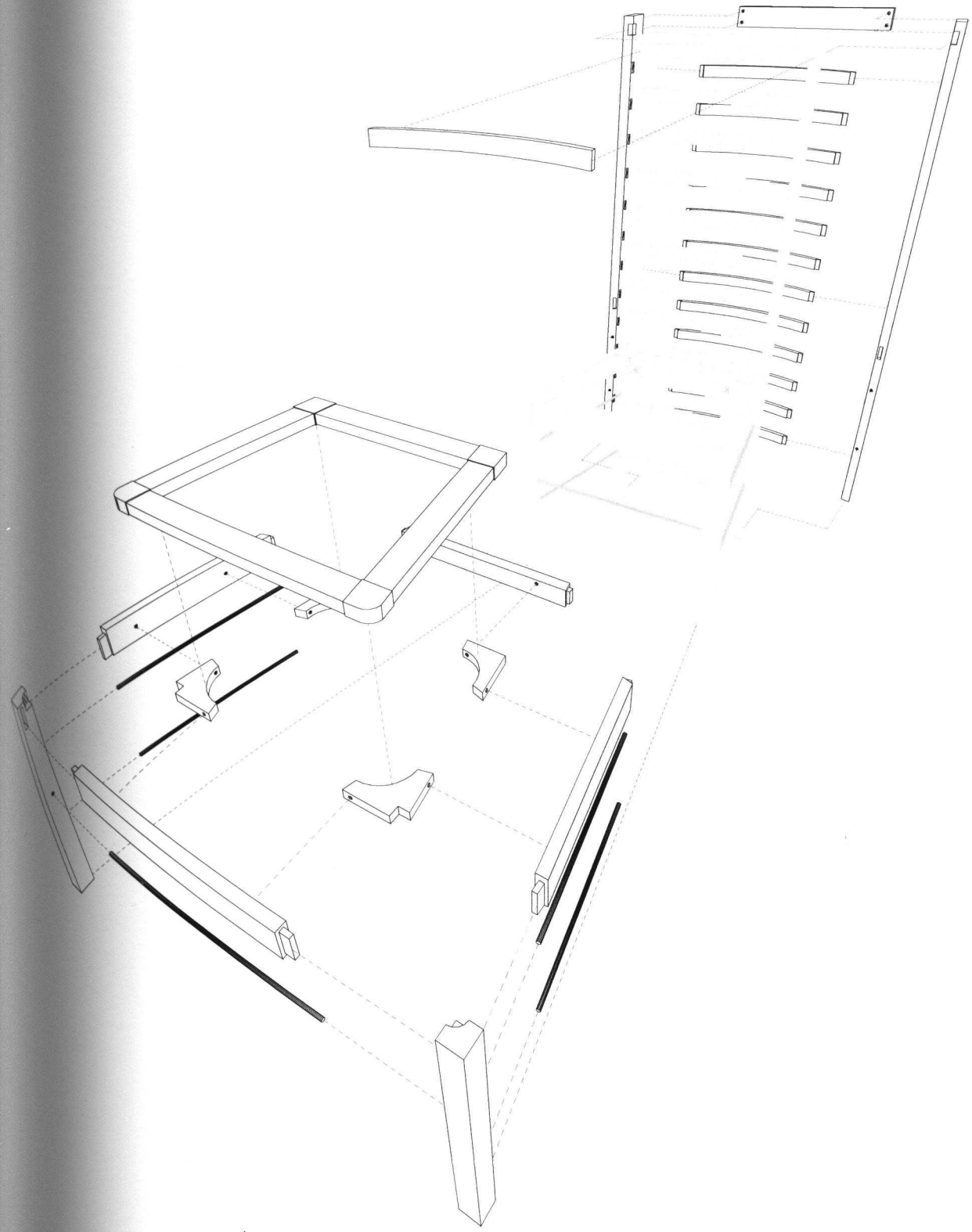


Axonometric view

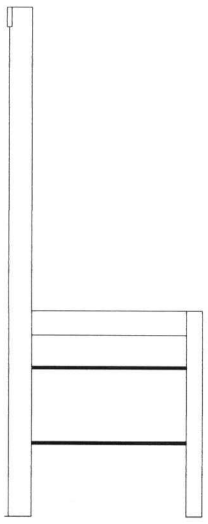
Detail view



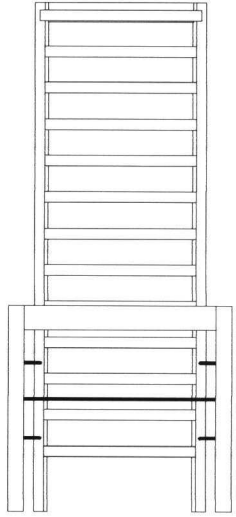




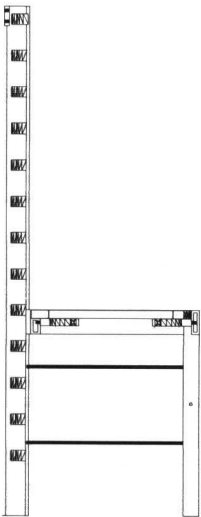
**Exploded Projection of :  
Ladderback Chair for the Willow Tea Room**



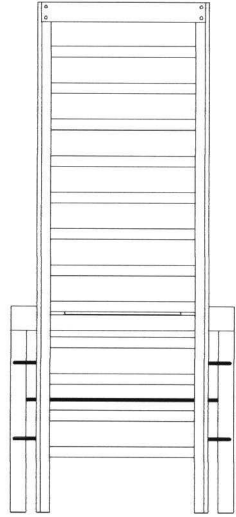
Side elevation



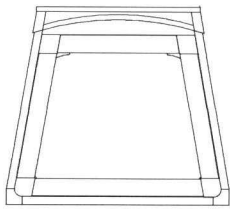
Front elevation



Section elevation



Back elevation

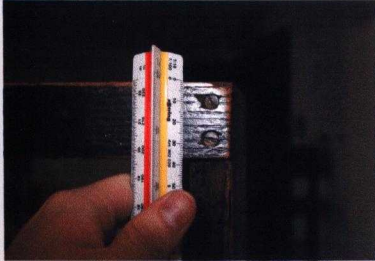


Plan at seat level

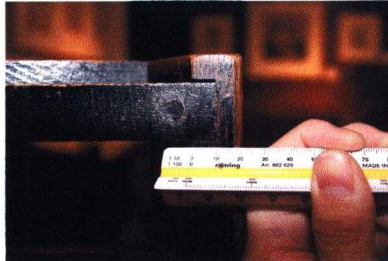
Scale drawing, Willow Tea Room:  
Ladder Back Chair

**Ladder back Chair for the Willow Tea Rooms, Glasgow (Chair 2):-  
Presentation Drawings, Photographic Details, Analytical Survey Notes  
and sketches.**

the rear



the front



head of chair: where the screws are set back and front different sections the rear traverse of the chair was added on to strengthen the chair, the front was original



detail showing section of Ladderback which is slightly arched curved.

body of chair:  
ladderback ribs connections  
tongued and grove joints



where the seat is supported  
by four supports at each junction  
of the top of the legs

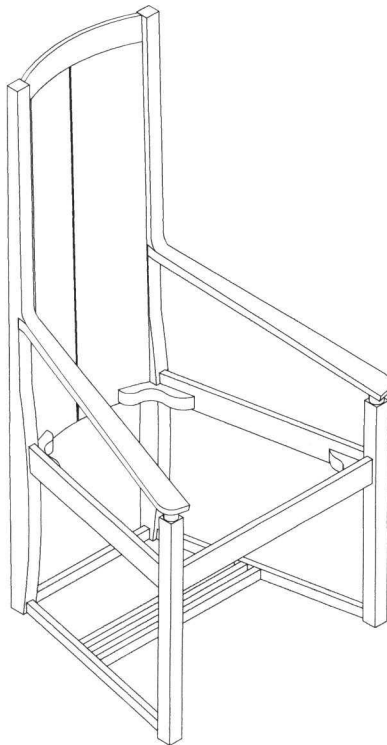


detail of seat rest made rush-upholstered seat - detachable

***Armchair for the Director's Room in the Glasgow school of Art (1904):***  
***Armchair***



Image of Chair



Axonometric view

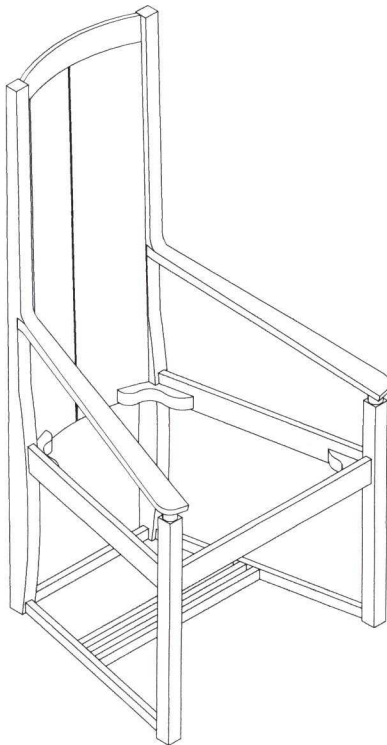
Detail view



***Armchair for the Director's Room in the Glasgow school of Art (1904):  
Armchair***



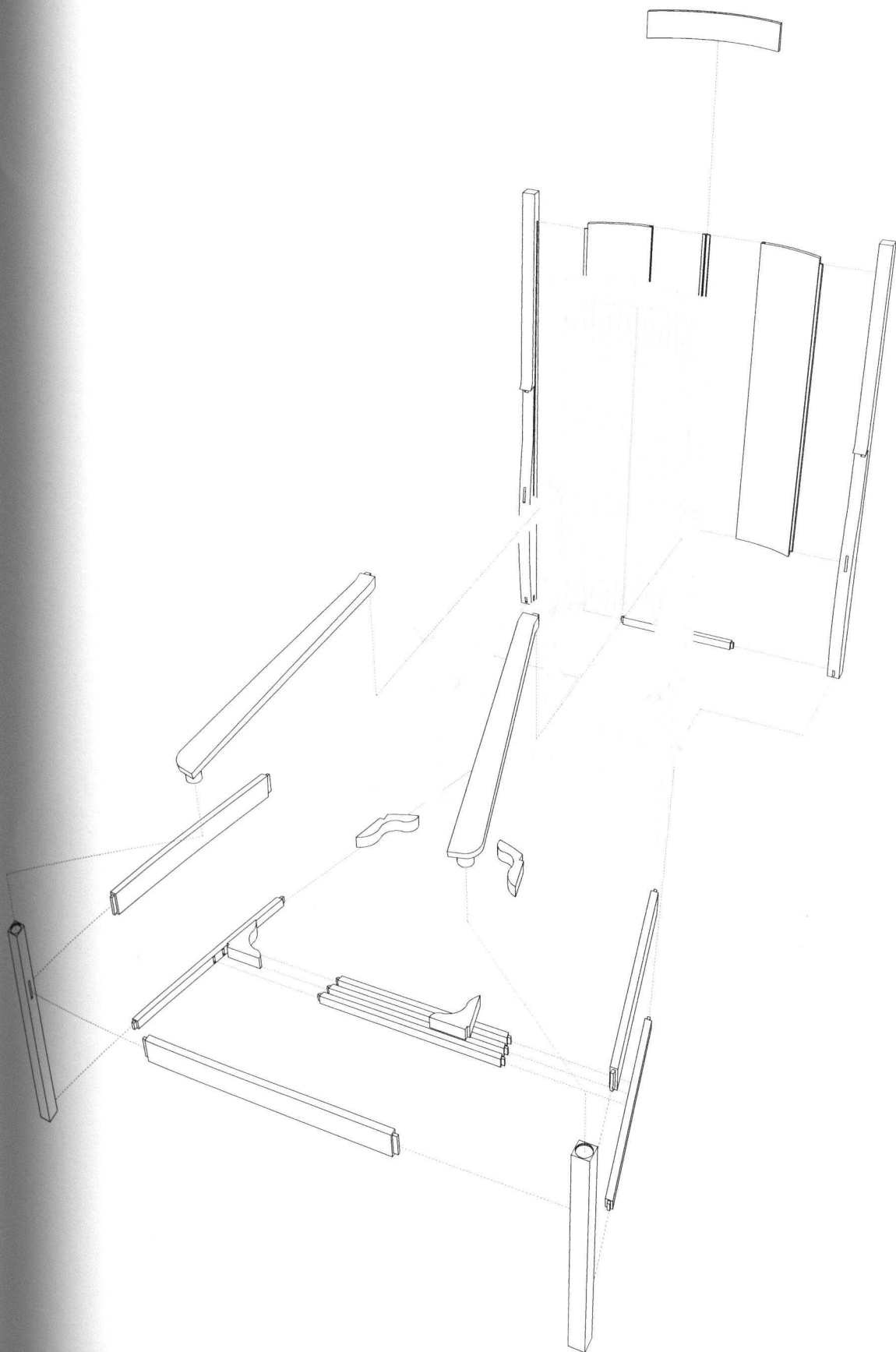
Image of Chair



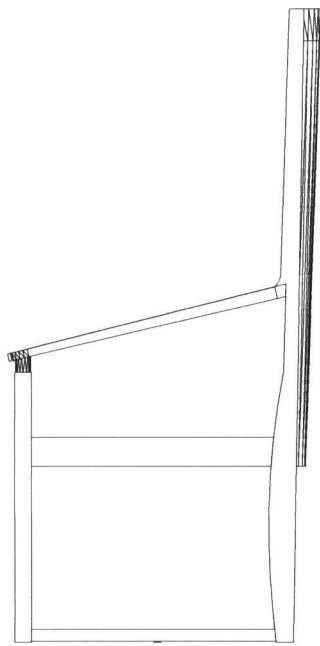
Axonometric view

Detail view

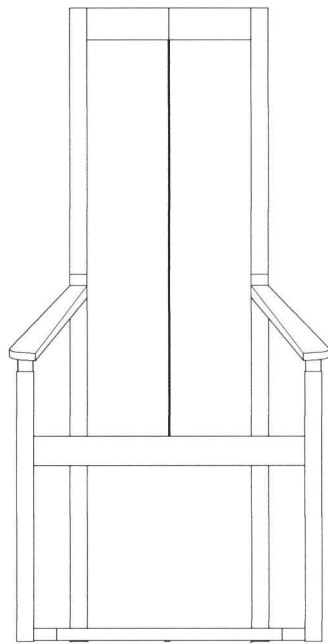




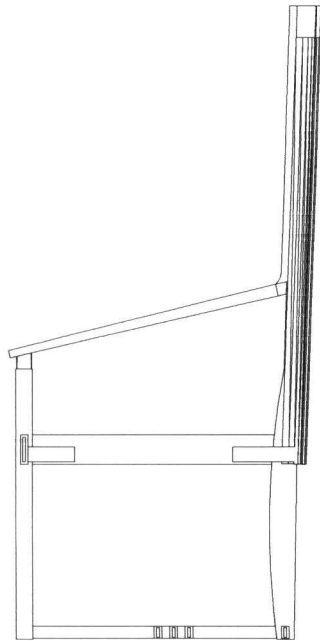
**Exploded Projection of :  
Armchair for the Director's Room in the Glasgow school of Art**



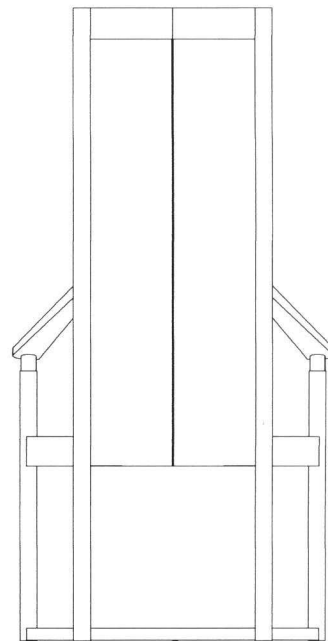
Side elevation



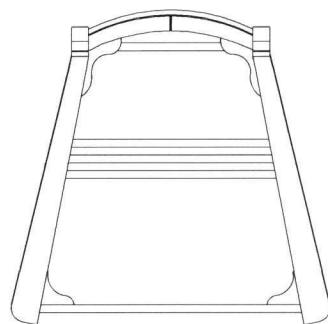
Front elevation



Section elevation



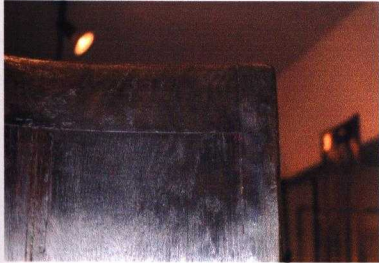
Back elevation



Plan at seat level

Scale drawing, Director's Room, of GSA:  
Director's Armchair

**Armchair with High back for the Director's Room (Chair 3):- Presentation Drawings, Photographic Details, Analytical Survey Notes and sketches.**



head of chair how the pieces of joints intersect



curved back support that is attached to the one piece leg that runs all the way to the head of the chair, legs are curved and taper from bottom to top



armrest, and skeleton of the seat part of the chair



Side of armrest where it is connected to the leg of the chair.

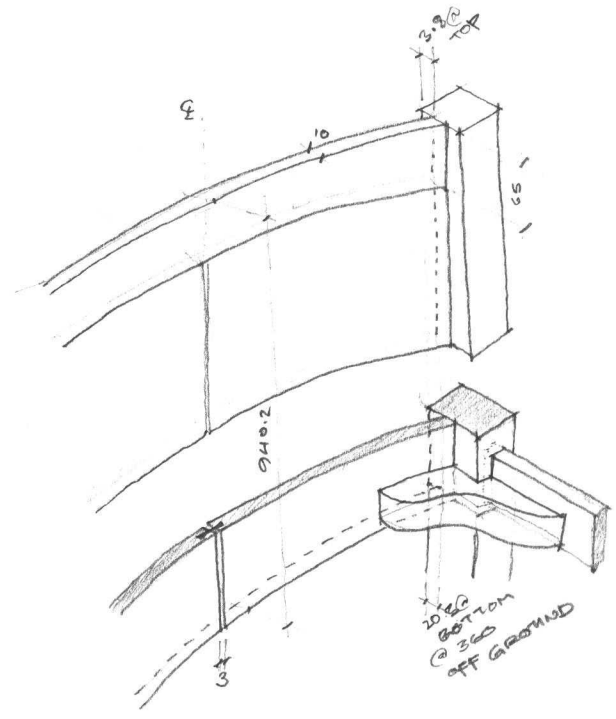
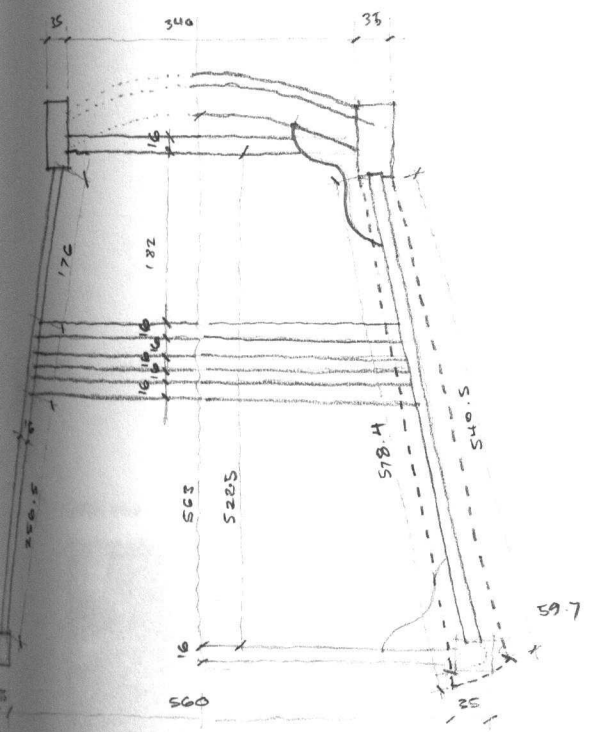
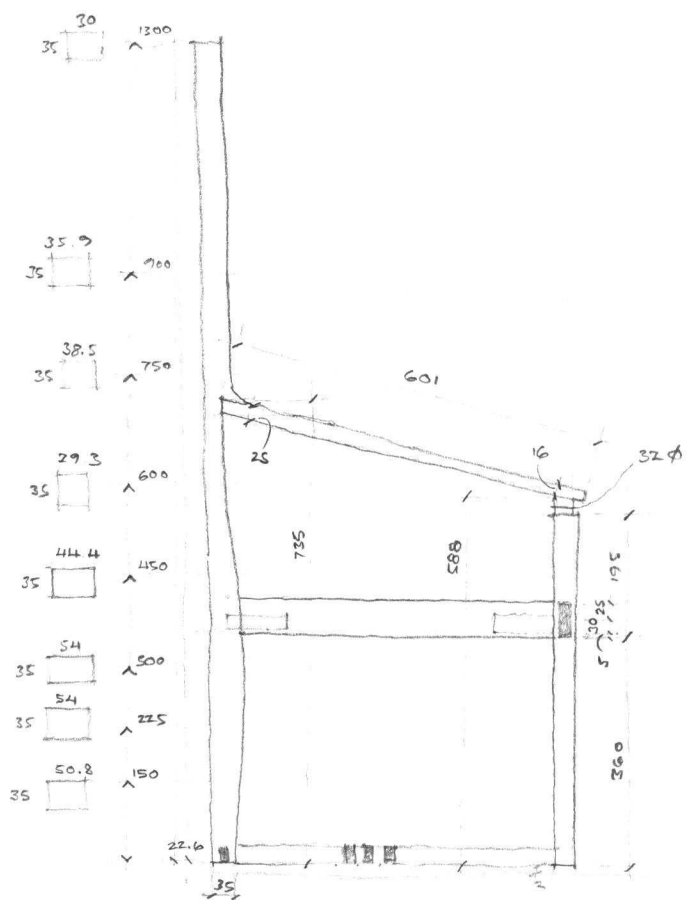
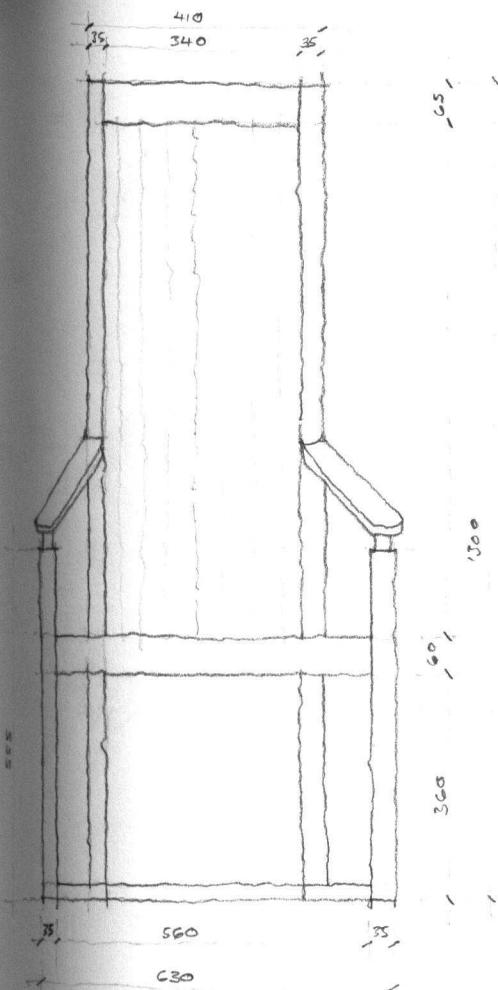


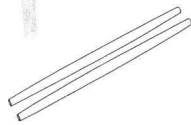
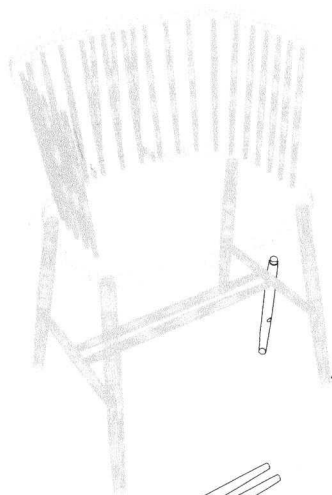
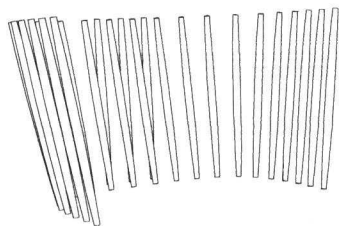
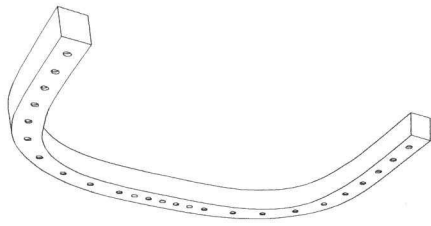
the body of the chair, at the bottom where we can see how the 'chair's back support' is jconnected - 2 slightly curved piece of wood which is joint up by a "+" piece.



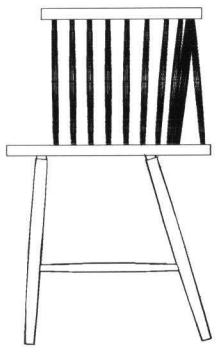
bracing support to the legs to stabilise the big chair.



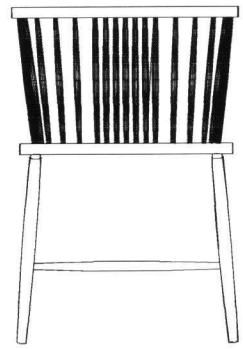




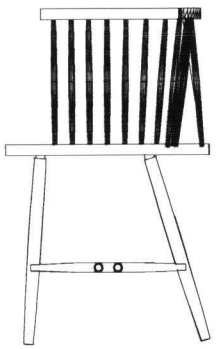
**Exploded Projection of:  
Windsor Chair for the Library in Glasgow School of Art**



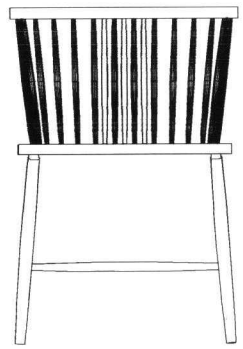
Side elevation



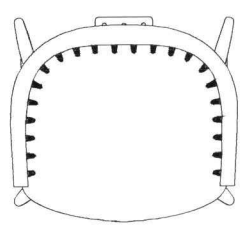
Front elevation



Section elevation



Back elevation



Plan at seat level

Scale drawing, Library of GSA:  
Windsor Chair

**Windsor chair for the Library ,in the Glasgow School of Art (Chair 4):-  
Presentation Drawings, Photographic Details, Analytical Survey Notes  
and sketches.**



detail showing the columns which is dress to the body of the chair the metal piece was to strenghten it, structurely still very unstable.



armrest bolted to the seat for more support was added later by GSA.



detail of how the columns are rested in the seat, the metal piece was added later on.

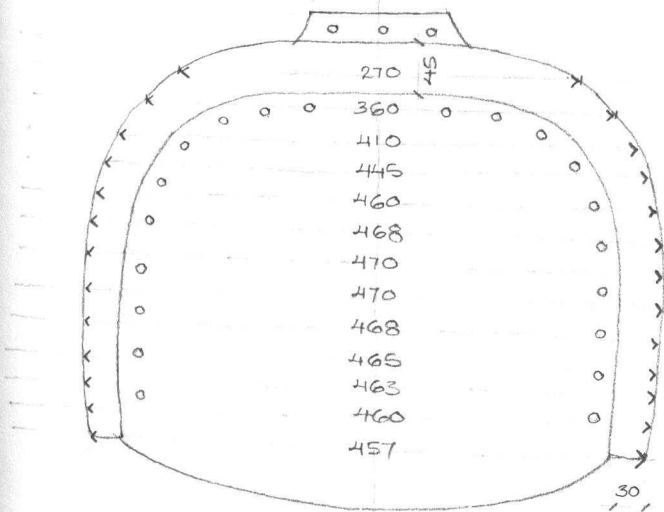
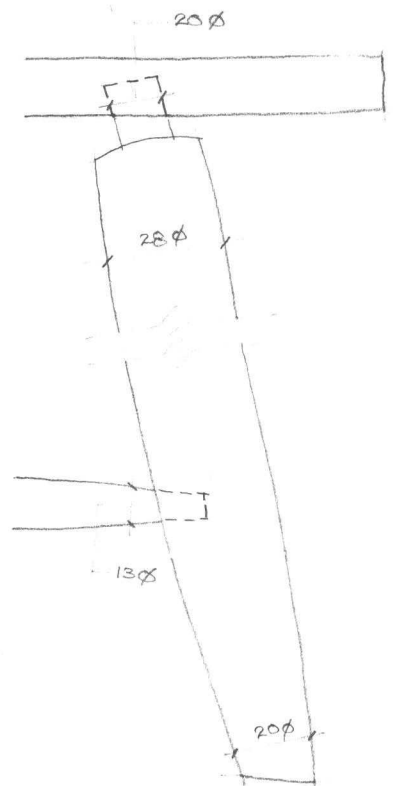
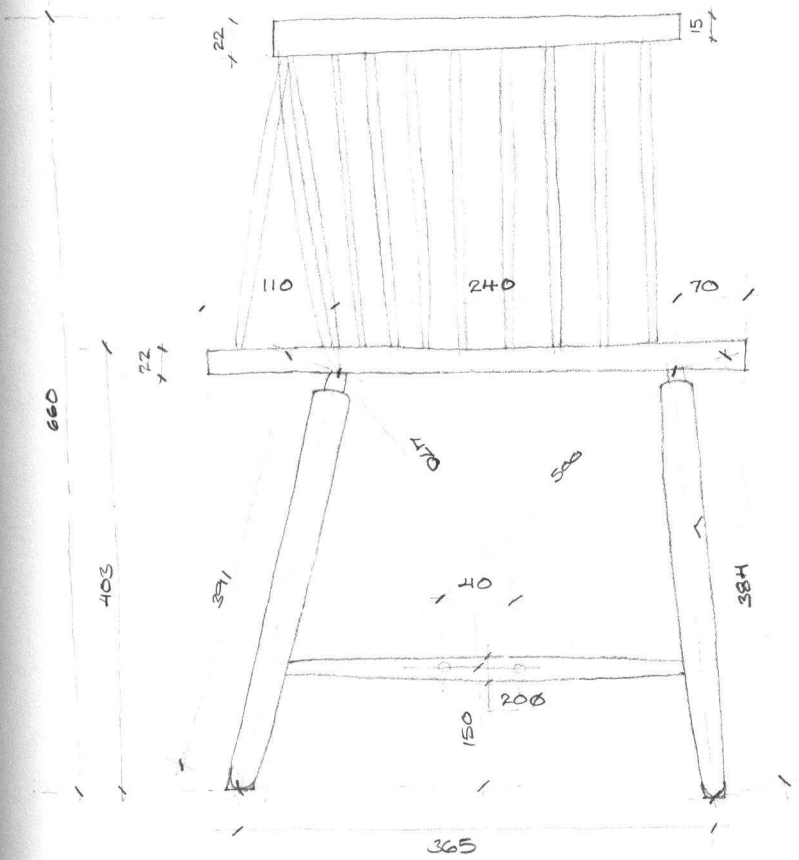


detail of arm rest and column

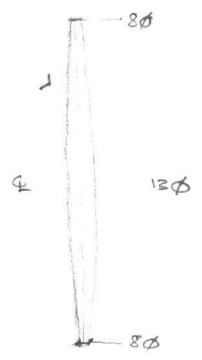
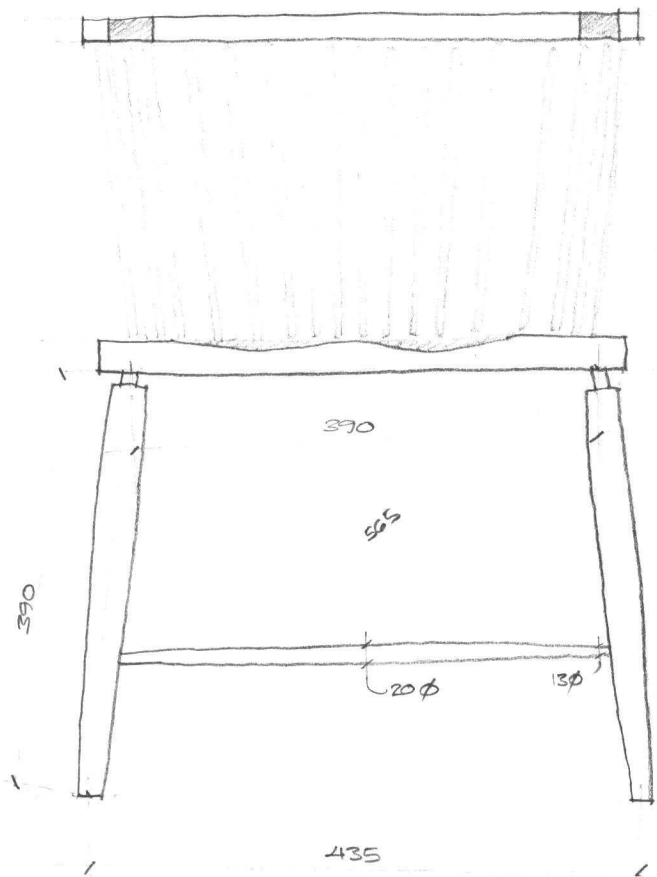
3 extra columns made of wood was added by Mackintosh at the back the seat that time of the original design, but many pieces are still not strong enough to be sat on



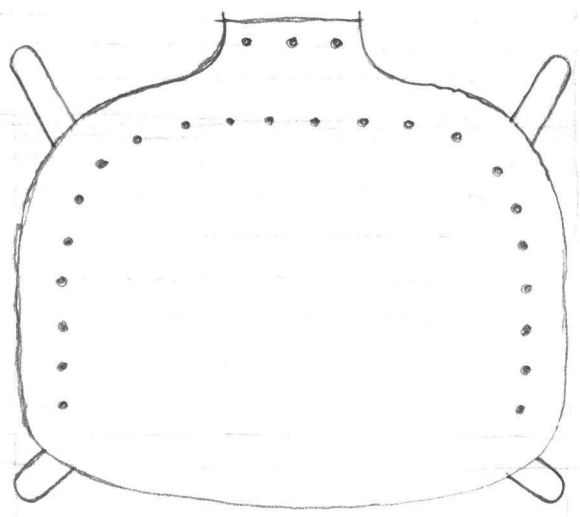
the legs of the chair brace by the slender piece horizontally.



- ↑ 325
- ↑ 300
- ↑ 275
- ↑ 250
- ↑ 225
- ↑ 200
- ↑ 175
- ↑ 150
- ↑ 125
- ↑ 100
- ↑ 75
- ↑ 50
- ↑ 25



- 42φ x
- 390 x
- 370 x
- 352 x
- 346 x
- 335 x
- 312 x
- 281 x
- 247 x
- 211 x
- 175 x
- 139 x
- 103 x
- 70 x
- 40 x



- | SEAT | SPINDLES   |
|------|------------|
| 107  |            |
| 118  | 47         |
| 230  | 120 (40x3) |
| 314  |            |
| 348  | 193 260    |
| 392  | 320        |
| 420  | 350        |
| 429  | 370        |
| 437  | 380        |
| 440  | 381        |
| 438  | 380        |
| 431  | 378        |
| 420  |            |
| 310  |            |

**Ladderback chair for the main bedroom Hill House Helensburgh (1903):**  
**Ladderback chair**

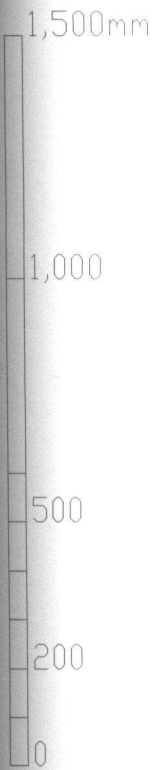
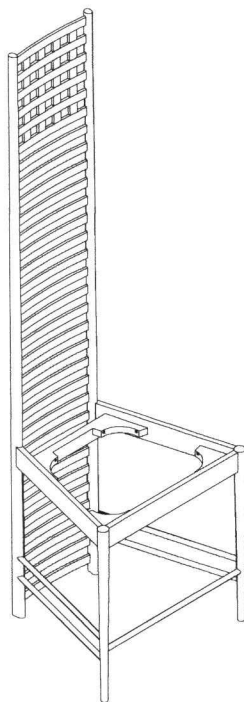


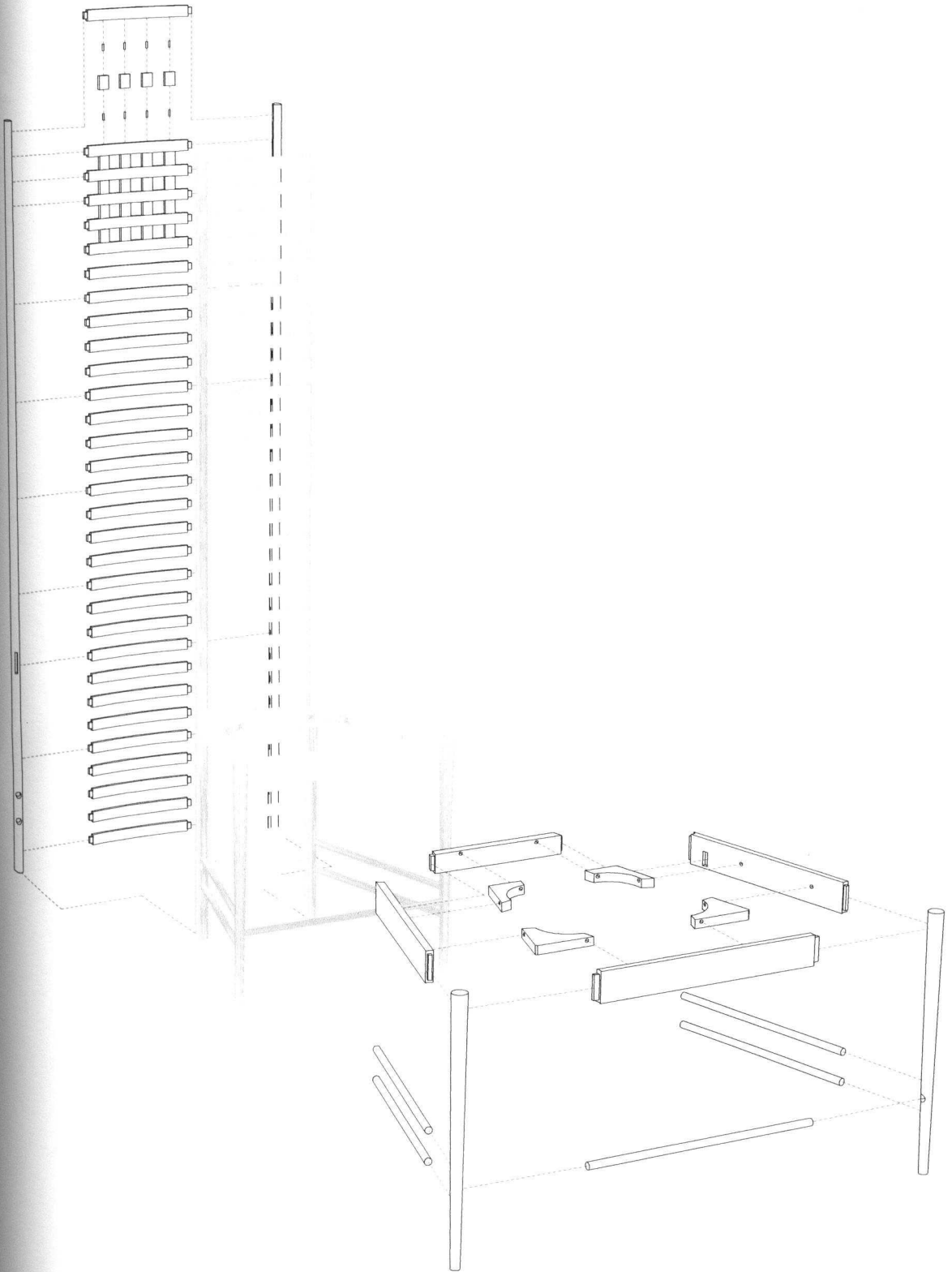
Image of Chair



Axonometric view

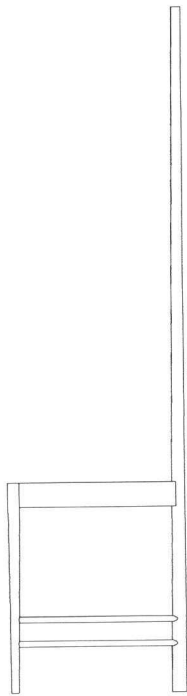
Detail view



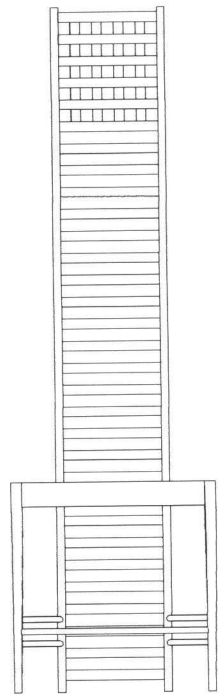


**Exploded Projection of :  
Ladderback Chair for the main bedroom in Hill House Helensburg**

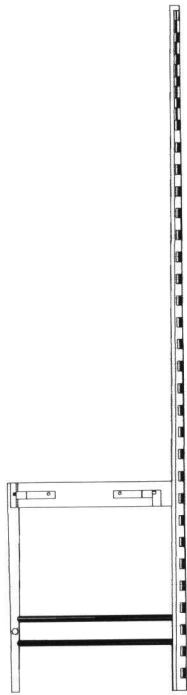




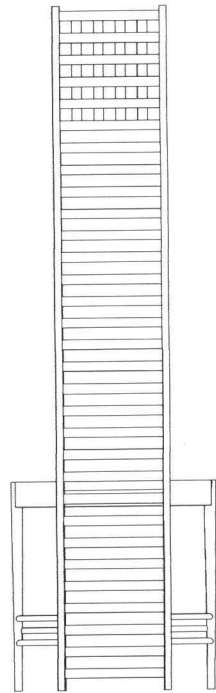
Side elevation



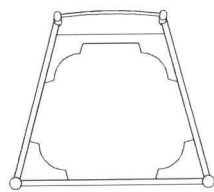
Front elevation



Section elevation



Back elevation



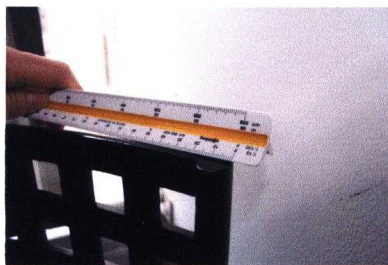
Plan at seat level

**Scale drawing, Hill House Helensburgh:  
Ladderback Chair**

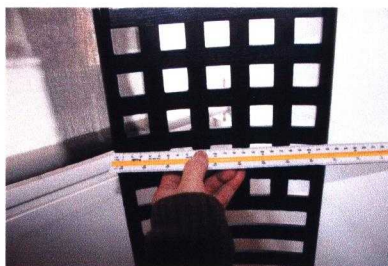
**The Hill House Ladder Back Chair (Chair 5):- Presentation Drawings, Photographic Details, Analytical Survey Notes and sketches.**



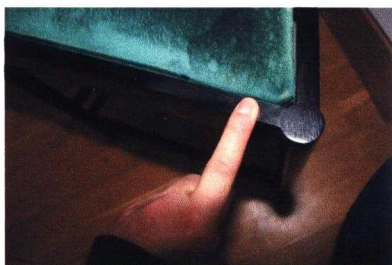
head of chair ; the column of its leg running from bottom to top in section like an egg shape. The headrest is high which crosses on each intervals..



the body of the chair is ladderback type, which again is curved to the minimum, its attached to the side of the legs that runs the whole way through to the head rest.



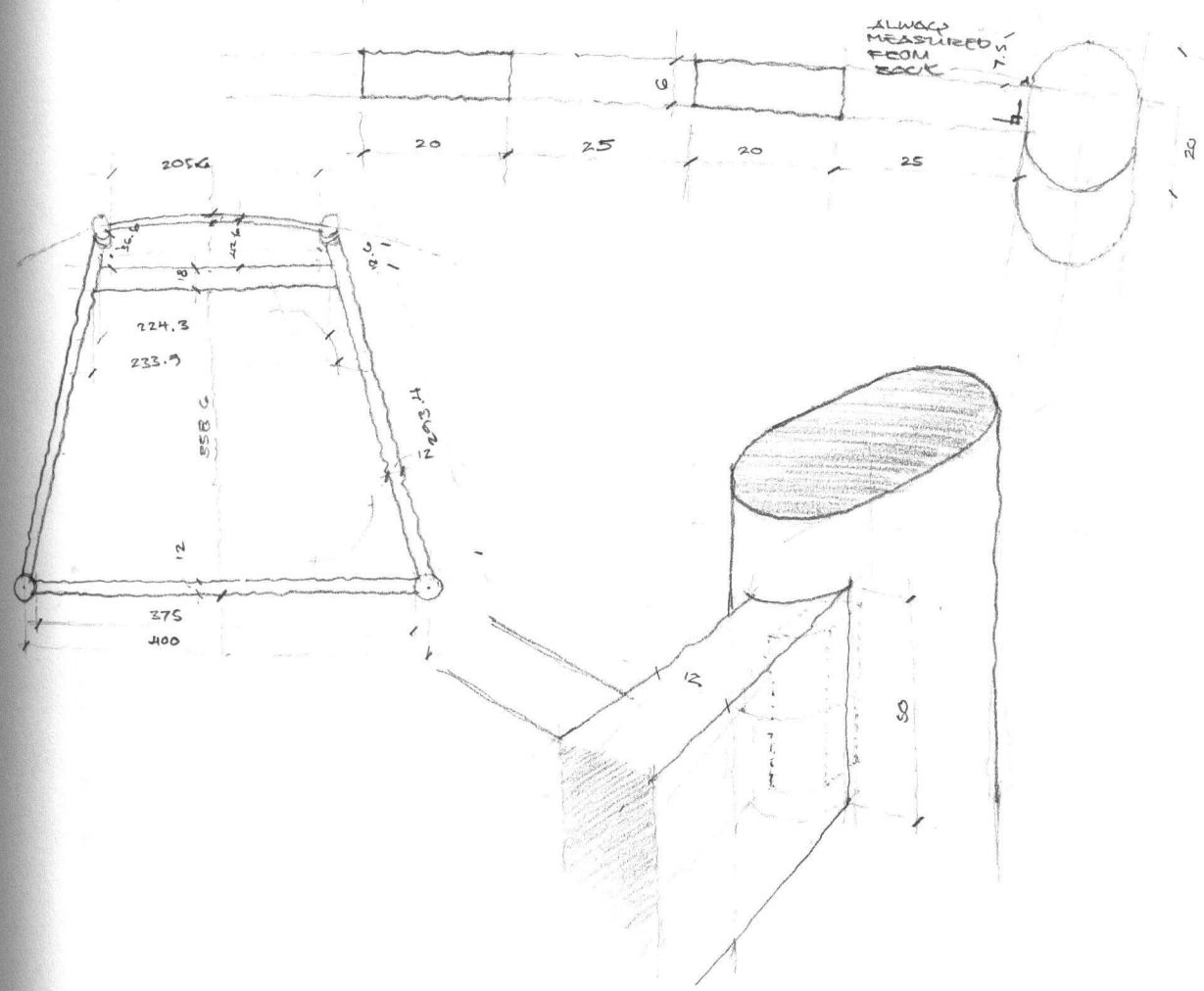
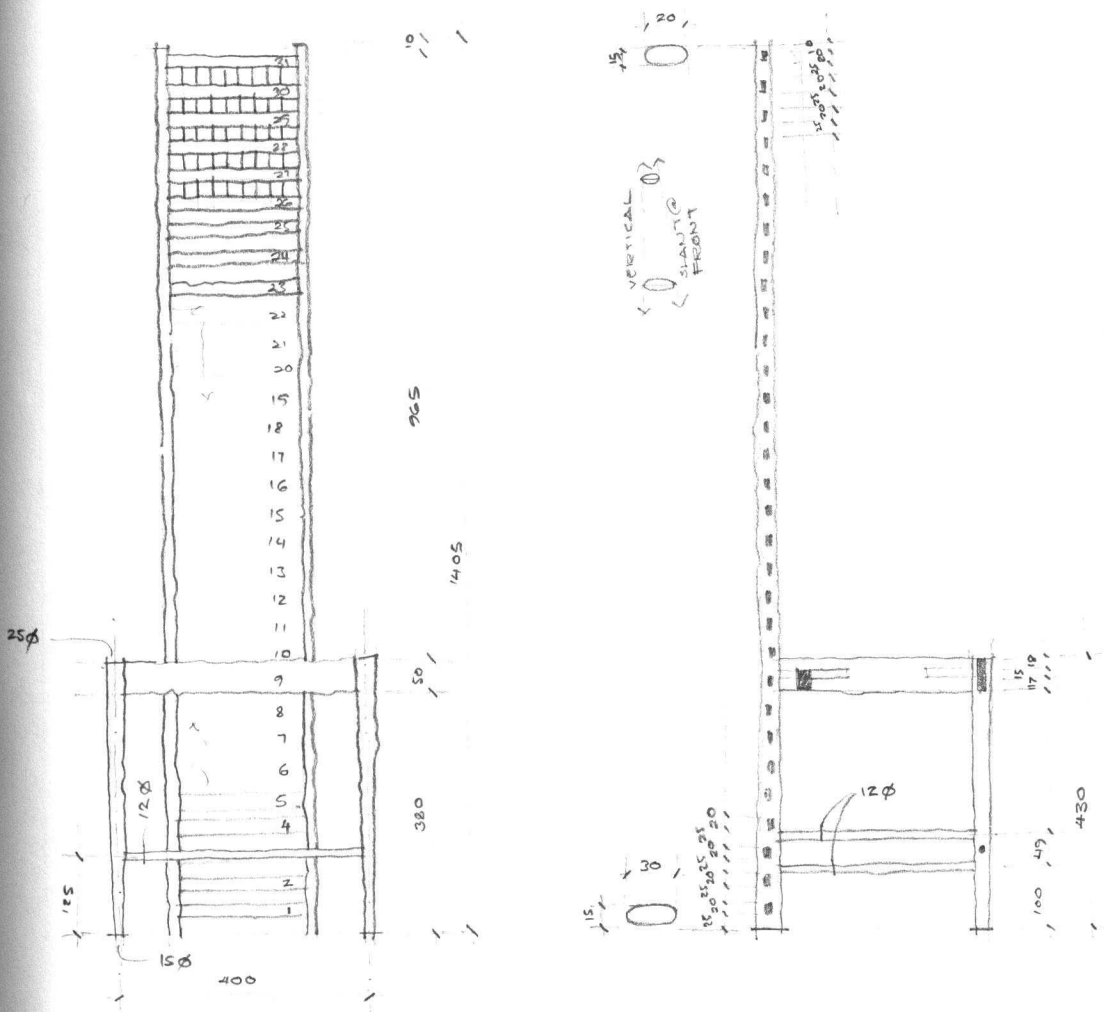
the seat is detachable again with upholstered.



the legs of the chair is circular cone downwards where looks slender,



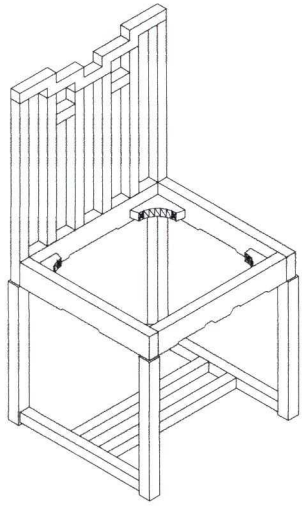
detail of where the legs are braced with rounded support horizontally.



***Fretted back chair for the Chinese Room Ingram Street Tea Room (1911):  
Fretted back chair***

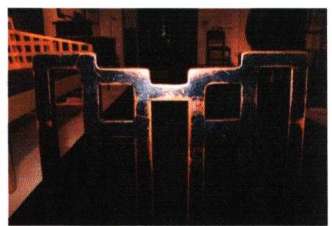


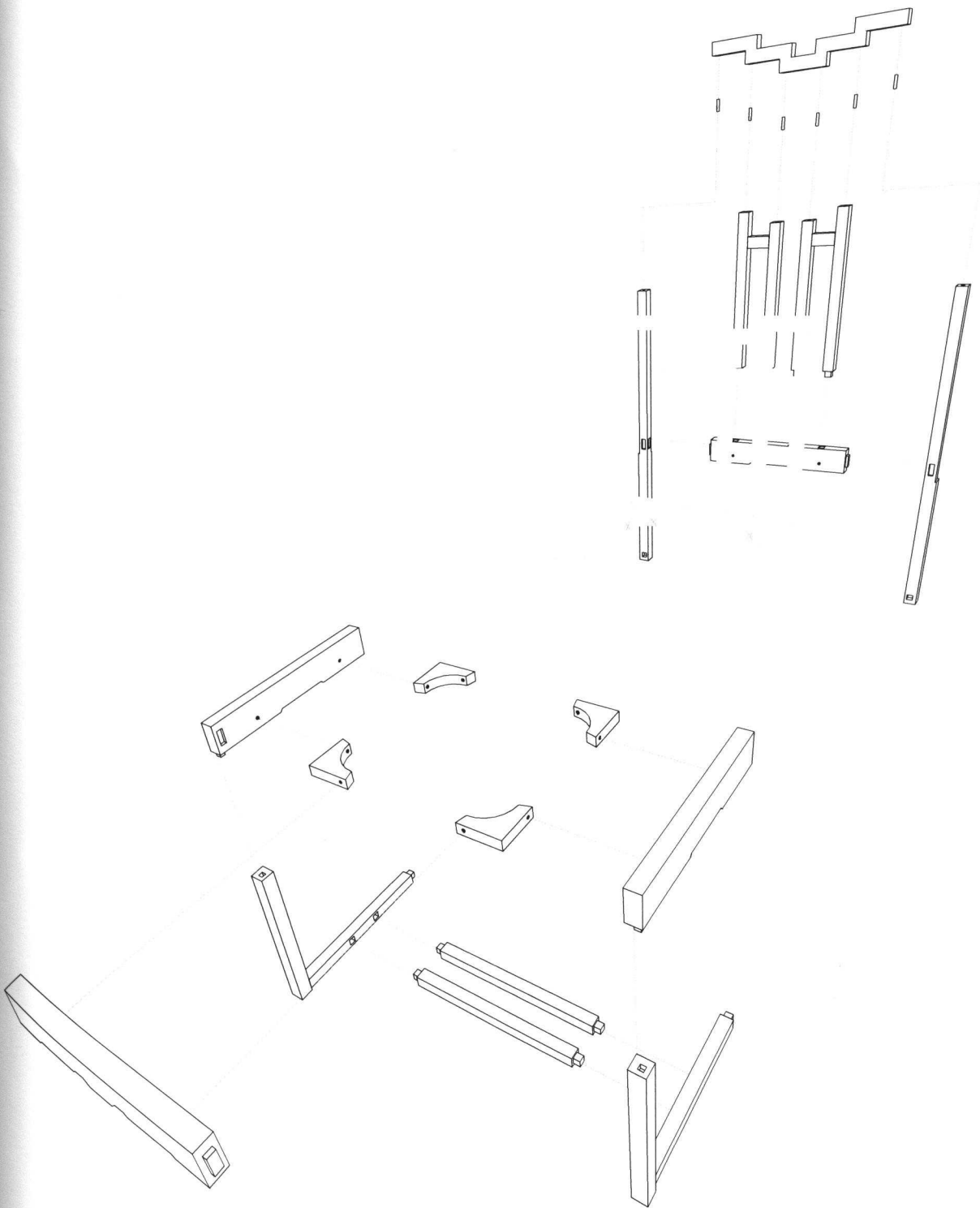
Image of Chair



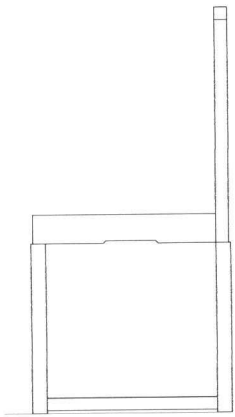
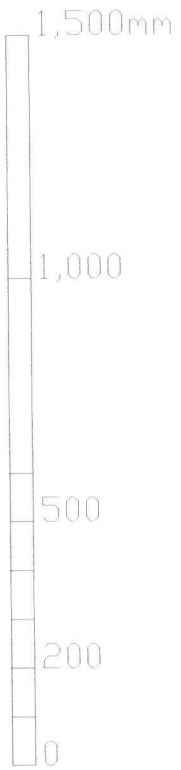
Axonometric view

Detail view

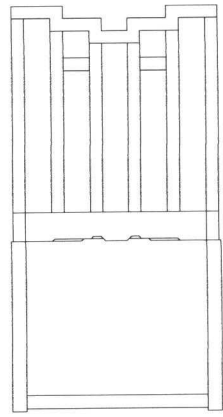




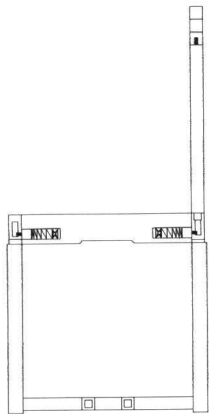
**Exploded Projection of :  
Fretted back chair for the Chinese Room Ingram Street**



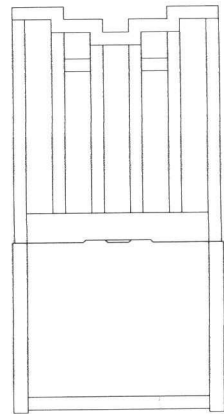
Side elevation



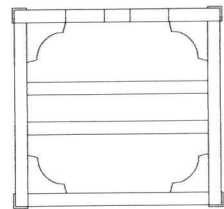
Front elevation



Section elevation



Back elevation



Plan at seat level

Scale drawing, Chinese Room, Ingram St Tea Room:  
Fretted back Chair

**Chair for the Chinese Room, Ingram Street Tea Rooms (Chair 6):-  
Presentation Drawings, Photographic Details, Analytical Survey Notes  
and sketches.**



top of chair with a unique linear zig-zag design



detail of front of rails of the chair influence by chinese style motives for the Chinese room in the Ingram Street tea room,



detail of back rail of chair



the overall detail in design looking from the back part of the chair

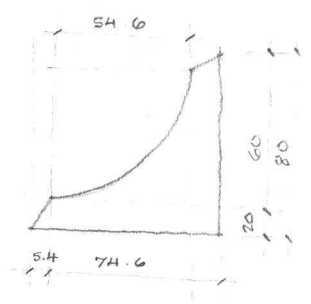
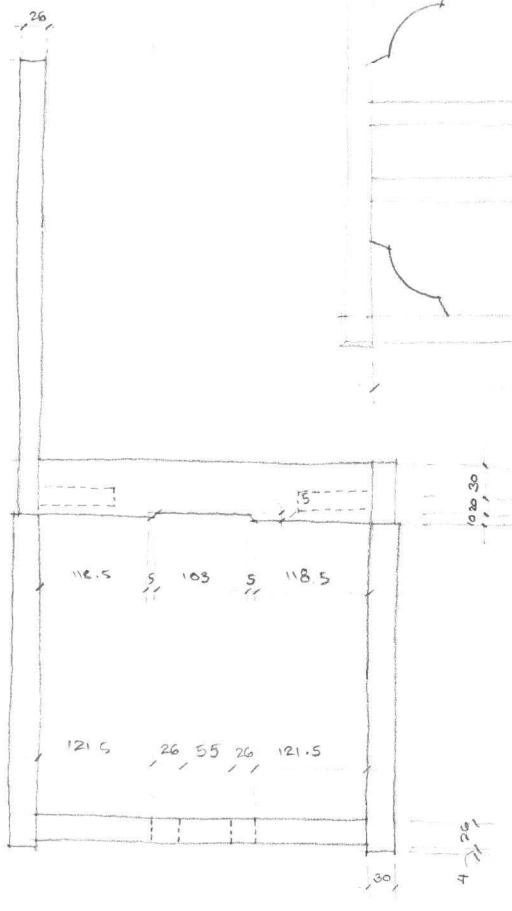
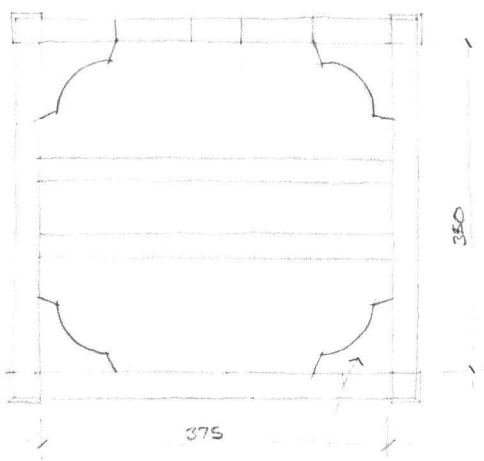
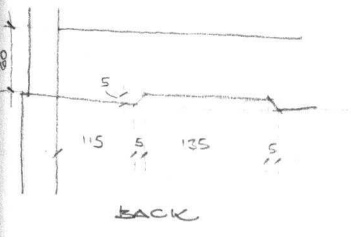
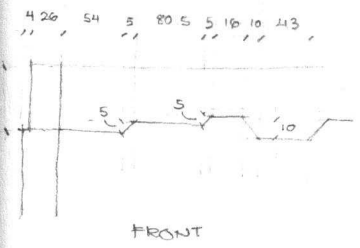
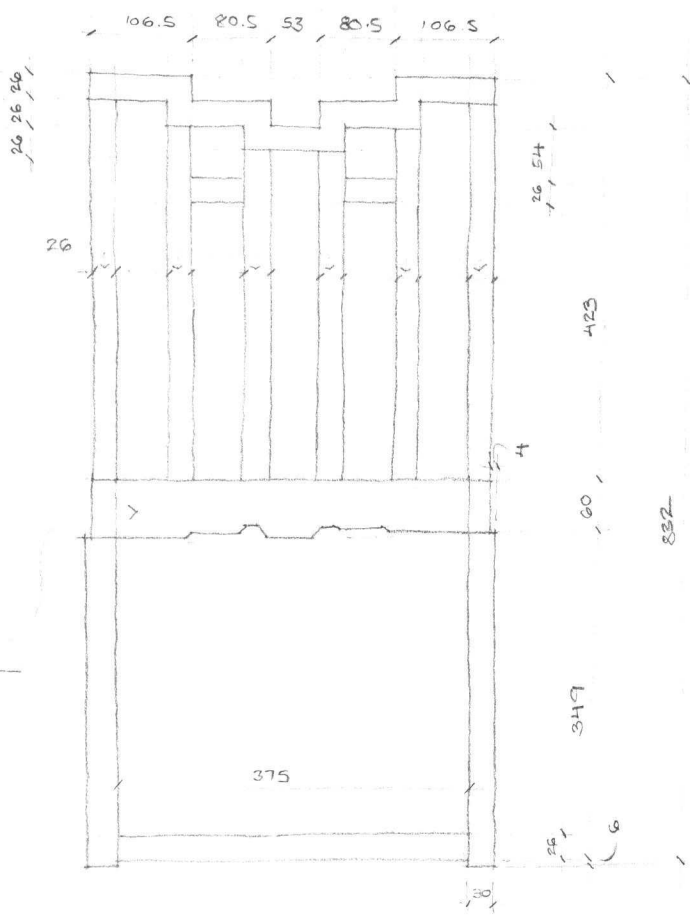


upholstered seat which is supported by triangular joints which is attached to the rails of the chair.



legs of the chair square section with horizontal bracing that ties the chair for better support







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