

TreProX: Innovations in Training and Exchange of Standards for Wood Processing

INNOVATION IN THE SWEDISH CARPENTRY, FURNITURE AND WOOD CONSTRUCTION INDUSTRY

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TREPROX WORKSHOP – SWEDEN - MAY - JUNE 2022



Erasmus+

Innovation in the Swedish carpentry, furniture and wood construction industry

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Definitions

Research:

money + competence (skills) = new knowledge

Innovation:

new knowledge + competence = money

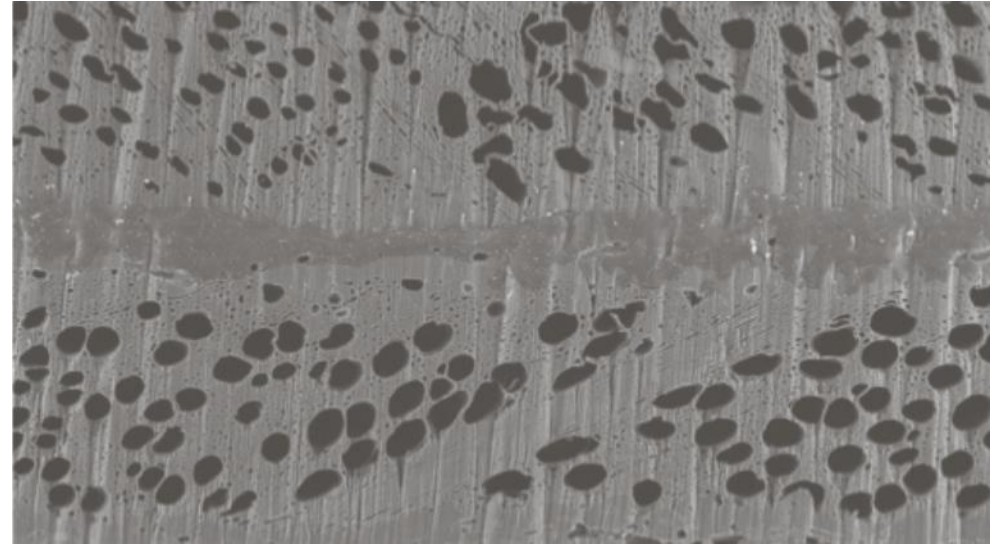
Background

- Laminated wood have been found in the tombs of the pharaohs
- The steam engine and other technical innovations made it possible to efficiently produce peeled and sliced veneer
- Thonet, Germany, Austria
 - Tested LVP.
 - Thonet No. 1 – 1850, solid wood bending
 - Thonet No. 14 – 1859, the first industrially manufactured chair

Michael Thonet
No.14 Chair

Adhesive

- Synthetic adhesive – 1920s
- Today
 - 80% of all wood products are glued
 - 70% of the world's glue production is used in the wood industry
 - substitute synthetic adhesive to reduce climate impact e.g.: soy protein and lignin based



Stockholm central station



HB-balken



De Havilland Mosquito

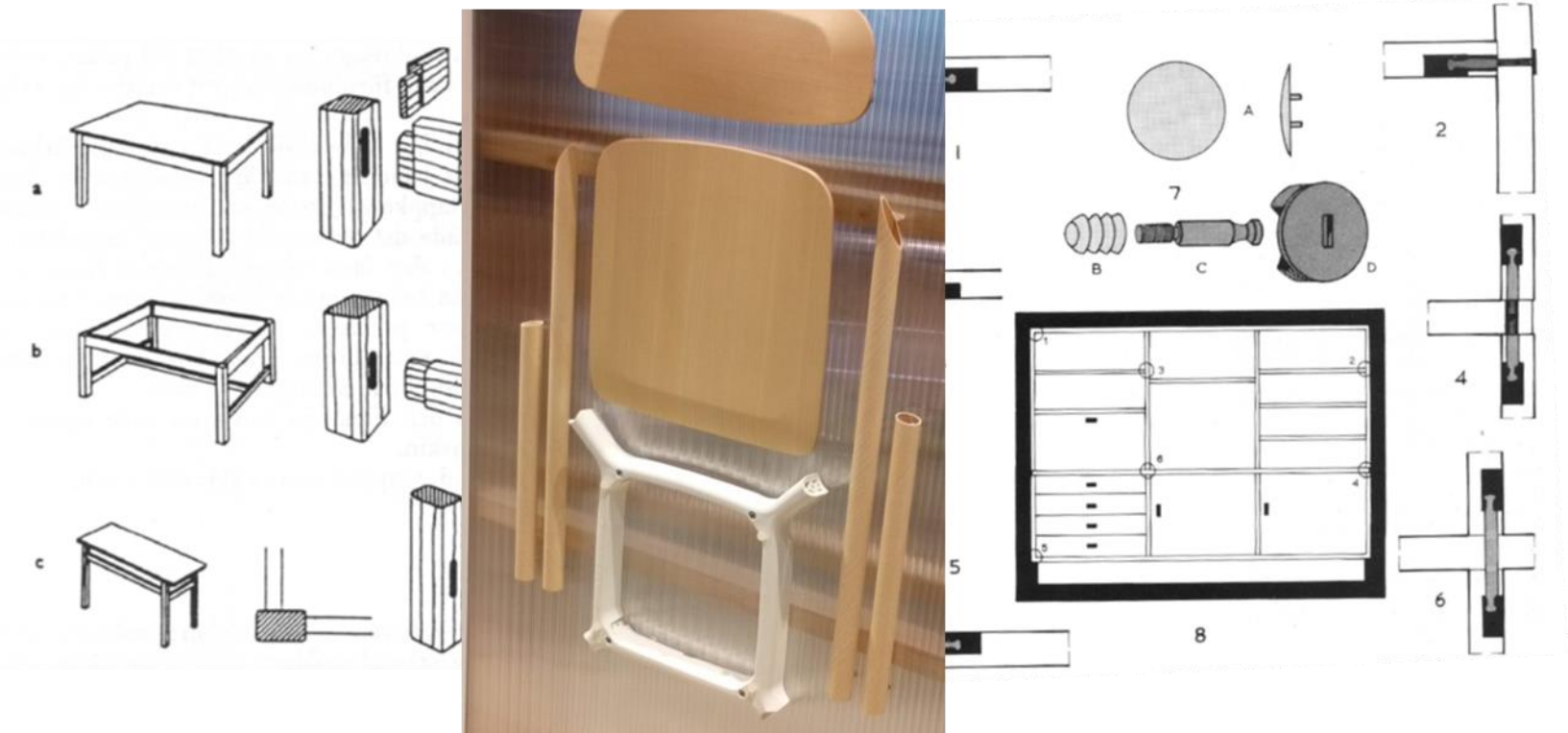
The Eames Lounge chair
Charles Eames and Ray Eames
Herman Miller

Series 7 chair
Arne Jacobsen
Fritz Hansen

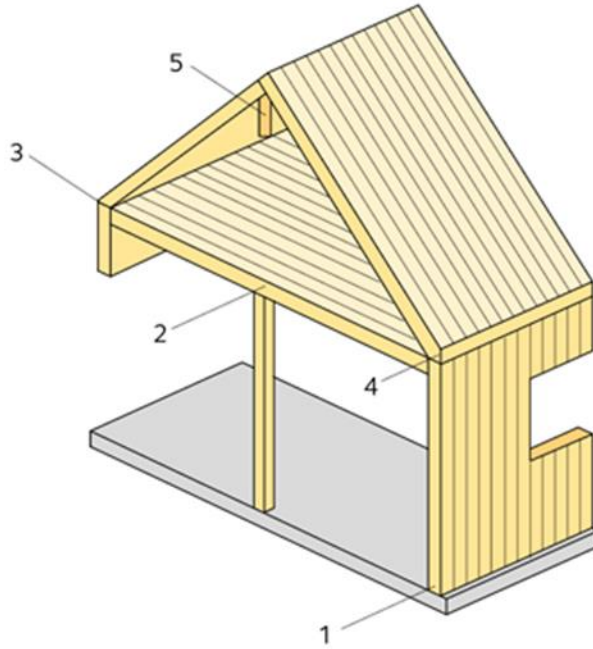
Poäng chair
Noburo Nakamuro
IKEA of Sweden



Furniture vs Building JOINTS

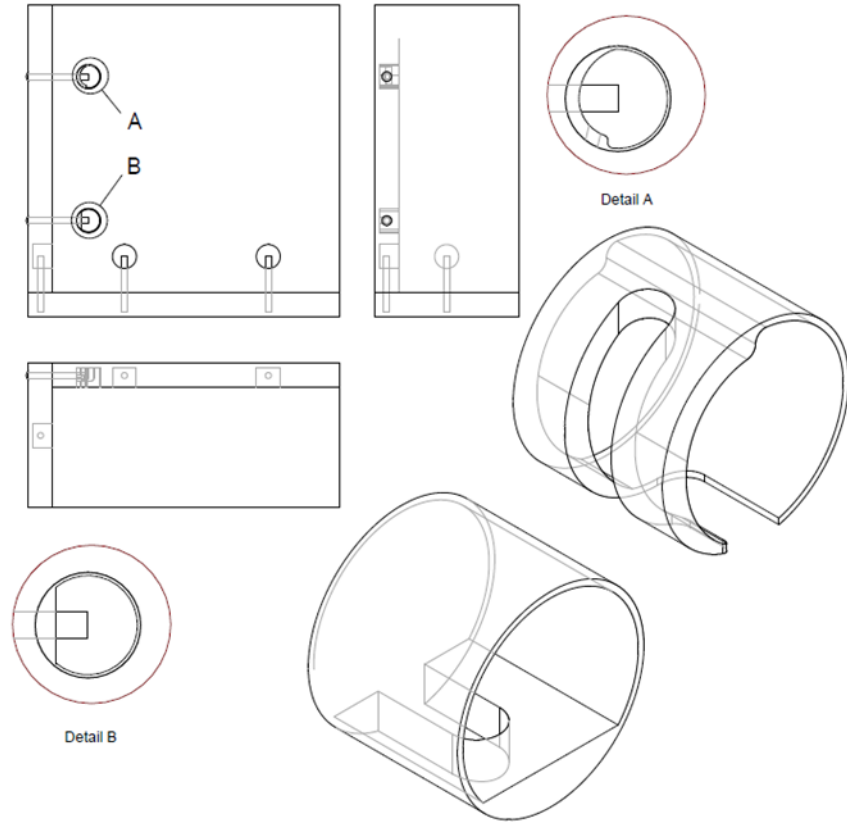


Furniture vs Building JOINTS

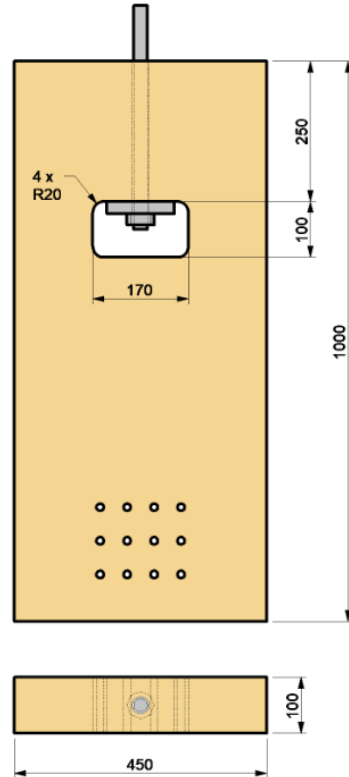


Concept

- Self-adjusting
- Hidden (partly)
- Demountable



Assembly connections on the construction site

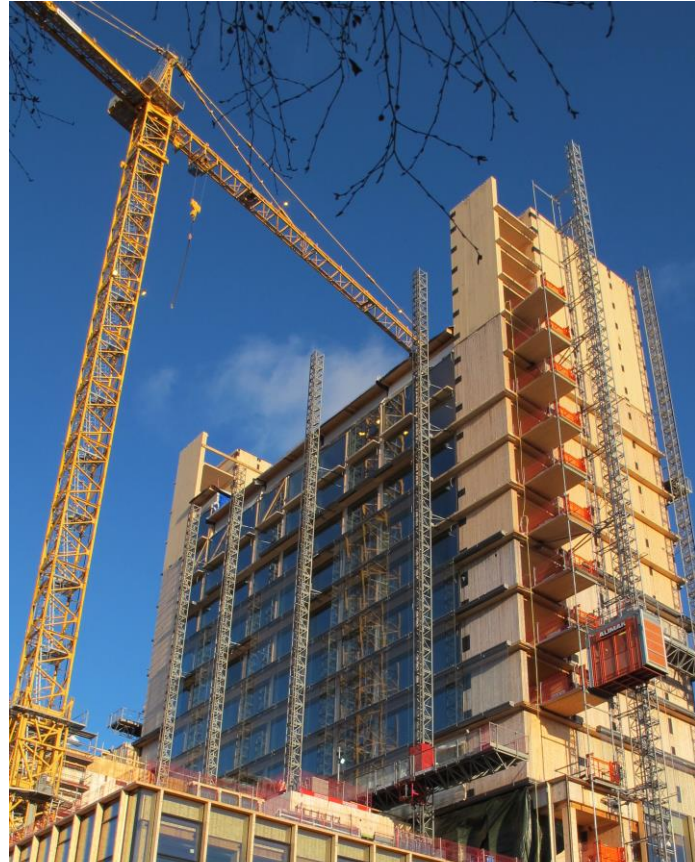


FUNDERS

- Kamprad Family Foundation

PARTNERS

- RISE
- KTH
- Södra Skogsägarna ekonomisk förening



Sara kulturhus



Cedar-houses









- Modular system for resource-efficient
- Easy-to-assemble wooden connections
- Connections with hardwood sheets (e.g. birch plywood) replacing conventional steel plate systems.
 - “environmentally friendly connection”
 - Relatively easy to assemble
 - Local wood
 - In-house material

Rational modular long-span timber structures



Funders

Produktion2030

VINNOVA

Swedish Energy Agency
(Energimyndigheten)

FORMAS

Partners

- Moelven Töreboda AB
- Moelven Limtre AS
- Rubner Holzbau S.R.L.
- Koskisen OY
- Säffle Verkstadsbolag AB
- KTH
- RISE
- Institute of BioEconomy
(IBE.Cnr)
- Dynea AS
- Innovatum

