

# ejectAoven

sketch model review

2.009 – Team Blue B

October 2, 2008



# the problem

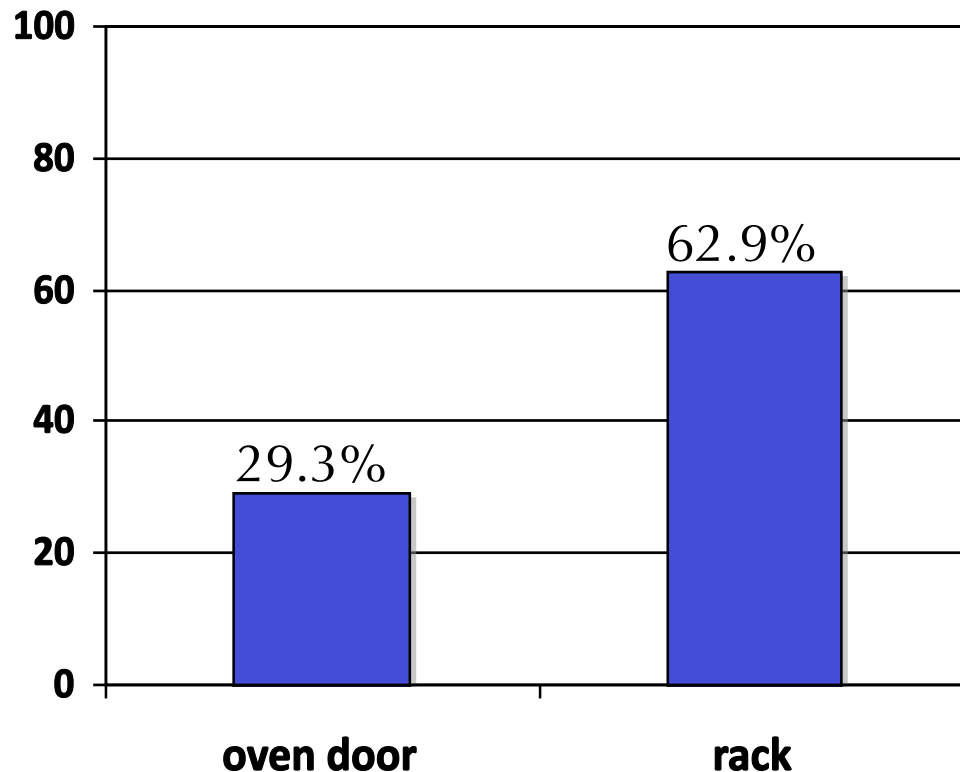
- People are afraid of ovens, too.
  - They don't like getting burned:

*“My emotional wounds continue to heal to this day.”*

- They are afraid to let children and the elderly use the oven, especially alone:

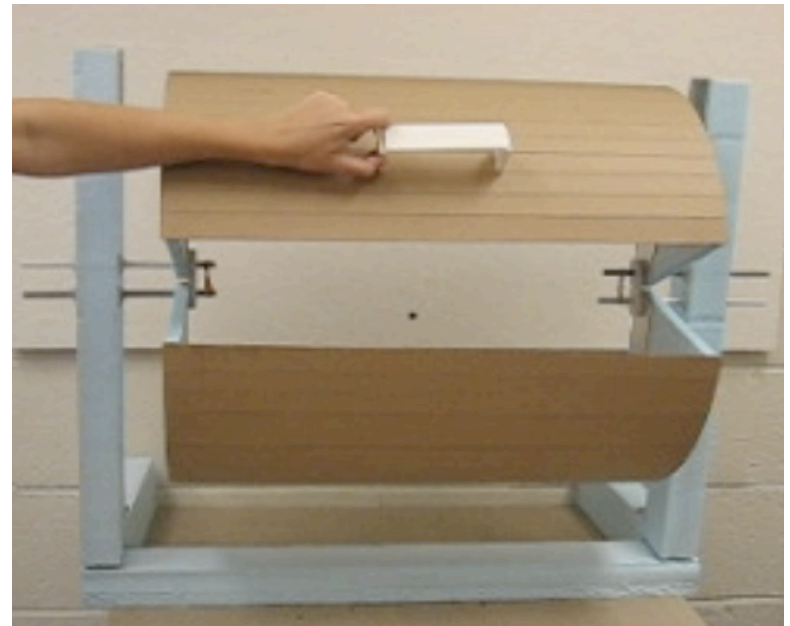
*“So I was never allowed to use the oven at home (which is mainly the only place I cook), at least not alone because my mother didn't want me to burn myself or to catch the house on fire.”*

- In a survey conducted of 194 MIT students,
  - 61% [or 116 people] have been burned from an oven



# the models

- Our mechanisms are designed with these statistics in mind, helping customers to:
  - **eject racks**
  - **open oven doors**



# rack ejector features

“oven rack and pinion” design brings food out of oven...and to you!

## – **benefits:**

- eliminates the need for users to reach into the hot oven
- ejects racks at different rates, controlled by the gear ratio:
  - bottom shelf comes out faster and further than the top shelf

## – **challenges:**

- jams

# door opener features

clam-shell design opens both doors at once

## – **benefits:**

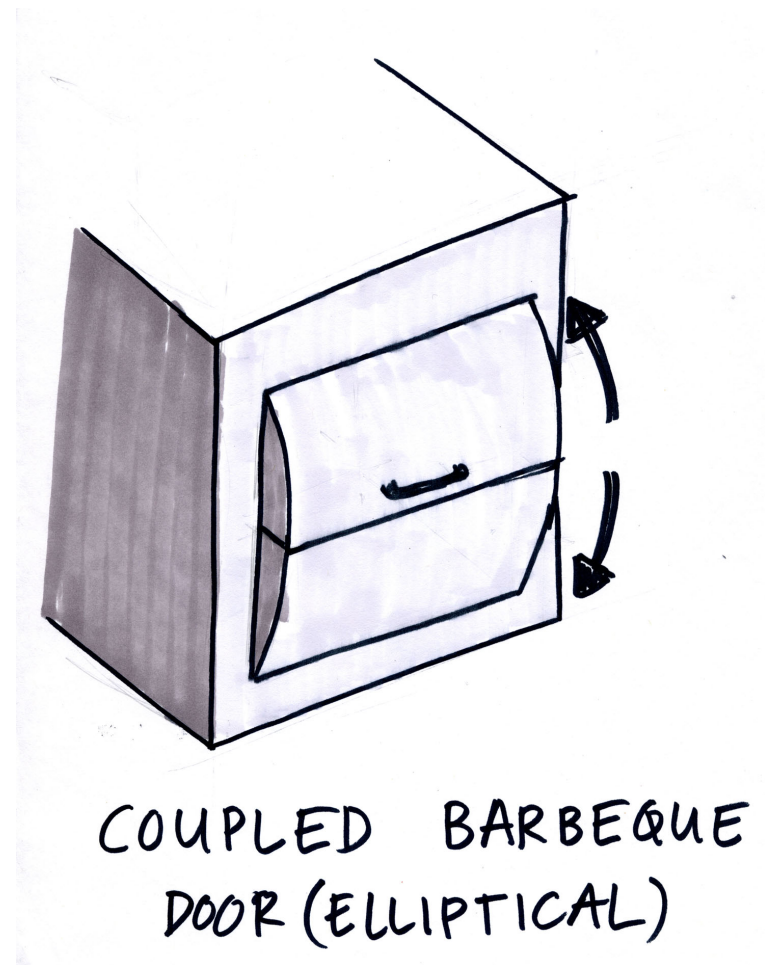
- keeps hot surfaces inside the oven and unexposed
- makes opened oven doors ‘out of the way’
- eliminates bending down to open/close door

## – **challenges:**

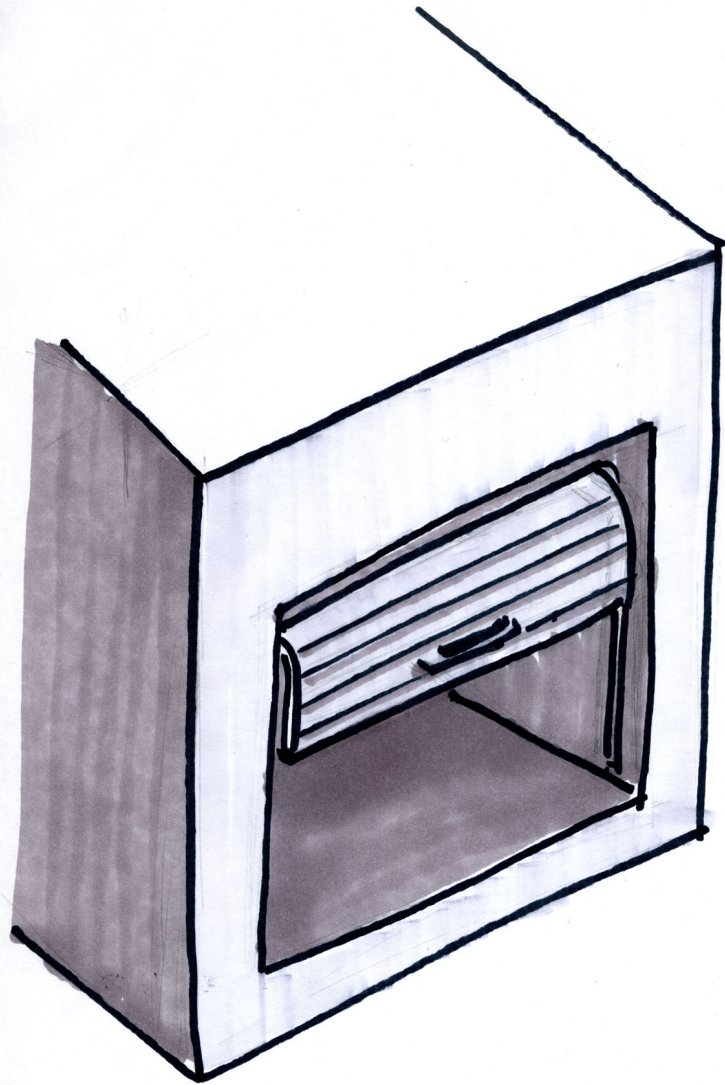
- opens into cooking area

# other door opener ideas

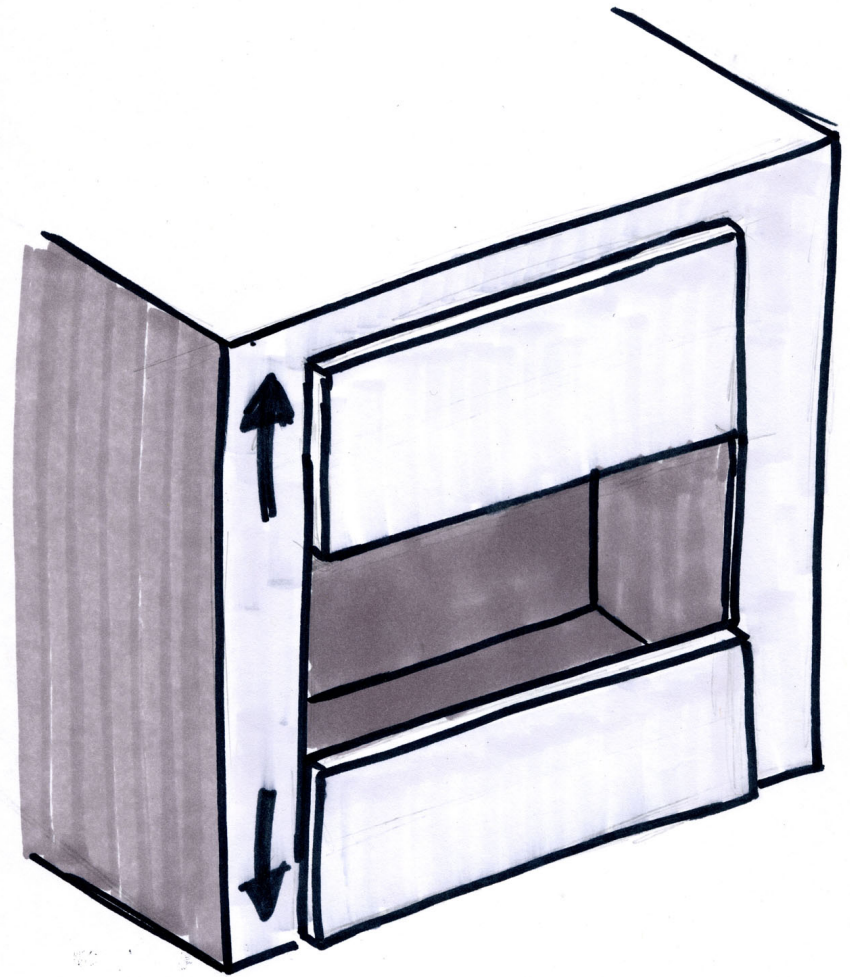
- This is just one way to look at the many possible ways to actuate the system.
- Other options include the following...



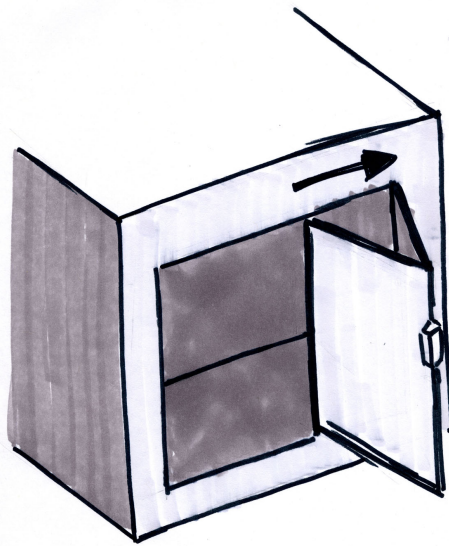




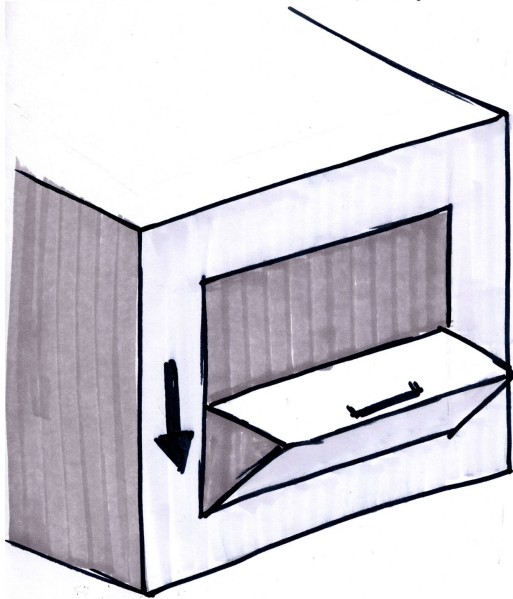
ROLL-TOP DESK  
MECHANISM



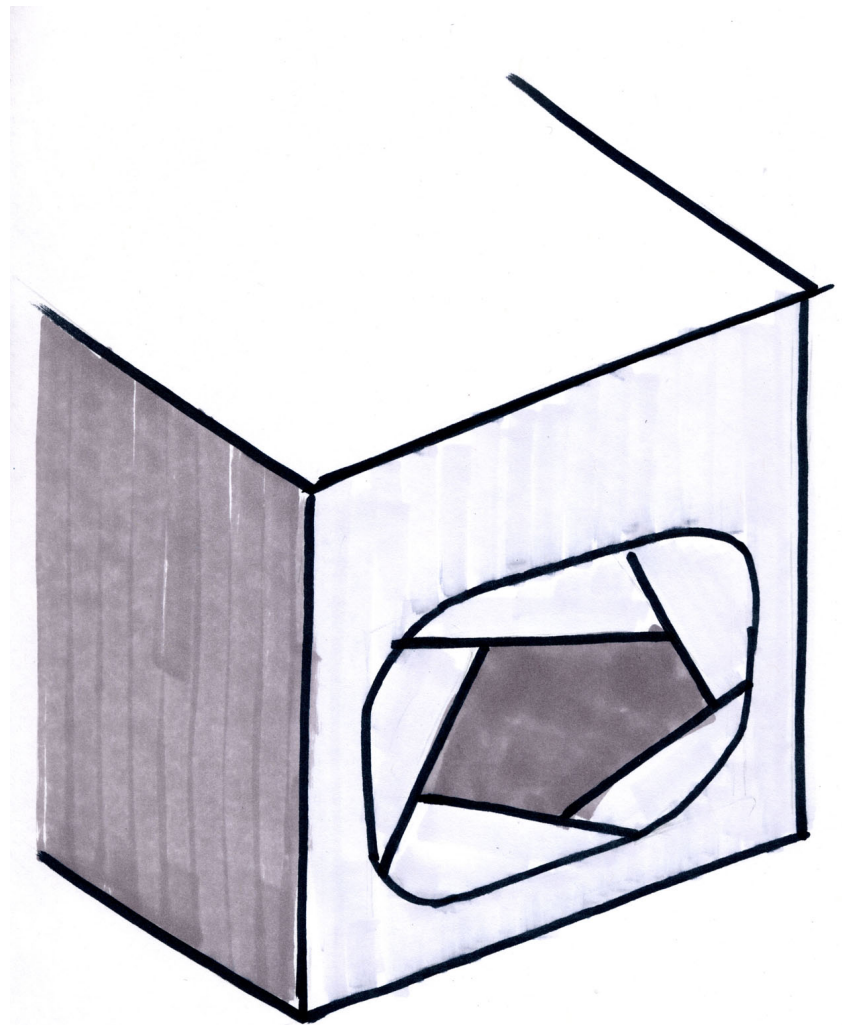
ELEVATOR DOOR  
MECHANISM



HORIZONTAL BIFOLD



VERTICAL BIFOLD  
MECHANISM



CAMERA APERTURE  
MECHANISM

# market and contact

- **39 million** oven units sold globally per year  
⇒ accounting for **\$42 billion** in sales

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