

BUILDING OF THE LOUVRE, PARIS, 1670



**HANDHOUSE STUDIO**  
**HUMAN POWERED CRANE PROJECT**



# Construction Cranes









The Pierpont Morgan Library, New York. M.638, f.3

*Fig. 1. Detail of manuscript (Paris, 1250) illustrated by miniatures depicting Old Testament scenes. The fellow working the treadwheel keeps up his energy by eating fruit, but the hod carrier and the other laborers about to climb the ladder have an uncertain future.*



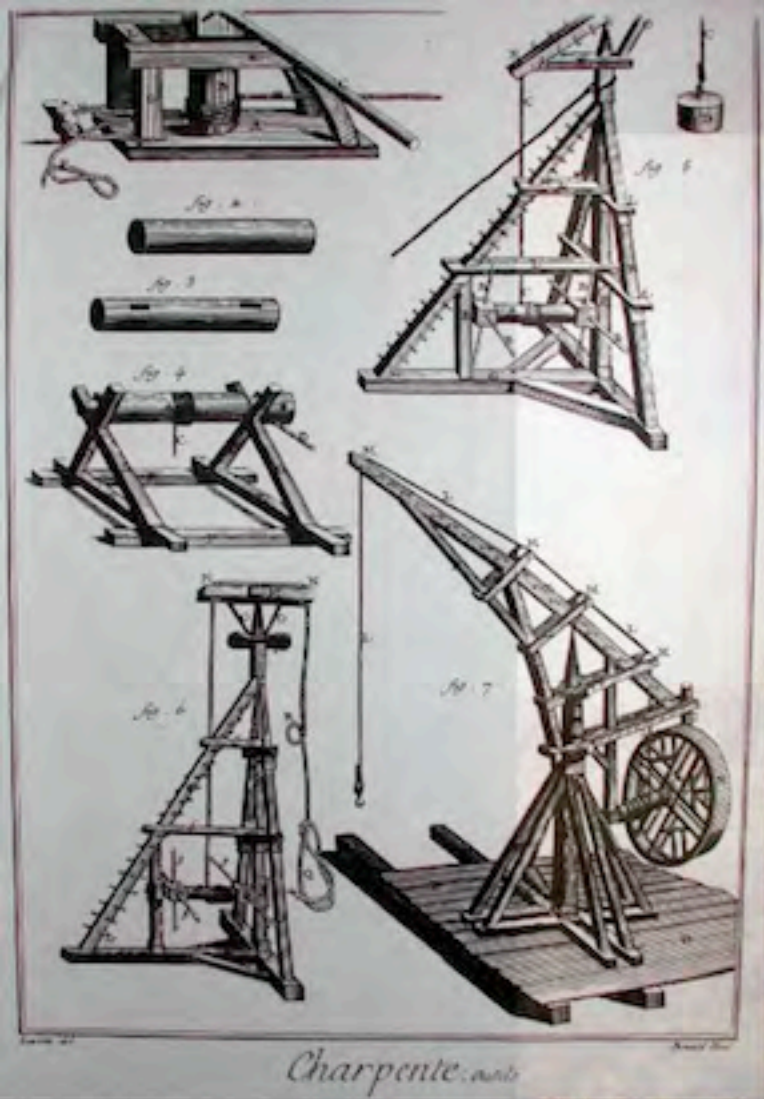


landscape with cranes constructing bridge  
unknown artist



section of a post windmill  
suggesting some of the basic structure that may have been implemented  
in the construction of the Bridge Crane, as well as other post-type  
dock cranes. drawing Jan Bruggeman 1995





*Charpente, outils*



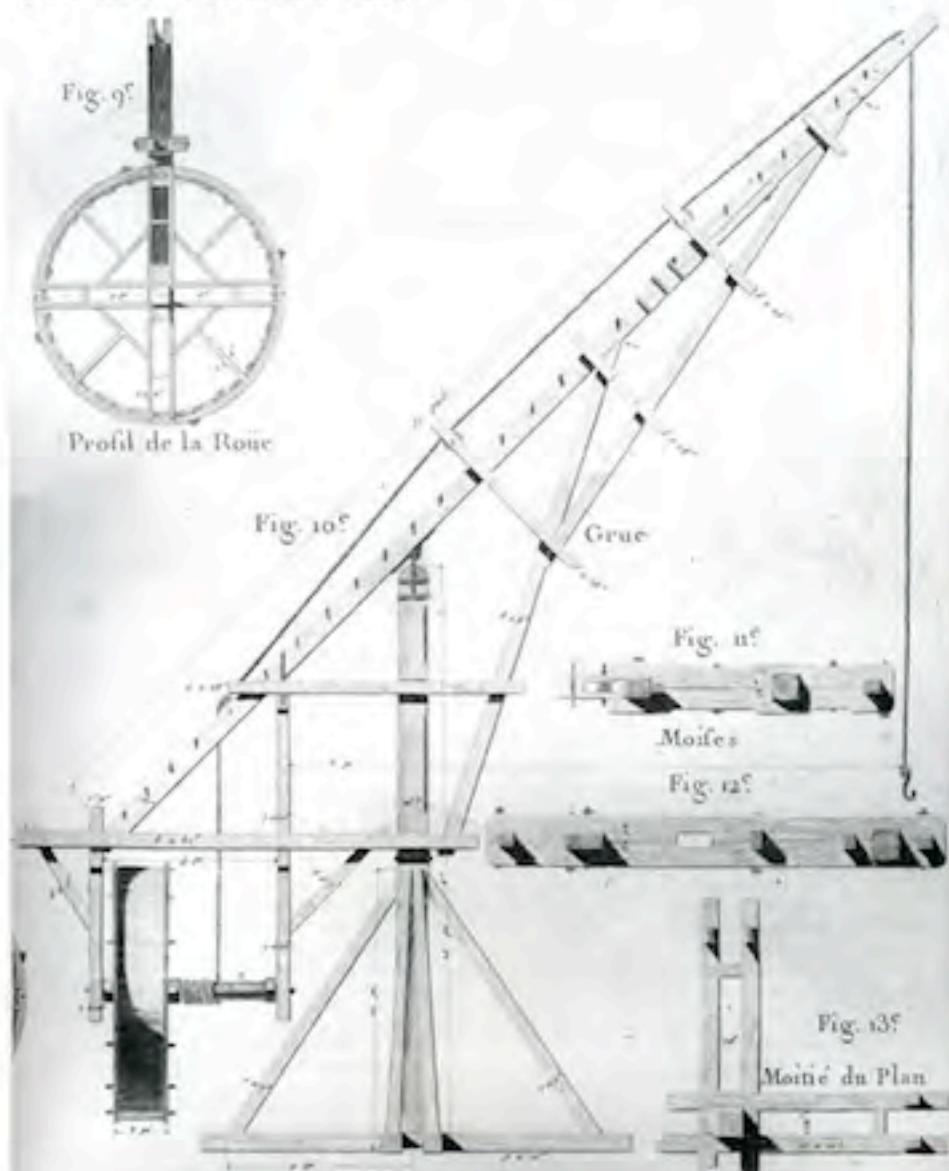
Building Versailles, France





132.4 x 31.4 x 77.5 Wood and brass

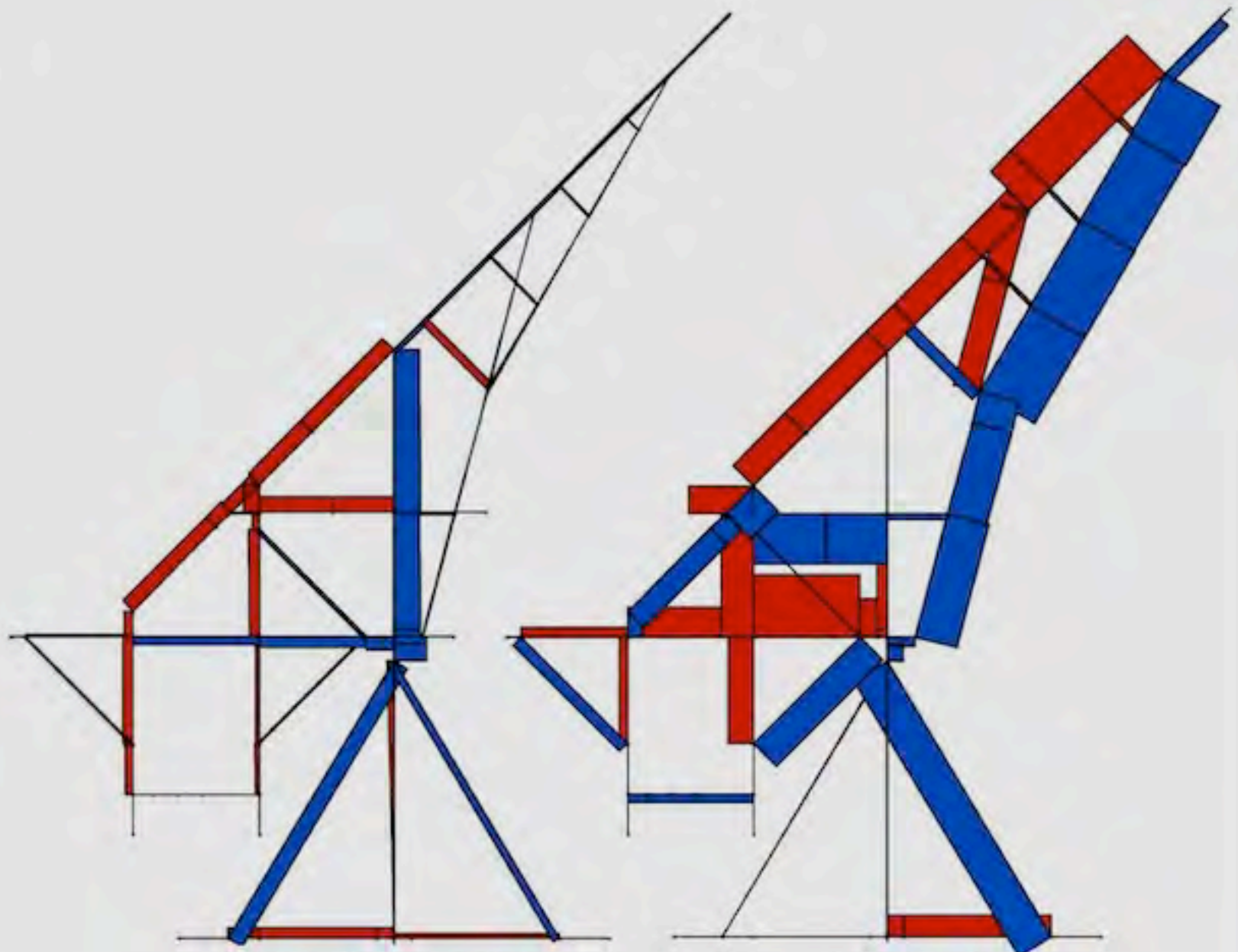
**ORIGINAL DRAWING OF PERRONET CRANE  
FOR BUILDING THE BRIDGE AT  
ORLEAN FRANCE 1750**



**MODEL OF THE PERRONET CRANE 2002**

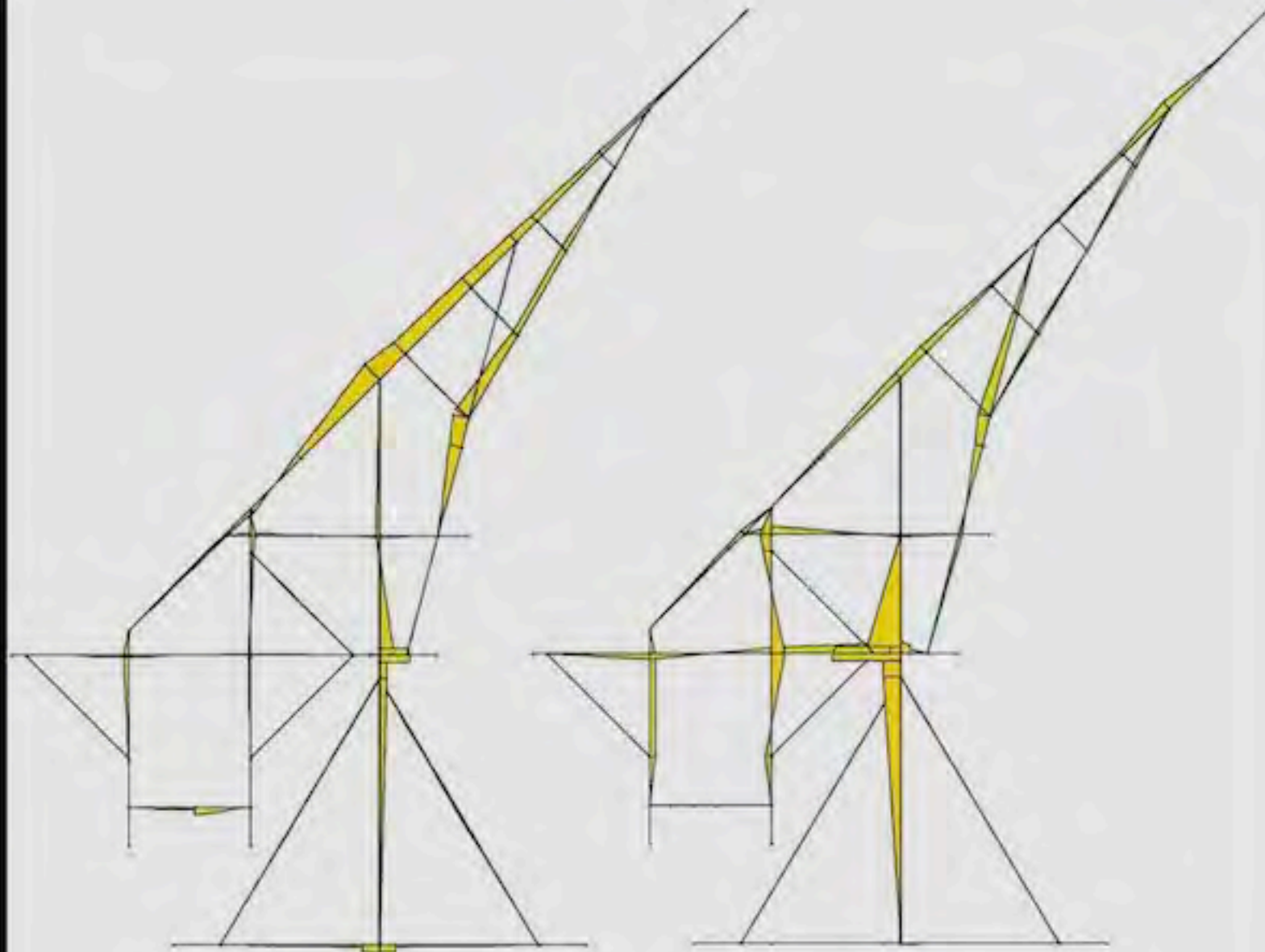






STAGE 1 AXIAL FORCE

STAGE 2 AXIAL FORCE

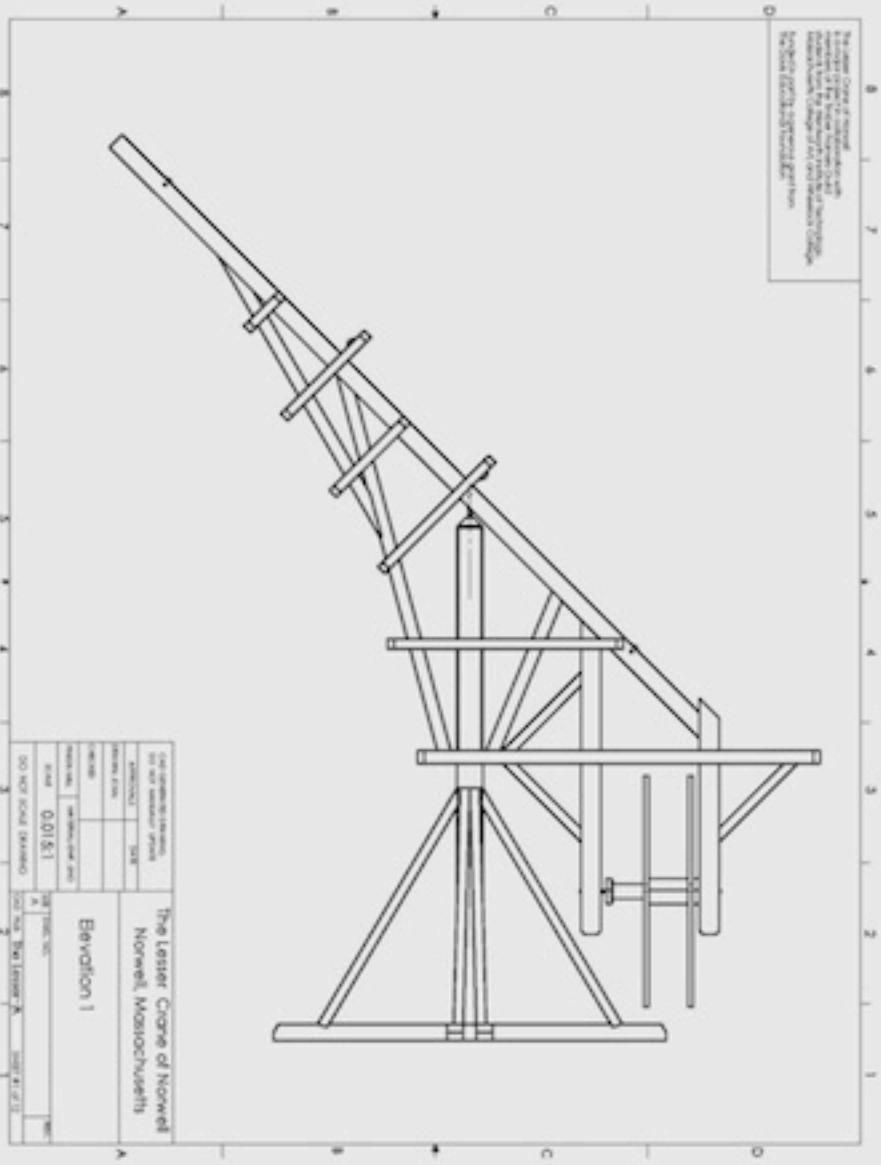


STAGE 1 BENDING STRESS

STAGE 2 BENDING STRESS

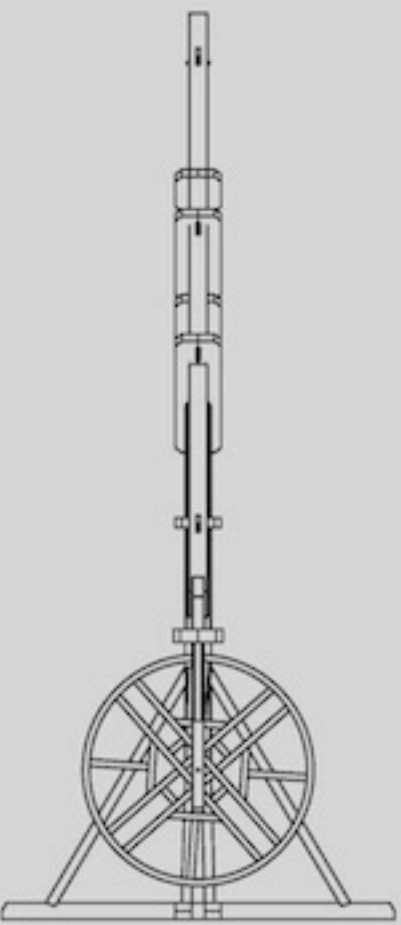


This object is part of a collection of objects  
 donated to the University of Massachusetts Lowell  
 by the Norman Family of Lowell, MA.  
 Inventory Number: 2023.10.10.1001.1001.1001



USE THIS SPACE FOR NOTES OF THE OBJECT'S HISTORY	
Inventory Number	2023.10.10.1001.1001.1001
Object Name	The Lesser Crane of Norwell
Material	Wood
Scale	0.01 & 1
DO NOT SCALE DRAWING	For Use: The Lesser Crane of Norwell

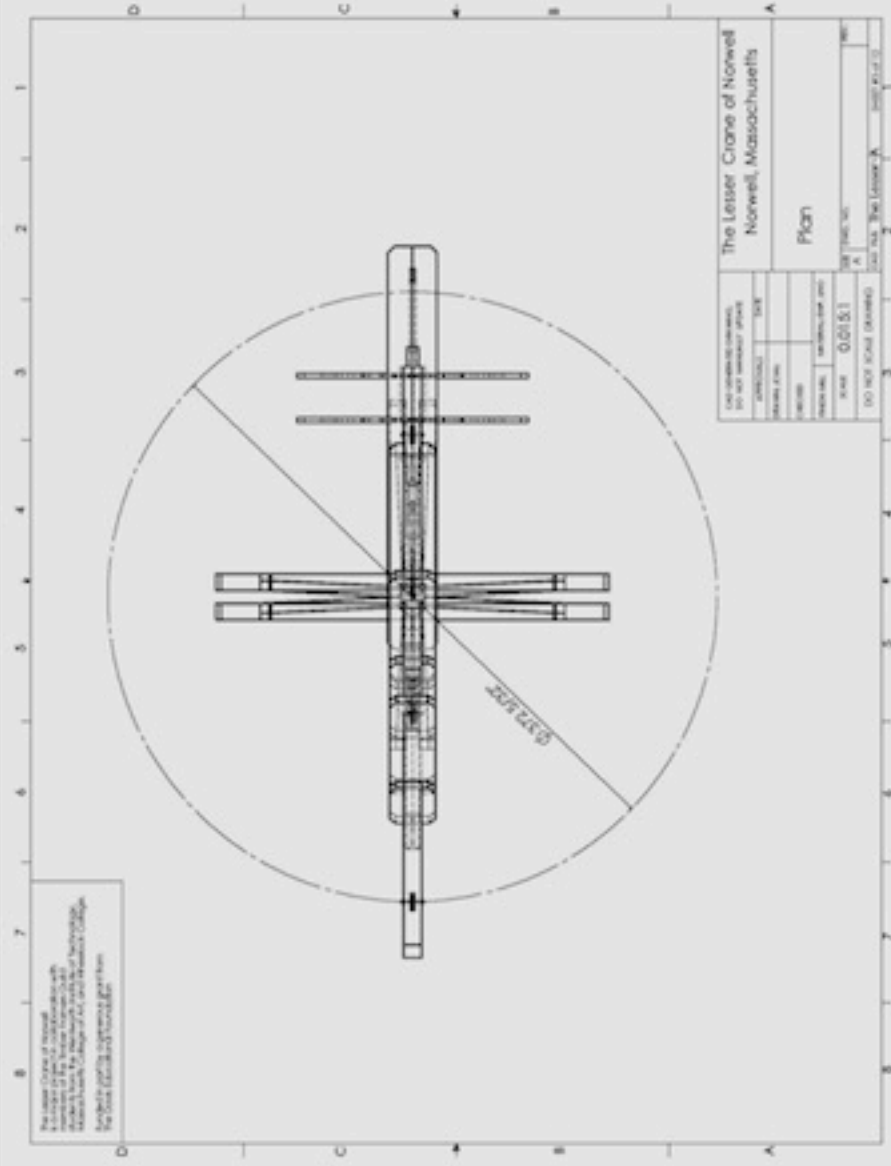
The Lesser Crane of Norwell  
 prepared by F. F. Taylor, Cambridge, Mass.  
 from the collection of the  
 Department of Engineering,  
 Massachusetts Institute of Technology,  
 No. 1000 (627.12.1) prepared by Taylor



USE STANDARD UNITS OF MEASUREMENT		The Lesser Crane of Norwell Norwell, Massachusetts
LENGTH	INCH	
WEIGHT	POUNDS PER CUBIC INCH	Evolution 2
SCALE	0.015:1	
DO NOT SCALE DRAWING		DATE: 1907-10-10
		BY: F. F. Taylor
		FOR: The Lesser Crane
		NO. 1000 (627.12.1)



The Lesser Crane of Norwell  
 was made in cooperation with  
 the Crane of the Crane Company  
 and the Crane of the Crane  
 Company, and the Crane of the  
 Crane Company, and the Crane  
 of the Crane Company.



THE CRANE OF NORWELL, NORWELL, MASSACHUSETTS	
ARCHITECT JOHN A. HARRIS	DATE 1887
DRAWN BY JOHN A. HARRIS	SCALE 0.015:1
MADE BY THE CRANE COMPANY	SHEET NO. A
NO. 107 1042 DRAWING	FOR THE LESSER CRANE

Plan

## HEWING THE LIFTING ARM













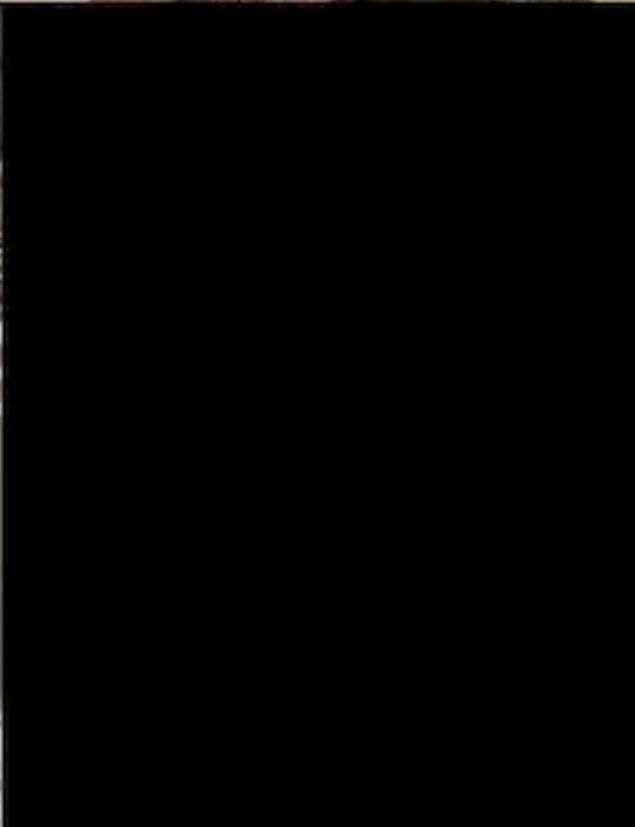


**CUTTING THE JOINERY**

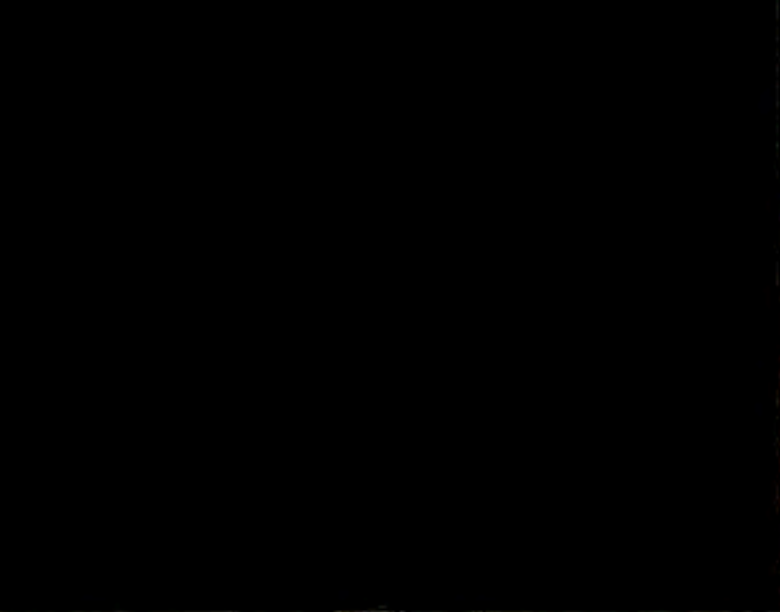
















CASTING THE IRON PINS







**FORGING THE IRON RINGS AND CONNECTING PINS**



## MOVING THE PIECES















**ASSEMBLING THE PIECES**





























AXIL PLANNING





**MAKING THE AXIL**









**MAKING THE GREAT WHEEL**

























**PLANNING THE RAISING**











































































**ATTACHING THE GREAT WHEEL**

































