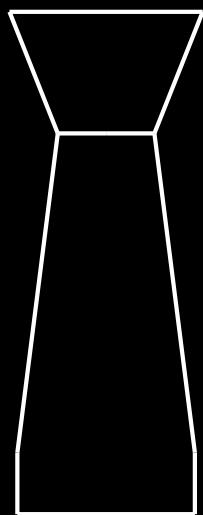


# Opulent Peril

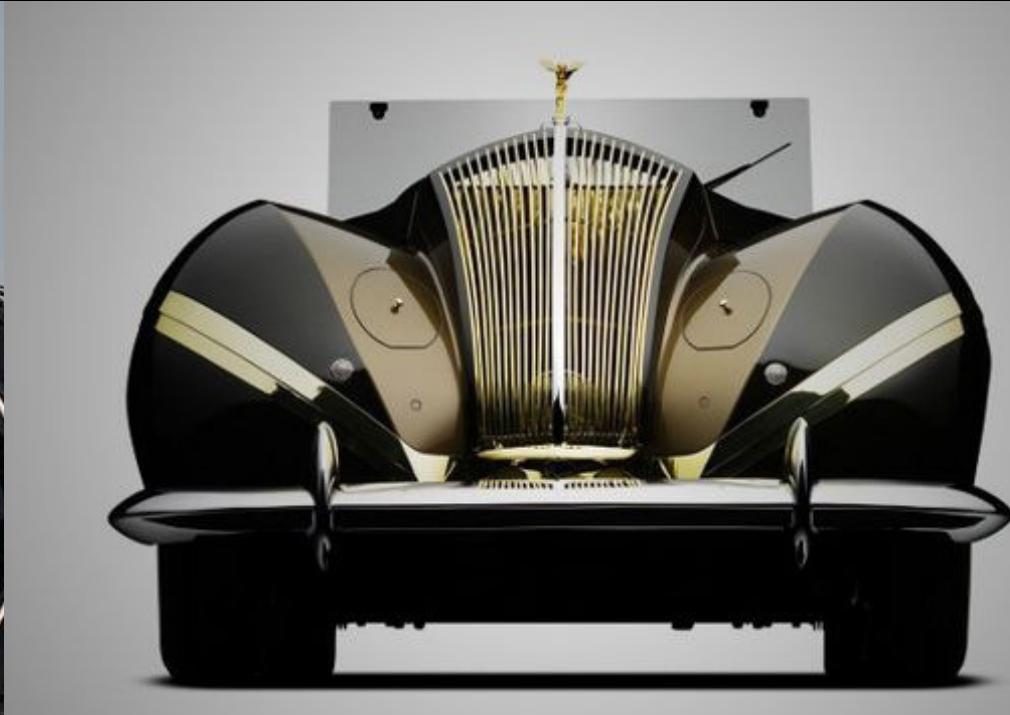
luxurious chess set focused on family of form



## INSPIRATION

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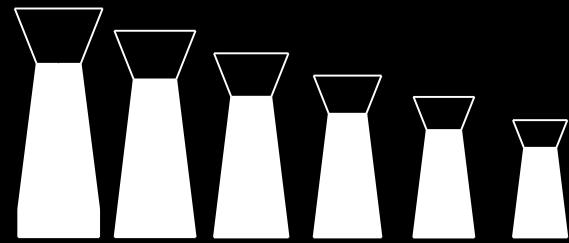
Opulent Peril is inspired by a luxurious yet edgy and bad-ass aesthetic very similar to steam punk.



## DESIGN INTENT

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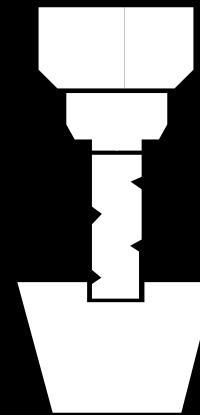
The aesthetic is achieved by combining machinery with the satisfaction and luxurious feeling of brass.



**Family of form** will be achieved by utilizing the **fibonacci percentages**.



The feeling of **luxury** will come from the satisfaction of brass.



**Tight tolerance machining** using the engine lathe and mill.

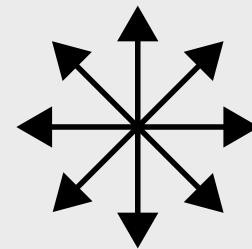
## IDEATION

With a solid theme in mind, I began to explore forms that best express the aesthetic.



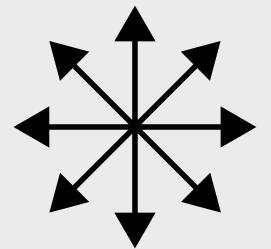
## MOVEMENT PATTERNS

With the need to have a more visual distinction from piece to piece, patterns were developed by looking into the direction(s) each piece is allowed to move.



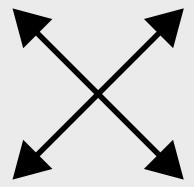
**KING**

One square in **any direction**.



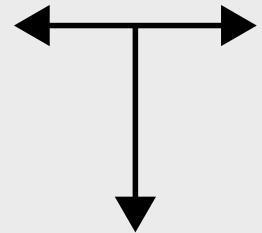
**QUEEN**

**Any direction** as far as possible.



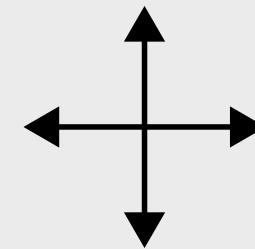
**BISHOP**

**Diagonally** as far as it wants.



**KNIGHT**

Two squares in one direction  
and then one more move at a  
**90 degree angle**.



**ROOK**

Any **perpendicular** direction.



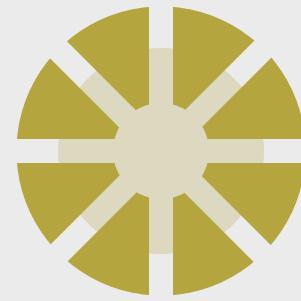
**PAWN**

**Forward** but attack diagonally.

## DEVELOPMENT

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The movement patterns are incorporated into the crown of each corresponding piece. The individual patterns, in addition to the height difference, help to visualize the hierarchy of the set.



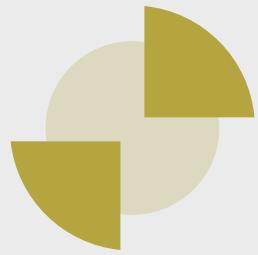
**KING**

One square in **any direction**.



**QUEEN**

**Any direction** as far as possible.



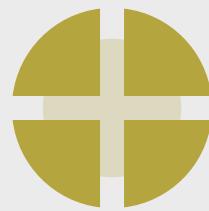
**BISHOP**

**Diagonally** as far as it wants.



**KNIGHT**

Two squares in one direction  
and then one more move at a  
**90 degree angle**.



**ROOK**

Any **perpendicular** direction.

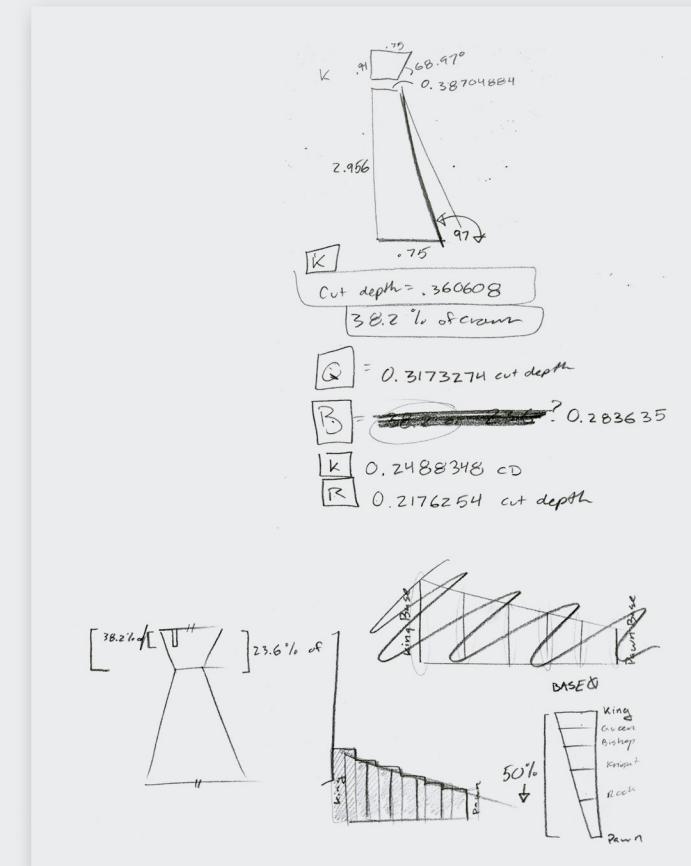
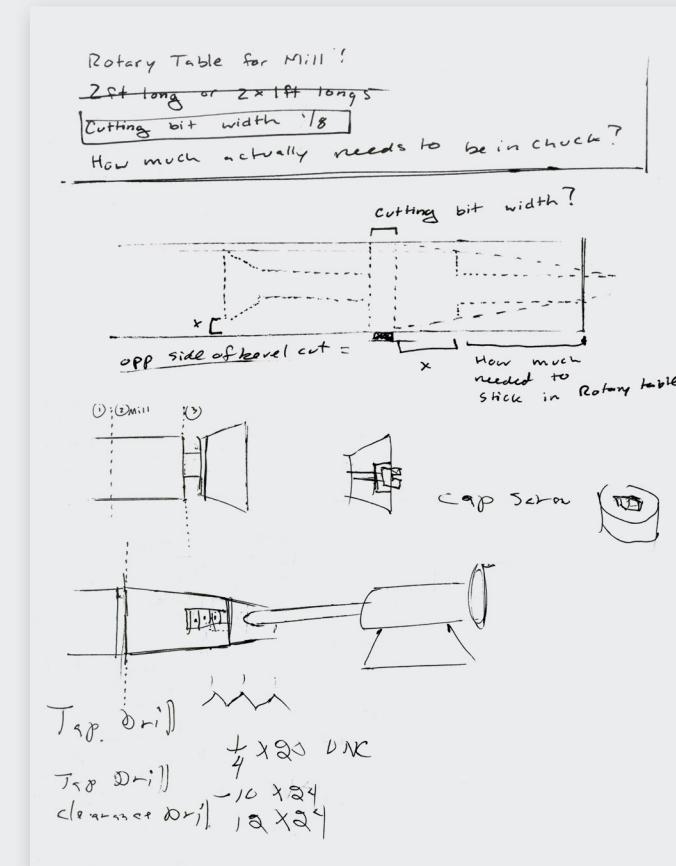
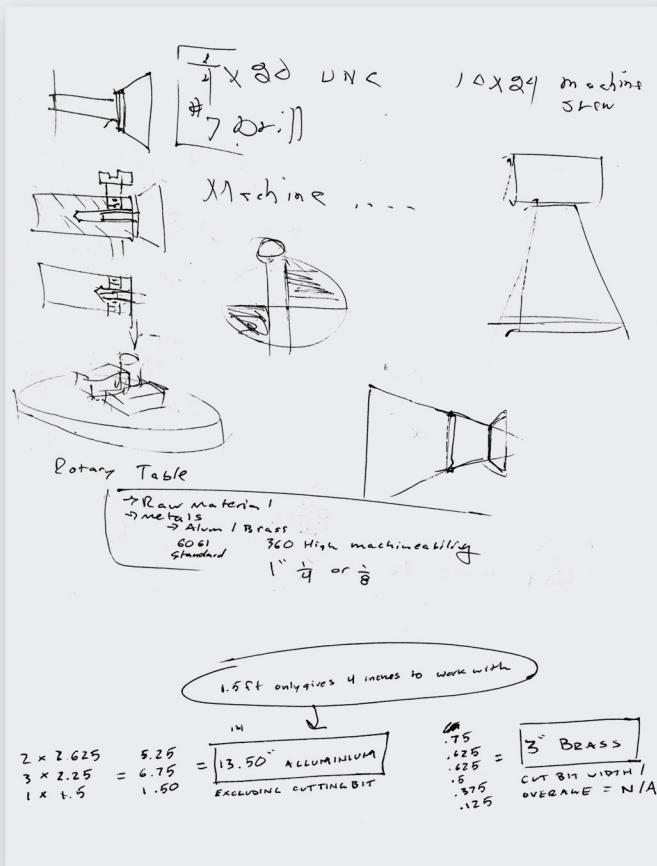


**PAWN**

**Forward** but attack diagonally.

## "FIGURING IT OUT"

Being my first time using the engine lathe and mill, I wanted to make sure I had every step of the process figured out before I got started. These are visuals of the discussions I had with my professor.



## PROCESS\_001

I needed to make sure the shop had a rotary table before I began as it was a crucial tool to maintain the design intent. They had two. They were both broken! Luckily, my professor saved the day by showing up with his rotary table that he keeps in his office!



## PROCESS\_002

The aluminum taper was cut longer than needed and then slowly faced until a perfect fit was matched with the brass crowns.



## PROCESS\_003

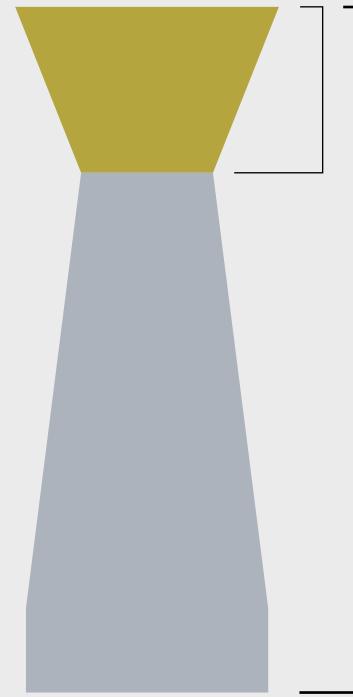
Using the rotary table, the patterns were milled into the crowns. I then sanded and polished the pieces and used epoxy to hold them together.





## FIBONACCI PERCENTAGES

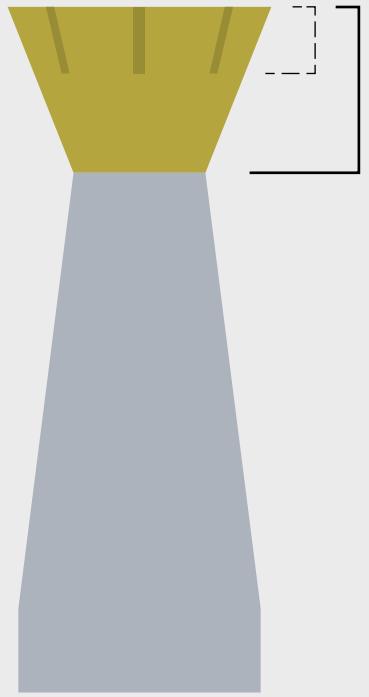
Focusing on family of form, the fibonacci percentages were utilized to maintain proper proportion within each piece regarding height, width, and cut depth.



Each crown measures **23.6%** of the piece's total height.



The narrowest width of the piece is **50%** of the total width.



The cut depth of each piece measures **38.2%** of the crown.

## FIBONACCI PERCENTAGES

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Fibonacci percentages were also used to provide proper proportion to the set as a whole focusing on overall height and base diameter.



The height of the pawn is  
**50%** of the king's height.

The pawn's base is **61.8%**  
of the king's base.

**TO BE CONTINUED ...**

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Currently in the process of making the opposing pieces which will then be anodized black.

