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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

THE MUSEUM OF MODERN ART
11 WEST 53rd STREET
TELEPHONE: C 6-1234

Manufacturing Modern Furniture

will be shown in the section
of the exhibition IN HOME
Furniture, October,

The exhibition shows the methods of manufacturing modern furniture in mass production with particular reference to the new types of construction undertaken with the prize-winning chairs from the competition. The visitor begins with an explanation of the competition, conducted by the Department of Industrial Design of the Museum of Modern Art. He is then shown a common over-stuffed chair, stripped of its coverings, to show what goes into the construction of this type of furniture. This chair is presented as a horrible example in conflict with the modern tendency and necessity to decrease the weight and bulk of our furnishings to fit into homes shriveling to ever smaller sizes. It thus affords a comparison to the succeeding photographs and models showing how modern furniture is becoming lighter through the introduction of new techniques and materials. The various steps from designer's sketch to finished chair are clearly illustrated by photographs and actual pieces of furniture. Explanatory labels accompany the illustrations.

The winning designs by Saarinen and Eames of Detroit are the high point of the exhibition: a group of chairs whose construction principle is a wooden shell cast like a piece of sculpture. The original full scale model for these chairs is molded by the designers in plaster and wire netting to fit the contours of the human body somewhat as a sculptor makes his first plaster cast. The shape of this plaster-and-netting chair is then transferred to a cast-iron mold in which the final chair shell is fabricated. The substance of the chair itself is formed of alternate layers of thin sheets of wood and glue laminated in the cast-iron form under intense pressure and heat. When removed from the cast the completed shell needs only to be trimmed and to have legs attached, which completes the structural part of the chair. A thin rubber pad is then applied over the inner side of the shell to be covered by upholstery material. The finished chair weighs twenty

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THE MUSEUM OF MODERN ART
11 WEST 53 STREET
TELEPHONE: CI 4-0000

MANUFACTURING MODERN FURNITURE
1941-45

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a section

GN IN HOME

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THE MUSEUM OF MODERN ART
11 WEST 53RD STREET, NEW YORK

TELEPHONE: CIRCLE 5-8900

FOR RELEASE _____

On _____ the _____
 will open an exhibition entitled MANUFACTURING MODERN FURNITURE. This is a section of the large show from the Inter-American Competition called ORGANIC DESIGN IN HOME FURNISHINGS held at The Museum of Modern Art, New York, in September and October, 1941.

The exhibition shows the methods of manufacturing modern furniture in mass production with particular reference to the new types of construction undertaken with the prize-winning chairs from the competition. The visitor begins with an explanation of the competition, conducted by the Department of Industrial Design of the Museum of Modern Art. He is then shown a common over-stuffed chair, stripped of its coverings, to show what goes into the construction of this type of furniture. This chair is presented as a horrible example in conflict with the modern tendency and necessity to decrease the weight and bulk of our furnishings to fit into homes shriveling to ever smaller sizes. It thus affords a comparison to the succeeding photographs and models showing how modern furniture is becoming lighter through the introduction of new techniques and materials. The various steps from designer's sketch to finished chair are clearly illustrated by photographs and actual pieces of furniture. Explanatory labels accompany the illustrations.

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The twentieth century has also introduced one completely fresh idea in unit furniture. The idea originated in the 1890's in the United States. As early as 1909 the Sears Roebuck catalog advertised and illustrated "sectional bookcases". Other developments were made in Germany by Bruno Paul in 1910 and later by the Bauhaus student and teacher Marcel Breuer. It appeared in the United States again in 1929; only since 1938 has it become a large-scale popular development. Three types are shown in this exhibition: designs again by Saarinen and Eames, others by Stenroos and von Moltke and by Hatfield and Craig. The Saarinen units are particularly notable. Adapting a module of 18 inches they carry the principle of standardization farther than any other group yet produced in this country. Literally millions of combinations are possible with only twelve unit pieces.

The exhibition will be on view through _____, after which it will be shown at New London, Connecticut; Minneapolis, Minnesota; Durham, New Hampshire; Ithaca, New York; Williamsburg, Virginia.

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Exhibit as sold 5/45 to David Jones, Ltd. Sydney, Australia
Sent 5/11/45 R.W.Cameron & Co.Inc. 52 West St., N.Y.6, N.Y.

MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

I N S T A L L A T I O N L I S T

Title Panel

Introductory label

Panel #1	Chairs: Overstuffed Chair The Winning Drawings
Panel #2	A tremendous step forward.....
Panel #3	In the chairs by Nicholson and Maier
#3a Label	Chair with half the upholstery stripped off
Panel #4	Photographs of original drawings by Saarinen and Eames
Panel #5	Photographs of original drawings by Saarinen and Eames
Panel #6	Study of Form Full size model Setting the legs
Panel #7	Recording form of chair Crate Shell and springing sofa units
Panel #8	Trimming flaws from veneer Cutting glue sheets Glue sheets between mahogany and poplar plies
Panel #9	Electric phenaloid press Steam pressure tank Trimming of edges
Photo #9a	SaarinensEames- Chairs & Unit furniture
Panel #10	Machine production of case work Quantity production Blue print Detail man
Photo #10a	Craig & Hatfield Chest
#10a	Red
Panel #11	Preliminary operations Typical machine processes

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Panel #12 Joints
Panel #13 Sandpapering
 Finishing
Photo #13a **Stonorov & Von Moltke Units**
Panel #14 Units: 1 drawing
Panel #15 2 drawings

Actual Furniture

3 Saarinen cases (#1, #2, #3)
2 Saarinen benches
1 Saarinen dining room chair
Saarinen model room
2 Stonorov cases (#1 and #2)
1 Stonorov bench
1 Hatfield chest (hang under Panel #10)

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

UNPACKING INSTRUCTIONS - BOXES #1 and #2 - panels

- Slide panels ^{+ photo package} out of box ^{Package containing 3 photographs} very carefully, one at a time. Many of the panels have protruding surfaces and will damage easily if not handled with care.

Do not stack panels against one another. Line up along wall.

- Replace cover on box.

Panel #12 - back to #5

Panel #10 - facing #4

Title Panel - facing #10

Package containing 3 photographs in groove at side of box

In Box #2, the following panels are packed in the order listed below, all panels facing in the same direction:

Panel #15

Panel #14

Panel #11

Panel #9

Panel #8

Panel #7

Panel #6

Panel #1

- Slide the panels into the boxes one at a time and in the above order. They will fit into the box only in the above order and position.
- Place covers on boxes and fasten securely. Be sure iron washers are on screws before attaching screw heads.

machine production of case work

Quantity production

Blue print

Detail man

#10a

Rod

Panel #11

Preliminary operations

Typical machine processes

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

PACKING INSTRUCTIONS - BOXES #1 and #2 - panels *package of 3 photographs*

1. In Box #1, the following panels are packed in the following order and position:

Panel #12 - back to side of box
Panel #3 - facing #12
Panel #13 - facing #3
Panel #2 - facing #13
Panel #5 - back to #2
Panel #4 - back to #5
Panel #10 - facing #4
Title Panel - facing #10

Package containing 3 photographs in groove at side of box

In Box #2, the following panels are packed in the order listed below, all panels facing in the same direction:

Panel #15
Panel #14
Panel #11
Panel #9
Panel #8
Panel #7
Panel #6
Panel #1

2. Slide the panels into the boxes one at a time and in the above order. They will fit into the box only in the above order and position.
3. Place covers on boxes and fasten securely. Be sure iron washers are on screws before attaching screw heads.

Panel #9	Electric phenaloid press Steam pressure tank Trimming of edges
Panel #10	Machine production of case work Quantity production Blue print Detail man
#10a	Rod
Panel #11	Preliminary operations Typical machine processes

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

I N S T A L L A T I O N L I S T

Title Panel

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- | | |
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Full size model
Setting the legs |
| Panel #7 | Recording form of chair
Crate
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| Panel #8 | Trimming flaws from veneer
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Blue print
Detail man |
| #10a | Rod |
| Panel #11 | Preliminary operations
Typical machine processes |

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Panel #12 Joints
 Panel #13 Sandpapering
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Actual Furniture

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 2 Saarinen benches
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 2 Stonorov cases (#1 and #2)
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 1 Hatfield chest (hang under Panel #10)

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MANUFACTURING MODERN FURNITURE

an exhibition circulated by The Museum of Modern Art, New York City

UNPACKING INSTRUCTIONS -- BOXES #1 and #2 -- panels

1. Slide panels out of box very carefully, one at a time. Many of the panels have protruding surfaces and will damage easily if not handled with care.

Do not stack panels against one another. Line up along wall.

2. Replace cover on box.

UNPACKING INSTRUCTIONS -- CRATE #1 -- 2 chairs, 1 chest, rod, leg-supports for model table.

1. Slide out Hatfield chest very carefully from special partition.
2. Lift rod from special partition at side of box.
3. Lift out 2 chairs one at a time.
4. Unscrew and remove brace holding collapsible legs for table of furniture models.
5. Replace all packing material -- brace and screws -- in box and out back cover. Put cover back on crate and fasten securely.

UNPACKING INSTRUCTIONS -- CRATES #2 and #4 -- 2 Stonorov chests, 2 Saarinen chests.

1. Rest ~~each~~ crate on its side. It is easier to slide out chests.
2. Slide chests from crate one at a time. BE CAREFUL NOT TO DROP.
3. Place cover on box and fasten securely.

UNPACKING INSTRUCTIONS -- CRATE #3 -- 2 Saarinen benches; 1 Stonorov bench; Table top for model furniture.

1. Press table top to side of crate, so that it is upright or perpendicular. Lift out.
2. Unscrew and remove 2 braces holding benches in place.

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3. The half-upholstered chair goes into box next, its four legs fitting into 4 grooves on bottom of crate, with back to end of crate.
4. Place Saarin chair in next, so that it rests upon the half-upholstered chair. Bottom of Saarinen chair should be face down upon bottom of half-upholstered chair.

Back of Saarinen chair slides between padded board and half-upholstered chair.
5. Place rod in special partition to one side of box, so that hooks on frame hang upon 2 nails provided in side of crate. Part of the rod rests upon arm of half-upholstered chair.
6. Place cover on crate and fasten securely. Be sure iron washers are on screws before attaching screw heads.

CRATE #2 - 2 Stonorov chests

1. Slide 2 chests into crate one at a time. The 2 chests must be back to back, and bottom down, in the crate.
2. Slide sheet of corrugated board between backs of 2 chests.
3. Place cover on crate and fasten securely. Be sure iron washers are on screws before attaching screw heads.

NOTE: In Crate #2: Wrap the Saarinen furniture models in tissue paper and place in drawer of Stonorov chest.

CRATE #3 - 2 Saarinen benches; 1 Stonorov bench; Table top for model furniture

1. Slide Saarin bench with 2 legs into box face down.

Place sheet of corrugated board in next.
2. Next, slide Saarin bench with 4 legs into box, into special partition at side of box - so that top of bench is facing side of crate which is marked.
3. Slide Stonorov bench in next so that legs are against side of crate opposite to Saarinen bench.
4. Put 2 braces in place so that they hold benches firmly in position. Screw braces securely.
5. Wrap table top for model furniture in heavy paper. Slide table straight down in grooves cut in braces; then press against top of Stonorov bench - so that it rests diagonally against pad on side of crate.
6. Place cover on box and fasten securely. Be sure iron washers are on screws before attaching screw heads.

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MANUFACTURING MODERN FURNITURE

\$30. for 3 wks.

1941	Nov. 12 - Dec. 15	Addison Gallery of American Art Andover, Mass.
1942	Jan. 7 - 21	Lyman Allyn Museum New London, Conn.
	Feb. 1 - 28	University Gallery University of Minnesota Minneapolis, Minn.
	Mar. 17 - 31	University of New Hampshire Durham, N.H.
	Apr. 6 - 27	Cornell University Ithaca, N.Y.
	May 2 - 16	College of William & Mary Williamsburg, Va.
	Nov. 20 - Dec. 11	Isaac Delgado Museum of Art New Orleans, La.
1945	May 5 sold to David Jones Ltd., Sydney, Australia for \$85.	

Packed in 4 boxes weighing 1,369 lbs.

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

PACKING INSTRUCTIONS - BOXES #1 and #2 - panels

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Panel #12 - back to side of box
Panel #3 - facing #12
Panel #13 - facing #3
Panel #2 - facing #13
Panel #5 - back to #2
Panel #4 - back to #5
Panel #10 - facing #4
Title Panel - facing #10

In Box #2, the following panels are packed in the order listed below, all panels facing in the same direction:

Panel #15
Panel #14
Panel #11
Panel #9
Panel #8
Panel #7
Panel #6
Panel #1

2. Slide the panels into the boxes one at a time and in the above order. They will fit into the box only in the above order and position.
3. Place covers on boxes and fasten securely. Be sure iron washers are on screws before attaching screw heads.

PACKING INSTRUCTIONS - CRATE #1 - Half-upholstered chair; Saarinen chair; Hatfield chest; rod; leg-supports for model table.

1. Collapse legs for table of furniture models. Place legs flat in bottom of crate - so that one leg is against side of crate and feet of legs are against special partition for Hatfield chest.

Put brace in position and fasten bolts from outside of crate, so that table legs are held securely in position.

2. Slide Hatfield chest into special marked compartment, bottom first, with front facing near-side of box.

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3. Lift out the 3 benches one at a time. The benches are long and heavy and 3 men are needed to unpack ~~this~~ crate.
4. Replace packing material - braces, screws, corrugated board, wrapping paper - in box and put back cover. The same material must be used in repacking the exhibition.

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PACKING INSTRUCTIONS - CRATE #4 - 3 Saarinen chests

1. Slide each chest into the special partition marked with its number, one at a time.

The chests go into the crate top up and bottom down.

2. Place cover on box and fasten securely. Be sure iron washers are on screws before attaching screw heads.

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Machine Production of Furniture

QUANTITY PRODUCTION OF FURNITURE:

There is a common misconception that furniture manufacture is completely a machine operation and a production line process from start to finish, as is the case of automobile manufacture. This is far from true. In many plants, furniture is still made almost entirely by hand; in others, a high degree of mechanization has been reached, but even in the most progressive ones, there is still a large amount of hand work. Despite this fact, one important condition, characteristic of twentieth century industry, prevails in almost all plants, whether highly mechanized or not. This condition is specialization or division of labor. Design has been profoundly affected by the fact that machines now perform many operations formerly executed by hand, but an equally important change has been the splitting up of factory production into separate operations, each performed by workmen specially trained to them. As Gropius has pointed out, "The difference between industry and handcraft is due far less to the different nature of the tools employed in each than to subdivision of labor in the one and undivided control by a single workman in the other." In even the smallest furniture plants now, the design is generally procured from an outside source (which may have little notion of the processes of manufacture) and produced by workmen who perform different parts of the operation. Many of the evils of contemporary furniture design may be traced to this separation of the creative mind from the materials and processes of production.

Typical of the most advanced kind of furniture factory is the Heywood-Wakefield Company of Gardner, Mass. In the furniture division of this plant, which works with solid wood rather than veneers machinery is used for almost every operation, and the furniture in production is carried from one part of the factory to another on hooks from a continuously running overhead conveyor cable. This is used simply as a method of transportation and should not be confused with the conveyor belt of an automobile production line on which the automobile is actually assembled as it moves.

The photographs and samples shown here demonstrate a few processes which are common to most furniture factories. An average piece of furniture goes through nearly a hundred separate operations before it is finished. Only a dozen or so different machine processes are shown in these illustrations, but each is typical of many similar ones. Although characteristic, the construction methods shown in these photographs are not the only ones in use, and fresh design often springs from a new idea of construction. As an example to start with, the three-drawer chest design by Craig and Hatfield for the Museum's competition is taken to show some of the early stages of production.

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Dear Mrs. Twining -
 I checked this back downstairs - and made
 a few corrections in pencil - L.S.

BLUE PRINT:

The drawing submitted to the manufacturer ^{may be} made up a blue print, such as the one shown. This is submitted first to the superintendant of the experimental and development department of the plant who goes over it to check the construction and make sure that it is detailed correctly for the machinery available in the plant. A preliminary cost estimate is also made at this stage. The design, having been cleared through this check-up, is passed on to the sample department, where a competent sample maker constructs a full size model under the supervision of the superintendant, the designer, and the detail man.

DETAIL MAN:

From the study of the full size model, design changes are determined and cost accurately figured. Because of the numerous separate operations and the many different parts which make up the chest, it must be studied by a detail man, who makes a "rod". This rod is a full size detail drawing on a wooden plank, and contains complete information for construction of the piece. All dimensions for all parts are taken by measuring against the drawing on the rod. By doing this, rulers or scales are dispensed with, and the chance for error in dimensioning becomes much less. Besides, the measurements as shown on the rod remain constant, since it expands and contracts at the same rate as the wood of which the chest is being made. The blue print cannot be used for this since paper expands and contracts in varying weather enough to throw measurements far off, and in use in the plant would be easily torn or destroyed. This rod not only shows all parts in full size, and the manner of joining them, but also contains a complete cutting bill for each part. Photograph 1 shows the detail man at work drawing the rod for this chest. The actual rod, with drawing on both sides, is also displayed.

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3 Or ate for arm chair -
SHELL AND SPRINGING SOFA UNITS

The photograph at right shows the full size plaster shell from which the mold for the sectional sofa unit was made. The compound curved form at the sides of this chair gives stiffness to the shell which must resist the thrust of the springs. The plaster form is shown here sitting on a construction which was used to determine the correct location of the springs in the shell.

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BASKELITE

The ~~main~~ shells for these chairs are built up of thin strips of wood bound in a bound together with a plastic glue. ~~Woodstripanana and logs~~

~~maintained~~ In order to get the wood, logs are rotated between knives or saws which remove large ~~sheeted~~ thin sheets of wood. Flaws must be cut from these sheets in the machine shown above, and they are then sliced into strips

TRIMMING FLAWS FROM VENEER

The ~~main~~ form of these chairs is ~~main~~ built up of thin strips of wood and layers of a plastic glue which join under heat and pressure to form a structural shell. The wood is cut from logs ^{by rotating them} ~~which are rotated~~ under sharp knives or saws, ^{and in this way cutting off} ~~providing large~~ thin sheets of wood. Flaws are ^{eliminated} ~~cut~~ from these sheets in the cutting machine shown above. ~~main~~ Strips of the proper width are then cut off.

The glue ~~main~~ also comes in large sheets which must be cut to the required size. This glue is Bakelite Resibond, and is a plastic binder

CUTTING GLUE SHEETS

In order to bind together the many wood strips in a compound form, a plastic ~~main~~ glue Bakelite Resibond, is used. This also comes in large sheets which are cut to strips of the required size. Rolls of this glue are ~~main~~ being spread out and cut in the machine shown above.

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If line is too long use

(WOOD)

GLUE SHEET BETWEEN (MAHOGANY AND POPLAR) PLIES

For these chairs, the wood and glue strips are laid up in ~~the~~ cast iron molds.

~~is~~. The method ^{of binding the plies together} is similar to that used in the making of flat plywood.

Layers of wood are separated by layers of glue, and the wood is placed to have its grain running in opposite directions in alternate plies. In this way, when ^{heated and} pressed, it becomes a new ^{and} uniform material which has no grain and which can take stresses in any ~~direction~~ direction.

The actual joining of the wood and glue may be done in a number of different ways. ~~One of the most common is the~~

ELECTRIC PHENALOID PRESS

The joining of the wood and glue depends on the application of heat and pressure, and this may be done in a number of different ways. The electric phenaloid press shown above is used for comparatively flat work, such as trays.

STEAM PRESSURE TANK

A second system, ~~for~~ for the making of compound curves, is the use of a steam pressure tank such as the one shown in the photograph above.

The parts to be glued up are put in the tank, which is ^{then} shut and bolted so that it will maintain the internal pressure required.

When the shell, whether of tray or chair, is removed from the press, it has rough edges. These must be trimmed off according to the design. In the photograph above, a tray is being routed.

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TRIMMING OF EDGES

⑥ When the shell is removed from the press or steam tank, it has rough edges which must be trimmed to the desired shape. In the photograph above, a moulded plywood tray is being routed. The chair's shells also come out with rough edges which are cut to the final form.

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4,

Overstuffed armchair

Cathedral Sag-, genus Amer. w. weight
 when fully matured, 60 lbs. - Habitat of the
 American home. Jeopardy little children, small
 change, pencils, & pens, binoculars, clips, ear-
 rings, scissors, hairpins, various flat &
 round objects. 35 lbs. for extinct.

The criny chair drgs by S. & E.
 demonstrate a tendency common to
 mod. furn. chs. All furn. is getting
 lighter. This tendency ~~derives~~ ^{derives} not only
 from the need to keep the weight and bulk
 of our furnishings down as we live
 in smaller areas, but is also the natural
 result of new techniques & new materials.
 Refinement of chair design involves the
 economical & imaginative use of materials.
 While primarily concerned with shape - various
 stages of the lightening process are shown
 in these 11 panels. Sag. The chair
 frame is stripped of its covers to
 show what goes on inside and substituted
 with a new design. The seat chair
 The last is generally intentional & not
 the result of clumsy technique.

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This frame (without legs) contains
 31 separate pieces of wood, almost all
 of different shapes. These are secured
 or glued together in a rigid & heavy
 construction, and thick burlap is
 stretched to take the 10 springs which
 must be placed to the seat. Two helical
 springs with a large piece of baling
 wire are still needed to support the
 center ^{section} of the seat's springs -
 The back contains 8 separate
 springs braced in a heavy webbing.
 Then all these springs are tied & braced
 against each other & the frame. On top
 of all this must still be applied a fiber pad
 a load of hair & further cotton padding
 before the upholstery material can be put on.
 The final frame without legs weighs
 45 lbs. - Furniture of this sort is hard
 almost entirely by hand process & the
 workers have become so skilled in putting
 this chair together by hand labor that it
 can still sell at a reasonable price.

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XI

2" long x 9 1/2"



Prelim

photo 2

Box planing

The rough lumber, dried + conditioned + with its moisture content carefully reduced to a definite pt. ^{over} ~~cut~~ to a planer + it is passed thru a rough planing machine which takes a slight cut from each side of the board -

cutting -

3

The width then spots imperfections such as stains, knots, mineral marks & checks & cuts them out as it saws the boards into required lengths -

4

Adjustable stops are used so that the board can be automatically cut to the right length - The squared off boards are then taken on a conveyor belt to be sorted out -

second planing

5

After sorting the boards are passed thru a surface planer - to take out any warp or twist and give a double check for imperfections -

Typical

6

Shelf - For large surfaces such as tables boards must be put edge to edge - This is done in the endless rotating planing clamp which keeps the piece just under pressure until it is hardened and becomes stronger than the wood itself -

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Shaping edges -

7 - A large double end tenoner moulds or cuts edges in any shape on boards up to 8' in length.

8 - ~~For~~ Drilling & holes - This multiple boring machine of the oscillating type has six adjustable drills which can all operate at the same time.

9. Shaping - A shaper consists of slowly rotating blades which may be set in relation to fixed blocks so that a board shaped along the blocks will have its edges shaped in any required shape -

10. Sweeping - This machine sweeps ends of flat boards and may be adjusted to any shape of knife -

11) Steam press bending - In steam press beds solid wood into shape for chair bands arms etc. Many forms beside the standard form are obtainable in all types -

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9/12

XIII

Sanding is one of the very important machine processes. At last part pass thru a bed sanding machine, as pictured in 1. This is a 3 ^{drum} machine and the wood passes in and out the other with both sides sanded.

Another machine called a belt sander is used for polishing, or for sanding irregular pieces which cannot be done on a bed sander. In this case a continuous belt of sand paper runs over the wood piece & is pressed against it with a block by a roller. 2/
The bed sander may not be used on completed pieces of furniture - 3.

Finishing

- 1/ 5 consecutive stages in the application of finish to wood used for Craig & Hatfield furniture. Above natural birch before a finish.
- 2/ Since natural birch turns yellow as it ages, the first stage is the application of a bleaching agent which counteracts the stains in the wood that cause discoloration.

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- 3) Application of a coat of lacquer to seal the pores of the wood.
- 4) On top of a seal coat, a final coat of lacquer is sprayed. In this case the less lacquer was used.
- 5) As a final step the wood is rubbed and polished to bring out a best surface -

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XII

Joints -

On this panel are shown four typical joints. Many other methods of joining wood are in use, but these are characteristic -

Joint 1 is a very common mortise & tenon

Joint 2 - is exactly the same joint but has a rounded mortise & tenon -

Joint 3 shows a system of joining. It comes in a C + H chest and other pieces - A ribbed joint is different to make strong, and in this case a system of counter sunk screws has been devised - The holes are plugged with wood dowels in the finished piece - Other methods of making a joint as it is are shown in the dig -

Joint 4 shows a method of attaching a chain leg to other members of the frame by means of dowels & a diagonal block which is screwed on as a brace -

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These samples show 2 kinds of 10" strips
 machine made joints for drawers -
 At the top is an example of
 longitudinal dovetailing, below it
 an example of multiple dovetailing.
 Both are based on an ~~simple~~
 interlocking system, and are cut by
 a simple machine process. All joints
 are as they are joined thoroughly -

Some of the operations of drawer assembly
 are shown in the illus - 1 shows the first
 operation where the dovetail joints are
 $3" \times 10"$ ~~joined + joined~~ + the boards slid
 into grooves, which finally hold it in
 4 sides when the board is in -

2 shows the 2nd operation in which the
 worker is placing glue blocks spaced
 properly to insure straight. A recent
 $3" \times 10"$ development is a center guide,
 which has been developed to
 make drawers run smoothly.
 As which may be seen on the
 bottom of the drawer in 2. The slot
 at the guide fits a pin in the
 case.

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NO Competition block

On the 1st of October, 1940, the
Museum

The unit by Thomas & Co. - a the
floor directly on an 18" high base with
removable legs - This base board may be
used for any 2 or 3 units in combination
to form a base - A plain board is to be the
upper layer for the 3 units -
The legs are attached to the ends of the
board on sides of which are covered
by the moulded case - The board shown here
is cut to the 2 unit length

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The case for the by SAA & IAN can
 be principle of standardization further
 than a one group yet provided in the
 country - the bases^a which these units rest are
 13" high & are in length to hold 2 3 or
 4 units. And as well be used in
 combination to make large groups as
 well.

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~~IV A Chair~~



The most Advanced of all these systems appears in a group of chairs by S. + S. An ordinary chair has one or two seats + a back which supports the body at 2 or 3 pts. In a case of a round large upholstered chair the body sinks into a general softness until it reaches support. The principle in these chairs by S. is that of continuous contact + support, with a thin rubber pad for softness at all pts. The shell is formed of strips of veneer + glue laminated in a cast iron form by a process developed by the Harkette Corp. - In this way more comfortable support is secured with a minimum of material, and the finished chair, the construction of which is shown, weighs 20 lbs. as compared with the 45 lb. S.A. -


As we studied this group of shell chairs is an important step in chair design. It can be seen by comparing the finished chairs with the drawings drawn - which had indicated

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to go to Ad. At this stage to be -
 The int production. A special
 int he was to expose a window on the
 backside in any case. Because of
 the complicated compound curves, it
 was not found possible yet to secure
 a finished surface without flaws,
 except in the case of a side chain -
 Surface of 3 layer wood-bamboo
 fabric applied to the back -
 The air design called for the use of
 very thin metal lips, attached to
 the shells by a special rubber weld
 joint. This had to be abandoned
 because of metal shortage. The
 drawing showed a very close edge
 of rubber upholstery, attached so that
 the edge of metal was exposed. Further
 study will be needed to work out a method
 for using this detail and for getting the edge
 of the shell finished enough to expose the
 the difficulty of his son still to overcome,
 and use chains as first proposed will be
 expensive. The principle governing is sound,
 and it is reasonable to expect that with
 development these chains will be further refined
 & will be an intricate piece of work -

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✓

 In A chair by Mies van der Rohe + ~~Marcel~~
 A minimum spring arrangement has been
 used with A thick rubber pad - R
 This case The rubber seat rests on A
 system of steel straps with helical
 springs in a rigid frame - R R back
 R rubber alone is adequate, even though
 R the is shaped only two-dimensionally to
 fit R human body -

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✓
II.

A tremendous step ~~forward~~ toward simplification + lightness is the introduction of a new type of spring, shown on the rigid frame at the ^{top} left. Here the webbing + hand tying can be dispensed with, since the springs are attached directly to the wood frame, which can then be lighter. The form of the back is determined by the flexing of the spring to its extreme positions. This lighter frame + new spring system, as shown at the left have been utilized by Craig + Hatfield in some of their designs.

A still more advanced step is represented in the sectional wall- by Sarr + S. ^{100% left} ~~At the~~. Here the rigid + built-up wood frame is replaced by a thin laminated steel slat board veneer shaped to take the thrust of the springs on seat + back and braced with wood strips at the points where these springs are attached. Instead of bulky stuffing from which has been used here a top slat the springs. This excellent material comes in various grades of softness + provides a very comfortable seat in combination with springs or even alone.

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030333

The detail man then cuts pieces out of the rod and
sends him down to the manager

The detail man then cuts up the
rod and sends it down to the manager

look at Ham's book
make two
number photo -
make first panel -

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In the quantity production of furniture by machine methods, two tendencies are noticeable. First, there is a

In the quantity manufacture of furniture, there is a natural tendency toward standardization. In design, *both these tendencies are* this is reflected particularly in the development of unit furniture, some examples of which are shown in this exhibition. In the case of the Saarinen units particularly, the top, bottom, and sides of all the different units are made absolutely standard, and so can be turned out "mechanically". The variation in them ^e depends on the different ways of ^{completing} finishing the interiors ¹ of the cases. In some are shelves, in some are drawers, some have cabinet doors applied, and so forth.

In the quantity production of furniture by machine methods, there is a tendency to eliminate decorative motives or ornamentation which is not suitable for the machine. There is also a tendency toward standardization of parts, as far as possible, so that the product of a single machine operation may be used in as many ways as possible, and so that there may be a minimum number of separate parts to manufacture.

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AD
up 121
Koyalon Foam Cushioning is made of genuine liquid latex. The latex together with necessary chemicals, is transformed from its original state into a cream like foam which is poured into moulds of any desired size and shape. It is then vulcanized and cured by heat into its permanent form. Air constantly circulates through the cushion making it cool, comfortable and clean. It is the scientific use of this material that gives these cushions their resiliency and durability. It is comfortable, sanitary and self ventilating, it keeps its shape permanently and does not sag or pack down at the edges or in the center.

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*Re-vamped
for sale to
Australia*

In October, 1940, the Department of Industrial Design of the Museum of Modern Art in New York inaugurated and Industrial Design Competition for the 21 American Republics.

The design categories included furniture for a living room, a dining room, a bedroom, for a one room apartment and outdoor living for a terraces or porches. Prizes were also given for movable lighting equipment, printed fabrics and woven fabrics. The ~~results of this~~ from

~~competition~~ winning designs in this competition were then actually put into production. *In September* On October 26 (?) 1941 this furniture etc. ~~was~~ *these pieces*

Spent put on exhibition in the Museum ~~xxxxxx~~ and on ~~the market~~ *sale* in a number of leading department stores throughout the country.

Small amount ~~In~~ the following exhibition "MANUFACTURING MODERN FURNITURE" is one section of the ~~large~~ *original competition* exhibition held at the Museum of Modern Art.

It illustrated different manufacturing processes adapted to the production of modern furniture with actual photographs taken in the plants where this competition furniture was being developed and worked out.

It ~~de~~ als principally with the work of ~~three~~ *four winning architects* winners in the furniture category: Craig and Hatfield of New York, Saarinen and Eames of Detroit, ~~and~~ Nicholson and Maier of New York and Stonorov and von Moltke of Philadelphia.

*Have put
for
Australia* For further information regarding ~~this competition~~ this furniture see the catalog which accompanied this exhibition when show at the Museum and entitled "Organic

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

INSTALLATION LIST

MACHINE PRODUCTION OF CASE WORK

Machine production of case work involves the use of a variety of machines and processes to create the various components of a case. The process begins with the selection of the appropriate wood and the cutting of the pieces to the required dimensions. The pieces are then joined together using a variety of techniques, including glue, nails, and screws. The final product is a sturdy, functional case that can be used for a variety of purposes.

The machine production of case work is a highly efficient and accurate process. It allows for the production of large quantities of cases in a relatively short period of time. The use of machines also ensures that the pieces are cut to the exact dimensions required, resulting in a high-quality final product.



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PRELIMINARY OPERATIONS



TYPICAL MACHINE PROCESSES



- Panel #8 Trimming flaws from veneer
Cutting glue sheets
Glue sheets between mahogany and poplar plies
- Panel #9 Electric phenaloid press
Steam pressure tank
Trimming of edges
- Panel #10 Machine production of case work
Quantity production
Blue print
Detail man
- ? (#10a) — Red — *Recovered rubber?*
- Panel #11 Preliminary operations
Typical machine processes

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	CE	II.1.73.5

MACHINE PRODUCTION OF CASE WORK

The machine production of case work is a process that involves the use of specialized machinery to create the components of a case. This process is typically used for the production of large quantities of cases, such as those used in the construction of industrial buildings or for the storage of materials in a warehouse.

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PRELIMINARY OPERATIONS



TYPICAL MACHINE PROCESSES



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INSTALLATION PHOTOGRAPH: PANELS ~~VIII-X~~ ^{X + XI}

Manufacturing Modern Furniture exhibition circulated by The Museum of Modern Art, N.Y.C.

Del

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by Soichi Sunami. If reproduced, credit
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Images from the book
The first of the two photographs shows a man standing next to a large, flat, rectangular object, possibly a piece of machinery or a large sheet of material, outdoors. The second photograph shows a man working on a large, flat, rectangular object, possibly a piece of machinery or a large sheet of material, outdoors.



Images from the book
The first of the two photographs shows a man standing next to a large, flat, rectangular object, possibly a piece of machinery or a large sheet of material, outdoors. The second photograph shows a man working on a large, flat, rectangular object, possibly a piece of machinery or a large sheet of material, outdoors.



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INSTALLATION PHOTOGRAPH: PANELS ~~VIII~~ + IX

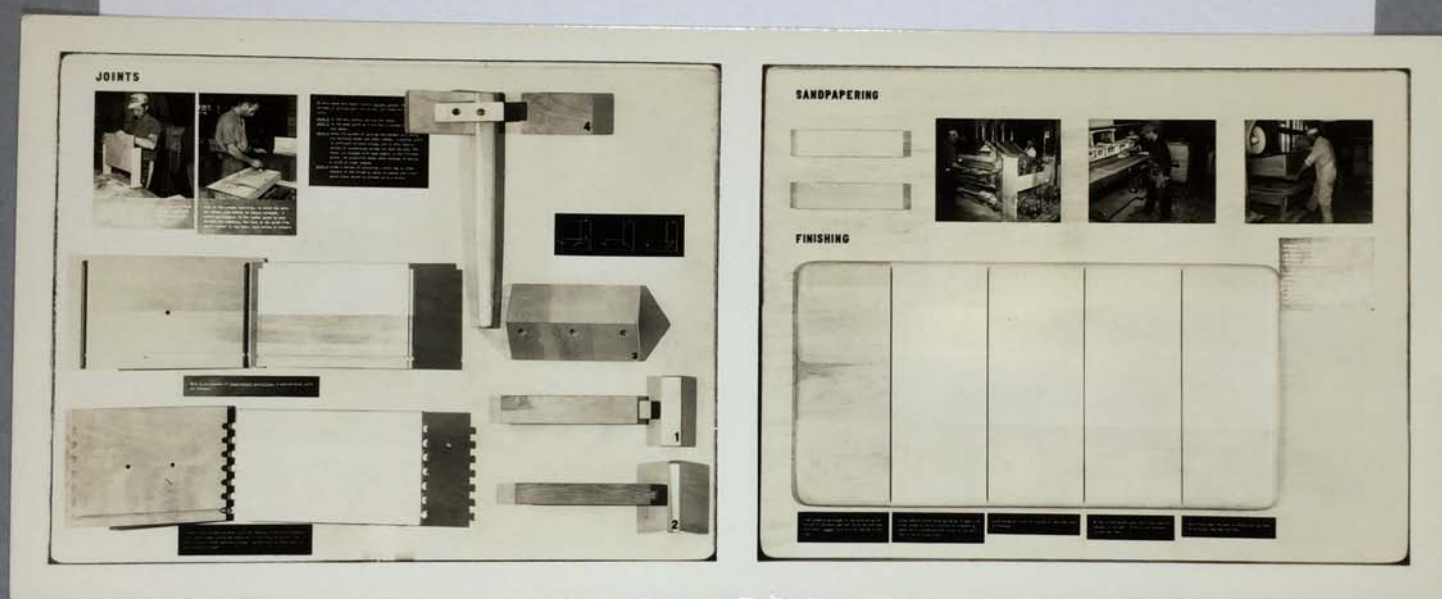
Manufacturing Modern Furniture exhibition
circulated by The Museum of Modern Art, N.Y.C.

Don

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INSTALLATION PHOTOGRAPH: PANELS XII & XIII

Manufacturing Modern Furniture exhibition
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Ree

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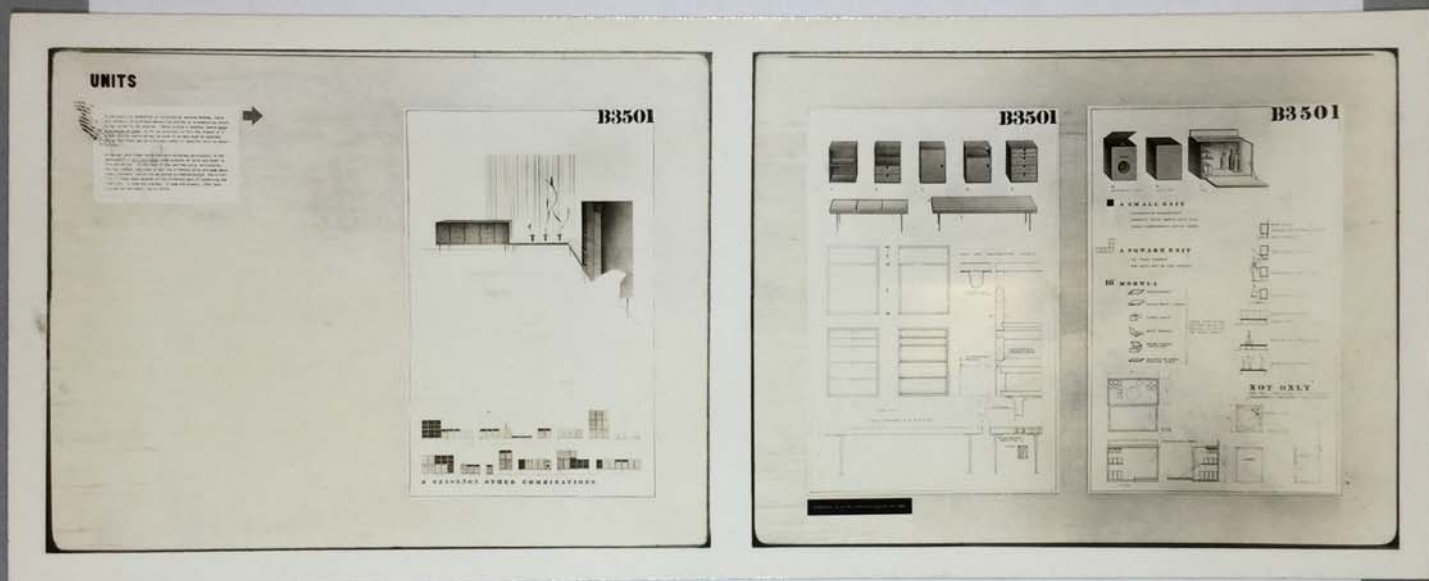
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INSTALLATION PHOTOGRAPH - VIII

Manufacturing Modern Furniture exhibition
Circulated by The Museum of Modern Art, N.Y.C.

FOCUS NO.

1001

#6

Reel

S-3642

Photographs for The Museum of Modern Art
by Saichu Saomai. If reproduced, credit
must be given The Museum of Modern Art.

11914-22

21

110

1335.1

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INSTALLATION PHOTOGRAPH: PANELS IV & V

Manufacturing Modern Furniture exhibition
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UNITS

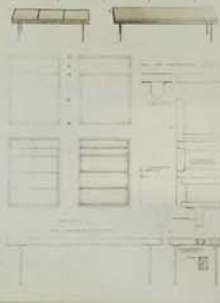
→

These units are designed to be used in a variety of ways. They can be used as a single unit, or they can be combined to form a larger unit. They can be used as a storage unit, or they can be used as a display unit. They can be used as a desk, or they can be used as a table. They can be used as a chair, or they can be used as a stool. They can be used as a lamp, or they can be used as a clock. They can be used as a mirror, or they can be used as a picture. They can be used as a shelf, or they can be used as a cabinet. They can be used as a drawer, or they can be used as a door. They can be used as a handle, or they can be used as a knob. They can be used as a hinge, or they can be used as a latch. They can be used as a lock, or they can be used as a key. They can be used as a handle, or they can be used as a knob. They can be used as a hinge, or they can be used as a latch. They can be used as a lock, or they can be used as a key.

B3501



B3501



B3501



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INSTALLATION PHOTOGRAPH: PANELS XIV & XV

Manufacturing Modern Furniture exhibition
circulated by the Museum of Modern Art,
New York City

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MANUFACTURING MODERN FURNITURE

An exhibition circulated by The Museum of Modern Art, New York City

I N S T A L L A T I O N L I S T

Title Panel

Introductory label - *missing* -

- | | |
|-----------------|--|
| Panel #1 | Chairs: Overstuffed Chair
The Winning Drawings |
| Panel #2 | A tremendous step forward..... |
| Panel #3 | In the chairs by Nicholson and Maier |
| ? (#3a
Label | Chair with half the upholstery stripped off |
| Panel #4 | Photographs of original drawings by Saarinen and Eames |
| Panel #5 | Photographs of original drawings by Saarinen and Eames |
| Panel #6 | Study of Form
Full size model
Setting the legs |
| Panel #7 | Recording form of chair
Crate
Shell and springing sofa units |
| Panel #8 | Trimming flaws from veneer
Cutting glue sheets
Glue sheets between mahogany and poplar plies |
| Panel #9 | Electric phenaloid press
Steam pressure tank
Trimming of edges |
| Panel #10 | Machine production of case work
Quantity production
Blue print
Detail man
<i>Remove red rubbers?</i> |
| ? (#10a | Red |
| Panel #11 | Preliminary operations
Typical machine processes |

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Panel #1

Panel #1

Panel #1

THE COMPLETE TIME AND MONEY SAVING REPRODUCTION SERVICE



230 PARK AVENUE
60 EAST 42nd STREET
485 MADISON AVENUE
480 LEXINGTON AVENUE
30 ROCKEFELLER PLAZA

PLaza 5-4700

R 02613

DATE Nov 4 1941

TERR. 11

THE MUSEUM OF MODERN ART

Date May 21, 1945

Elodie

To:

From: Margaret

Re: Manufacturing Modern

Furniture

There is one detail I slipped up on, and have just noted on the Check List I checked this show with: the Introductory label was missing. ~~Was~~ Is this an essential item now? In the attached working folder - do you recognize which was the final "copy" for it? Was it in the usual form - large type? Shall we wait and see if David Jones inquires for it, or have one made and send it to him. or type out copy for him to have it made there?

Just copied and given J. Gordon 6/1/45. All printed notes on to send to David Jones. Sydney, yellow paper page 1.

This is to certify that the merchandise listed in this invoice has been produced in accordance with the Fair Labor Standards Act of 1938.

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[illegible]

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Actual	Fu
3	Saarine
2	Saarine
1	Saarine
	Saarin
2	Stonoro
1	Stonoro
1	Hatfiel

READY REPRODUCTION SERVICE
RUSSO
READY REPRODUCTION SERVICE

PLaza 5-4700

R 02794

DATE July 12 1941

TERR. 14

SOLD TO

CUSTOMER'S ORDER No. _____

PRODUCTION ORDER No. _____

ART ORDER No. _____

[illegible]

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The Museum of Modern Art Archives, NY

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-2-

Panel #12 Joints
Panel #13 Sandpapering
 Finishing
Panel #14 Units: 1 drawing
Panel #15 2 drawings

Actual Furniture

3 Saarinen cases (#1, #2, #3)
2 Saarinen benches
1 Saarinen dining room chair
Saarinen model room
2 Stonorov cases (#1 and #2)
1 Stonorov bench
1 Hatfield chest (hang under Panel #10)

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THE

Substitutions made: 5/45

S-3423 - 18x30

9a Saarinen + Eames - Chairs +
Unit furniture

10a - Craig + Hatfield Chest
S-3429 - 18x18

13a Stonorov + Von Moltke units

S-3447 - 18x18

To:

From:

Dear Mr.

Since n
opportu
Carson

On April
bench)

know immediately as a member of the staff (I) did. He replied that he would like to have them: later said that he would like to see them first.

I have written him several times during the summer and finally sent him an ultimatum last week, since his indecision was causing you, the recording room (where the furniture is stored) and me (who was still living out of suitcases hoping that there was a chance of getting the dressers) - considerable inconvenience.

He has now replied to this ultimatum - but three days late and saying that he would like the dressers sent to someone else. Since he has been so uncooperative and the furniture is not for his own use, I trust it will be all right with you if I buy it.

Yrs,

Anne T.

P.S. The bill that was made out to Stonorov included a packing charge of \$3.00, which I will pay if it is too difficult or late to change your books.

Min. Remin. telephone + Min. Vlasov's etc.

EBM note.

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

THE MUSEUM OF MODERN ART

Date August 30, 1943

To: Miss Ulrich

Re: Story of Stonorov furniture

From: Anne Tredick

Dear Miss Ulrich:

Since none of the designers of Organic Design furniture had been given an opportunity to buy their furniture when the large exhibition closed, ~~Miss~~ Carson offered them first the furniture left from the small circulating show.

On April 22nd she wrote Mr. Stonorov about a cabinet set (two dressers and a bench) saying that if he didn't want them for his own personal use to let her know immediately as a member of the staff (I) did. He replied that he would like to have them: later said that he would like to see them first.

I have written him several times during the summer and finally sent him an ultimatum last week, since his indecision was causing you, the recording room (where the furniture was stored) and me (who was still living out of suitcases hoping that there was a chance of getting the dressers) - considerable inconvenience.

He has now replied to this ultimatum - but three days late and saying that he would like the dressers sent to someone else. Since he has been so uncooperative and the furniture is not for his own use, I trust it will be all right with you if I buy it.

Yrs,

Anne T.

P.S. The bill that was made out to Stonorov including a packing charge of \$3.00, which I will pay if it is too difficult or late to change your books.

Mr. Paris telephone + Mr. Ulrich's etc.

EBM - de

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Storage

ce hff Mod Furn
circ.

September 1, 1943

THE MUSEUM OF MODERN ART

Date Dec 6 -

To: EC

Re: Manufacturing

From: M.J.

Modern Furniture

Good

Right & no
sent

I checked this at Lincoln Storage today -
it is in almost perfect condition -
looks like a brand new show. just
a little gluing of photo is needed -
However, I do not find the 4 crates
of furniture - these must have been
disposed of? as you did not list it (over)

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Storeroom

ca 1880s Mod Furn
circ.

September 1, 1943

when you inspected the contents of
54th St. preliminary to sending
to Lincoln -

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	CE	II.1.73.5

Stonorov

ce hffs Mod Furn
circ.

September 1, 1943

Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Pa.

Dear Oscar:

Sorry to disappoint you and Mr. Crowell, but the dressers and bench were sold before your postcard came; my letter really was an ultimatum. I have just called the Red Lion Company hoping that they might have some of your cabinets left. They said every piece of Organic Design furniture had been sold.

In case you haven't heard any Mock news recently, Mudi is very happy about his job with the O.W.I. Right now he's studying in New York - expects to be here a month, perhaps two, before being sent overseas.

Regards,

Anne Tredick
Department of Industrial Design

at:t

any in consideration. Thanks for looking
to hffs to long.
regards
Stonorov

The Museum of Modern Art Archives, NY	Collection:	Series/Folder:
	CE	II.1.73.5

Friday

Dear Ann,

Please send the Furniture to

MR. LUCIUS CROWELL

R.D.2 PHOENIXVILLE PA.

Express Collect. I hope this does
not arrive too late for you to cause
any inconvenience. Thanks for holding
the stuff so long. regards

STONOROV.

Des

I b
and

Organic Design furniture; namely, two Stonorov cabinets and one
Stonorov bench.

If you do want them, please let me know by this Friday.

Sincerely,

Dear Mr. Stonorov:

Perhaps you've forgotten the tea dressers and hope that we've holding for

you. Please let us know soon whether you are

Anne Tredick
Department of Industrial Design

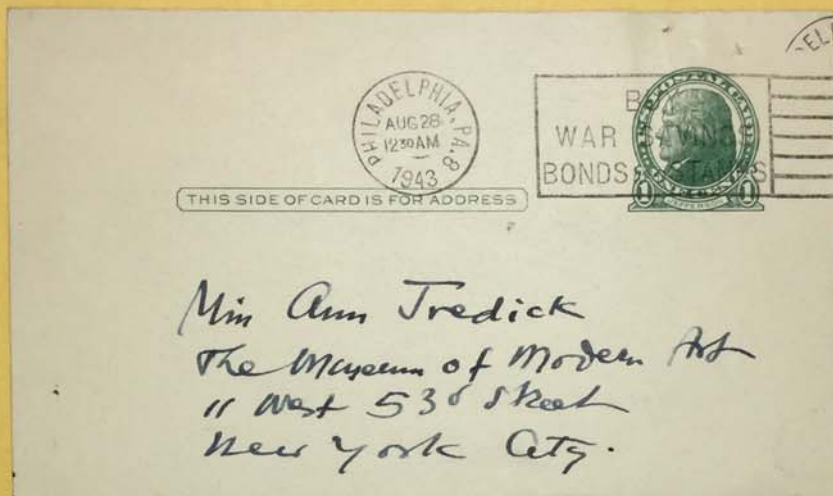
Sincerely,

Anne Tredick
Department of Industrial Design

Dear Mr. Stonorov
Bellevue Building
Philadelphia, Penna.
1910

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	CE	II.1.73.5



Organic Design furniture; namely, two Stenorov cabinets and one Stenorov bench.

If you do want them, please let me know by this Friday.

Dear Mr. Stenorov:

Sincerely,

Perhaps you've forgotten the ten drawers and hope that we're holding the

you. Please let us know soon whether you are

Anne Tredick
Department of Industrial Design

Sincerely,

Anne Tredick
Department of Industrial Design

Mr. Stenorov
Bulletin Building
Philadelphia, Penna.
19106

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

August 23, 1945

Dear Mr. Stonorov:

I have had special pleas from the Business Department and the packing and storing department to clear up the matter of the remaining Organic Design furniture; namely, two Stonorov cabinets and one Stonorov bench.

If you do want them, please let me know by this Friday.

Sincerely,

Anne Tredick
Department of Industrial Design

Mr. Stonorov
Museum Building
Philadelphia, Penna.
19106

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

August 12, 1943

Dear Mr. Stonorov:

The furniture's still here

Dear Mr. Stonorov:

and you may inspect it at any time. Shall

Perhaps you've forgotten the two dressers and base that we've holding for

you. We will until you decide to have it.

you. Please let us know soon whether you really do want them.

Sincerely,

Anne Tredick

Department of Industrial Design

Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Penna.
at:t

Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Pa.

Aug 27, 1943

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

OSCAR STONOROV ARCHITECT AIA

MAY 26, 1943

THE MUSEUM OF MODERN ART
11 WEST 53RD STREET
NEW YORK, N. Y.

ATTENTION: INDUSTRIAL DESIGN DEPT.

GENTLEMEN: THERE MUST BE A MISUNDERSTANDING IN REGARD TO THIS FURNITURE WHICH I DID NOT FORMALLY ORDER. I TOLD MISS GAYSON BEFORE SHE LEFT THAT I WOULD LOOK AT IT WHEN I WAS IN NEW YORK. UNFORTUNATELY I HAD TO LEAVE SOON. I TRUST THAT THE FURNITURE WAS NOT BEEN SHIPPED AS YET SINCE I HAD NOT BUY-
ING SAME.

Dear Mr. Stonorov:

The furniture's still here

and you may inspect it at any time. We'll
hold the bill until you decide about it.

DB19

SINCERELY YOURS,

Best regards,

Anne Fredick
Assistant

Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Pa.

May 27, 1943

BULLETIN BUILDING, PHILADELPHIA
TELEPHONE 7-1701

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	CE	II.1.73.5

OSCAR STONOROV ARCHITECT AIA

MAY 25, 1943

THE MUSEUM OF MODERN ART
11 WEST 53RD STREET
NEW YORK, N. Y.

ATTENTION: INDUSTRIAL DESIGN DEPT.

GENTLEMEN: THERE MUST BE A MISUNDERSTANDING IN REGARD TO THIS FURNITURE WHICH I DID NOT FORMALLY ORDER. I TOLD MISS CARSON BEFORE SHE LEFT THAT I WOULD LOOK AT IT WHEN I WAS IN NEW YORK. UNFORTUNATELY I WAS UNABLE TO DO SO. I TRUST THAT THE FURNITURE HAS NOT BEEN SHIPPED AS YET SINCE I WANTED TO INSPECT IT BEFORE BUYING SAME.

OS:S

SINCERELY YOURS,

Oscar Stonorov

BULLETIN BUILDING, PHILADELPHIA
TELEPHONE RITTENHOUSE 5845
L O C U S T 4510

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

Stonorov

OSCAR STONOROV ARCHITECT AIA

APRIL 26, 1943

THE MUSEUM OF MODERN ART
11 WEST 53rd STREET, NEW YORK, N. Y.

Date May 17, 1943

To: Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Penna.

Terms

Please make checks payable to Museum of
Modern Art and mail to Controller's Office

Order No.

1	#240 bedroom dresser w. drawers	18	36
1	#240 bedroom dresser with doors	17	95
1	#240 large base	7	63
		\$ 43	94
cost of packing, crating		3	00
		46	94

PLEASE MAKE CHECKS PAYABLE TO
THE MUSEUM OF MODERN ART AND
SEND TO CONTROLLER'S OFFICE

3-B-42-5M

BULLETIN BUILDING, PHILADELPHIA
TELEPHONE 3-1111

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	CE	II.1.73.5

Stonorov

OSCAR STONOROV ARCHITECT AIA

APRIL 26, 1943

MISS ALICE M. CARSON, ACTING DIRECTOR
THE MUSEUM OF MODERN ART
11 WEST 53RD STREET
NEW YORK, N. Y.

April 29, 1943

Mr. Oscar Stonorov
Bulletin Building
Philadelphia, Penna.

DEAR ALICE:

TRAVELING SHOW, PROVIDING RED LION WILL LET ME HAVE THEM - USED AS
THEY ARE - AT A

Dear Oscar:

THANKS EVER SO
SEEING YOU REAL

Red Lion will let us have the units for \$43.94. They
have been slightly abused in traveling - a loose hinge,
a crack in the plywood and a few scratches; but as they
are covered by Museum insurance, we will have them put
in good order.

OS:5

Will you let me know whether this price tempts you?

O.S.
Sincerely yours,

Alice M. Carson
Acting Director

ac:t

BULLETIN BUILDING, PHILADELPHIA
TELEPHONE 2-1555

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The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

OSCAR STONOROV ARCHITECT AIA

APRIL 26, 1943

MISS ALICE M. CARSON, ACTING DIRECTOR
THE MUSEUM OF MODERN ART
11 WEST 53RD STREET
NEW YORK, N. Y.

DEAR ALICE: I WOULD BE GLAD TO HAVE THE TWO BED ROOM PIECES OF THE TRAVELING SHOW, PROVIDING RED LION WILL LET ME HAVE THEM - USED AS THEY ARE - AT A FRACTION OF THE WHOLESALE PRICE.

THANKS EVER SO MUCH FOR YOUR FRIENDLY NOTE. I AM LOOKING FORWARD TO SEEING YOU REAL SOON.

OS:S

SINCERELY YOURS,

O.S.

BULLETIN BUILDING, PHILADELPHIA
TELEPHONE RITTENHOUSE 5845
L O C U S T 4810

The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

In 1940, the Department of Industrial Design of the Museum of Modern Art in New York inaugurated an Industrial Design Competition for North and South America. (see folder at right. - 1940)

The design categories included furniture for: a bedroom
a living room
a dining room
a one room apartment
outdoor living, on terraces or
porches
April 22, 1943
Other items given also were: notable lighting equipment
printed fabrics
woven fabrics

The designs submitted in this competition were then actually put into production. These finished products, chairs, tables, etc., were simultaneously put on exhibition in the Philadelphia, Penna. on sale in the leading department stores in the country.

Dear Oscar:

The little traveling show, Manufacturing Modern Furniture, one section of which is being broken up. In it there are two of your bedroom units on a base, one with drawers and one with doors. Would you by any chance want these? The last time we bought from Red Bion they let us have the pieces for 20% off the wholesale price and they might do it again.

Please let me know soon if you want these for your personal use as someone else wants them if you don't.

designs and pieces of furniture by some of the competition winners in the furniture categories, Martin Craig and Ann Hatfield of New York, Richardson and Eleanor Water also of New York, Eero Saarinen and Alvaro Eames of Detroit, Oscar Stonorov and Wille von Moitke of Philadelphia.

Sincerely yours,

For further information regarding this furniture see the catalog published by the Museum of Modern Art "Organic Design in Household Things". This furniture is sold at the following department stores:

Alice M. Carson
Acting Director

list.

aciat

The Museum of Modern Art Archives, NY	Collection:	Series.Folder:
	CE	II.1.73.5

In October, 1940, the Department of Industrial Design of the Museum of Modern Art in New York inaugurated an Industrial Design Competition for North and South America, (see folder at right. - *W.H.*)

The design categories included furniture for: a bedroom
a living room
a dining room
a one room apartment
outdoor living, on terraces or porches.

Prizes were given also for: movable lighting equipment
printed fabrics
woven fabrics

The winning designs from this competition were then actually put into production. In October, 1941, these finished products, chairs, tables, beds, lamps, fabrics etc. were simultaneously put on exhibition in the Museum of Modern Art and put on sale in the leading department stores in ~~the~~ *a number of* the large cities in the country.

The following exhibition "MANUFACTURING MODERN FURNITURE" is one section of the large exhibition called "Organic Design in Home Furnishings" held at the Museum of Modern Art. It includes:

illustrations of different manufacturing processes in the machine production of modern furniture with photographs taken in the plants where this competition furniture was being worked out and developed.

designs and pieces of furniture by some of the competition winners in the furniture categories, Martin Craig and Ann Hatfield of New York, *Bern ?* Nicholson and Douglas Maier also of New York, Eero Saarinen and *Ralph O.* Eames of Detroit, Oscar Stonorov and Willo von Moltke of Philadelphia.

For further information regarding this furniture see the catalog published by the Museum of Modern Art "Organic Design in Home Furnishings" This furniture is ^{also} sold at the following department stores:

list.