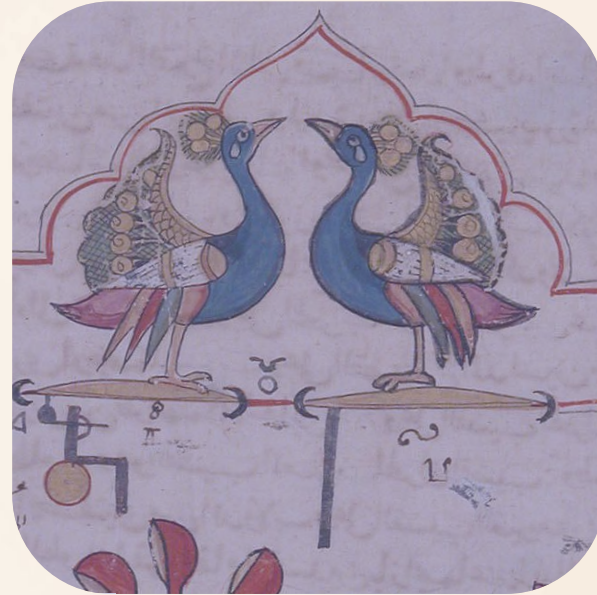


ismail al-jazari

Machine Lab - Nouf Alabbasi

Background information

- **Name:** Badi3 Al-Zaman Abull-Izz Ibn Ismail Ibn Al-Razzaz Al-Jazari.
- **Author of** “the book of knowledge of ingenious mechanical devices”
- **Things that first appeared/ were described in al jazari’s book**
 - Segmental gears
 - Cranks
 - Crankshaft
- Born in 1136
-
-



The Book of Knowledge of Ingenious Mechanical Devices

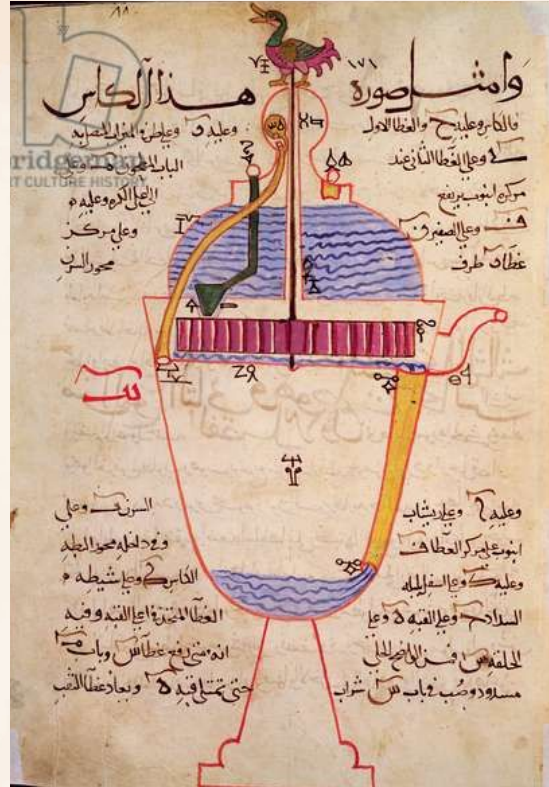
(Kitāb fī ma'rifat al-hiyal al-handasiyya)

by Ibn al-Razzaz al-Jazari

Translated and annotated
by
Donald R. Hill



D Reidel Publishing Company / Dordrecht-Holland / Boston-U.S.A.



THE BOOK OF KNOWLEDGE OF INGENIOUS MECHANICAL DEVICES

Chapters in the Book

○ Clocks

○ Vessels

○ Pitchers, basins, and others

○ Fountains and perpetual flutes

○ Machines for raising water

○ Miscellaneous

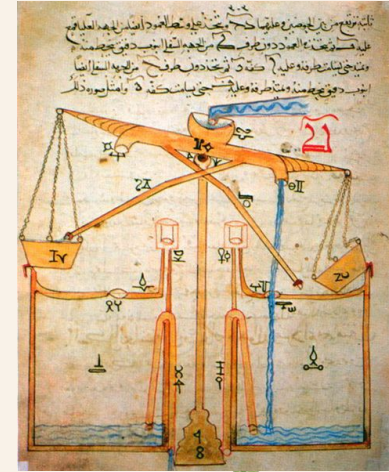
Interesting aspects of his work

Entertainment aspect



Documentation

He documented the detailed steps of how to build his machine and included hand drawn Illustrations to help visualize the mechanisms





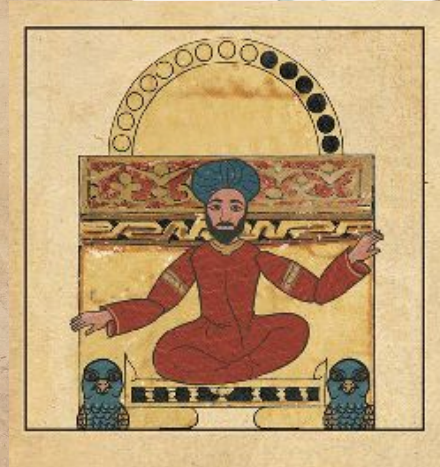
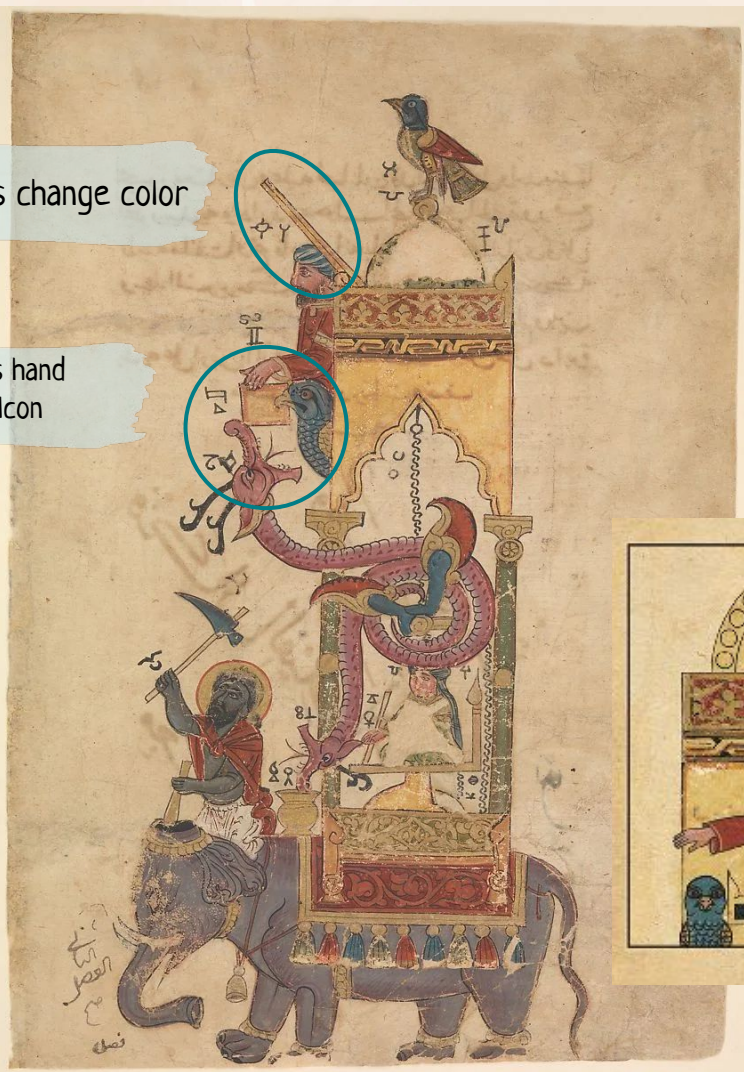
The Elephant Water Clock

Bird moves

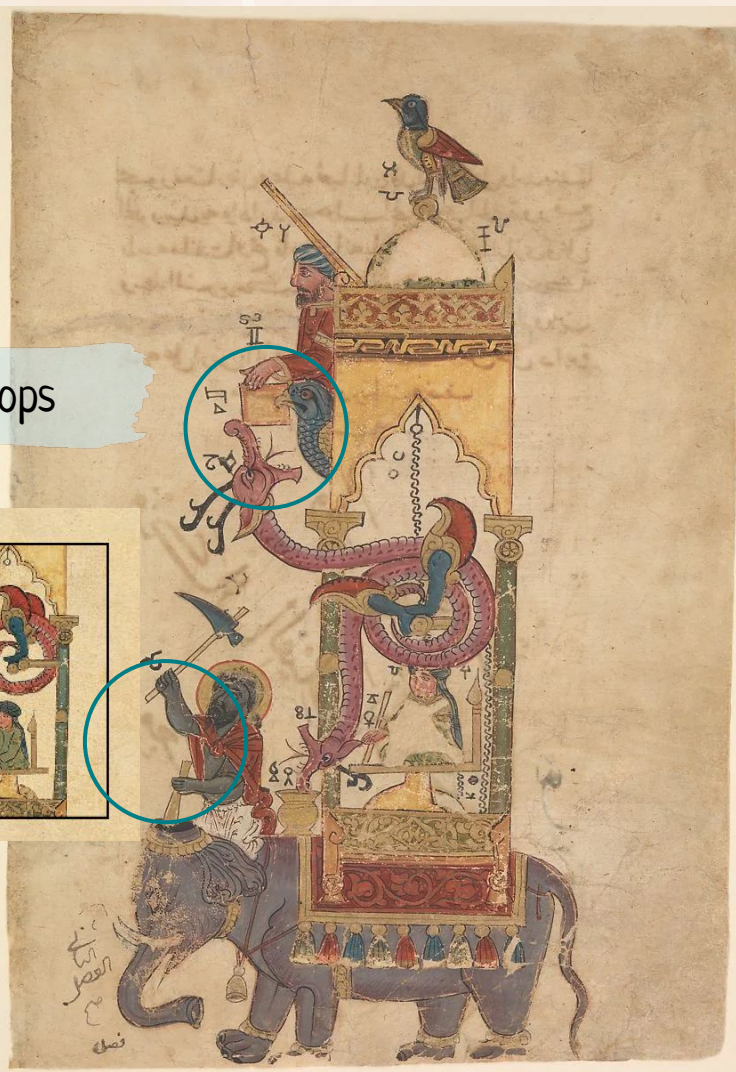


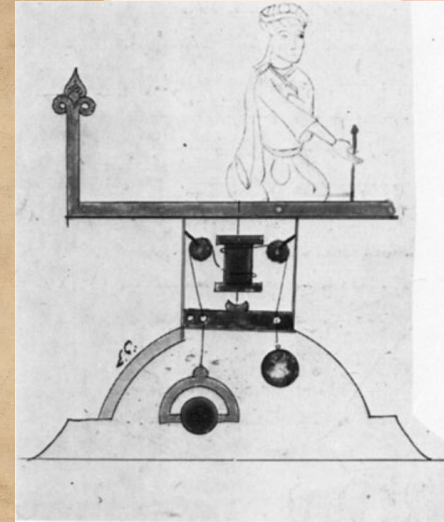
The holes change color

Man moves hand
off of falcon



Ball drops



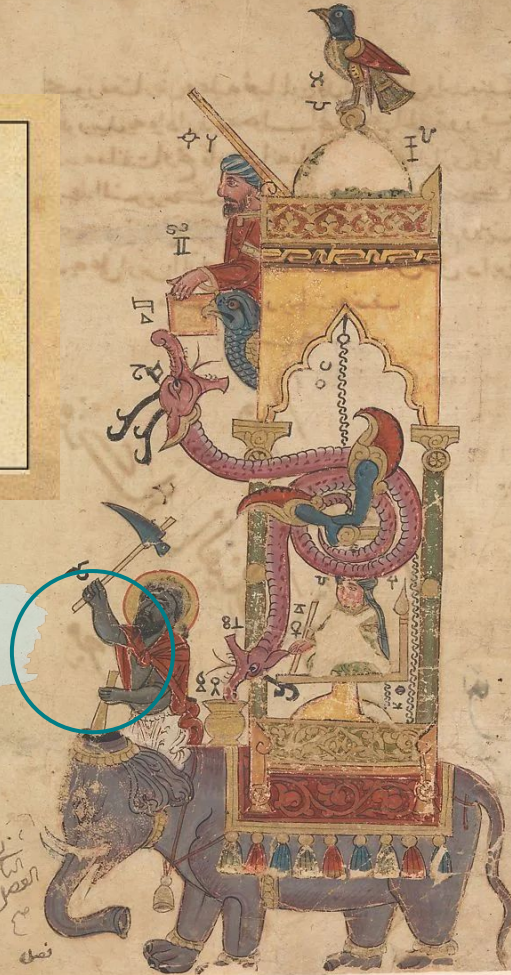


Man indicates the
minutes per hour





Mahout strikes
elephant







P-Brick one controls the phoenix, the dial and the dragons