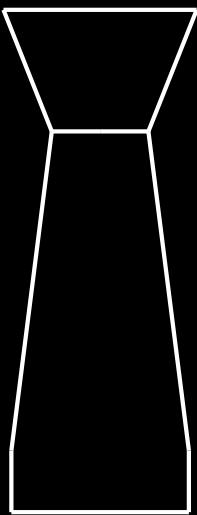
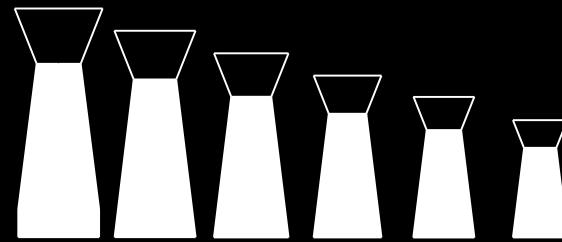


Opulent Peril

Luxurious chess set focused on family of form



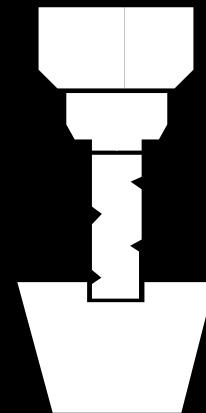
DESIGN GOALS



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.

INSPIRATION

My chess set is inspired by the luxurious bad-ass culture associated with high-end bars and pool halls.



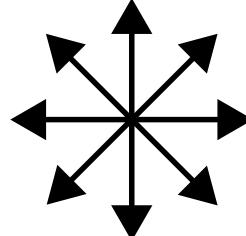
RESEARCH

Not knowing how to play chess, I decided to focus my research on the different moves each piece is allowed to make to give myself a better understanding of the game.



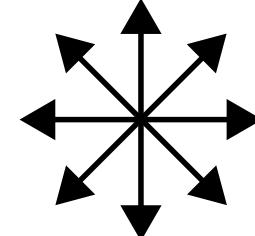
KING

One square in **any direction**.



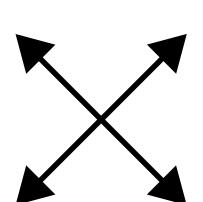
QUEEN

Any direction as far as possible.



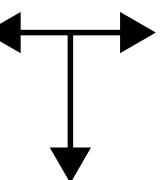
BISHOP

Diagonally as far as it wants.



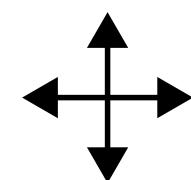
KNIGHT

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



ROOK

Any **perpendicular** direction.



PAWN

Forward but attack diagonally.



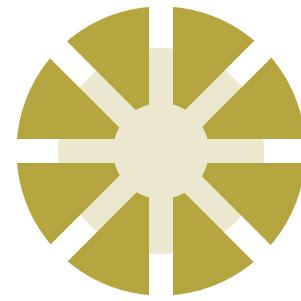
IDEATION

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



DEVELOPMENT

The crown's pattern is a direct correlation to the moves each piece can make. This aids in distinguishing each piece from each other.



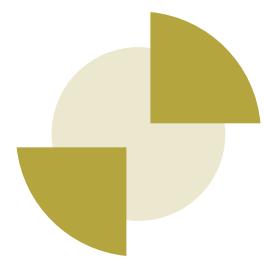
KING

One square in **any direction**.



QUEEN

Any direction as far as possible.



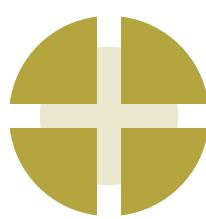
BISHOP

Diagonally as far as it wants.



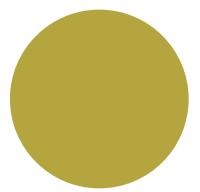
KNIGHT

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



ROOK

Any **perpendicular** direction.

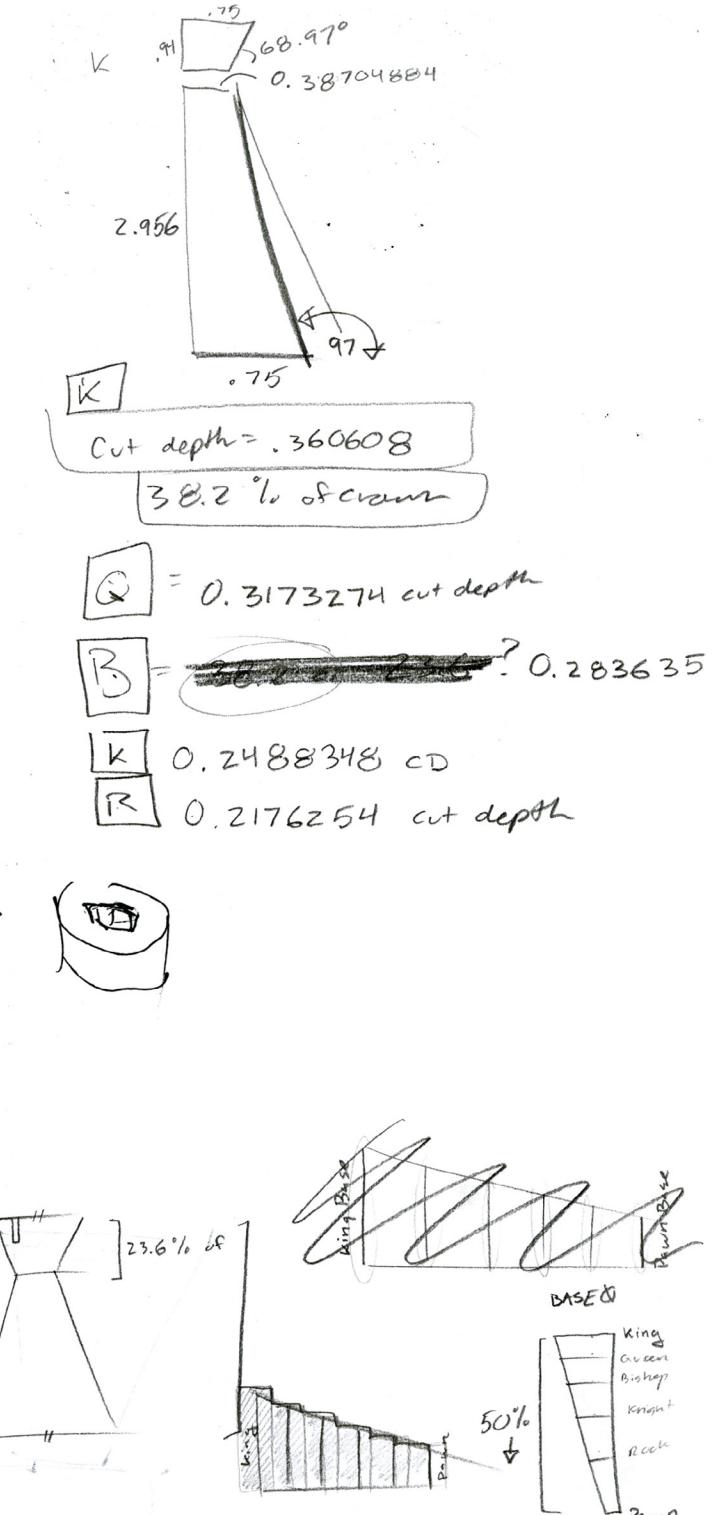
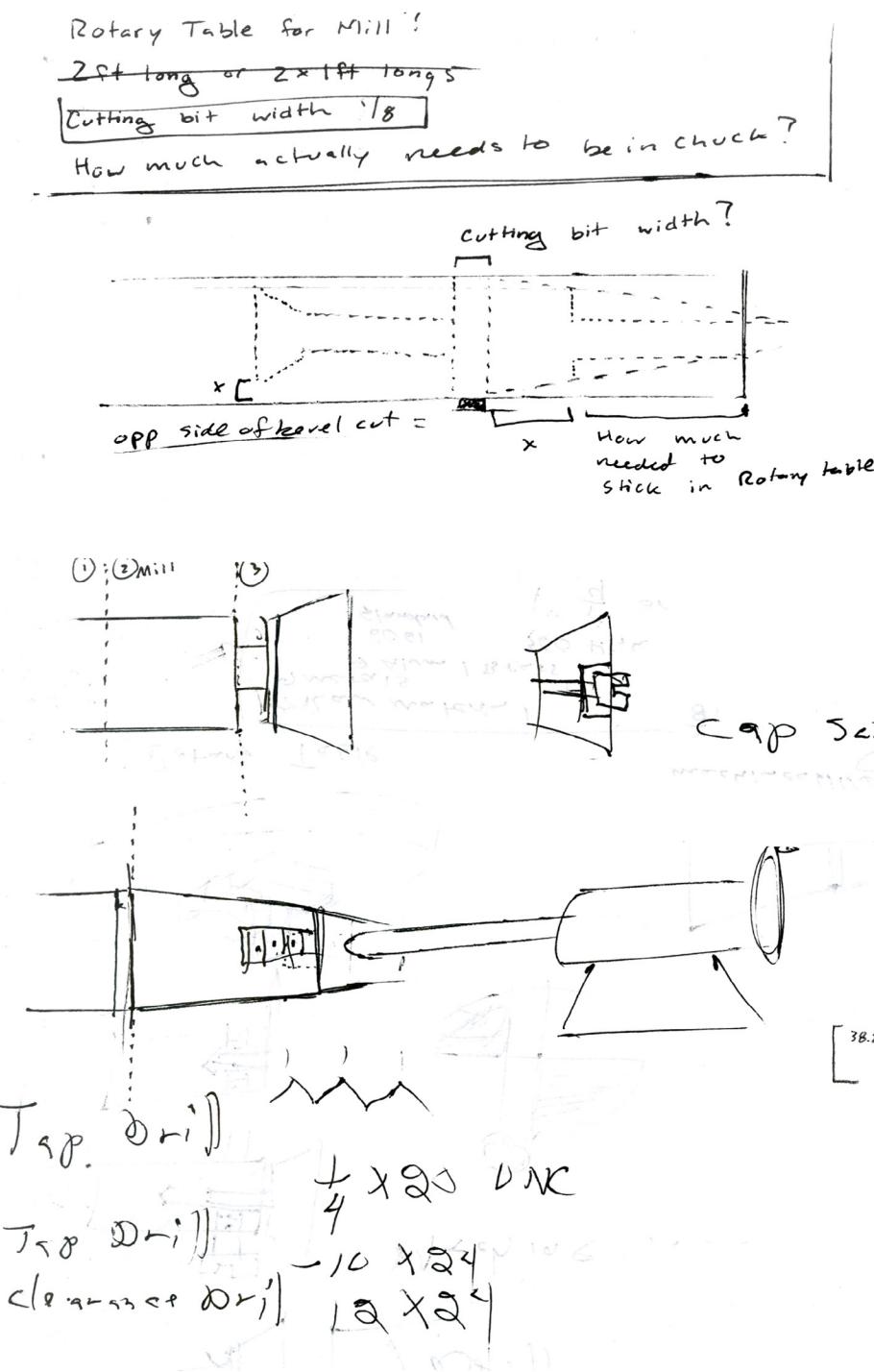
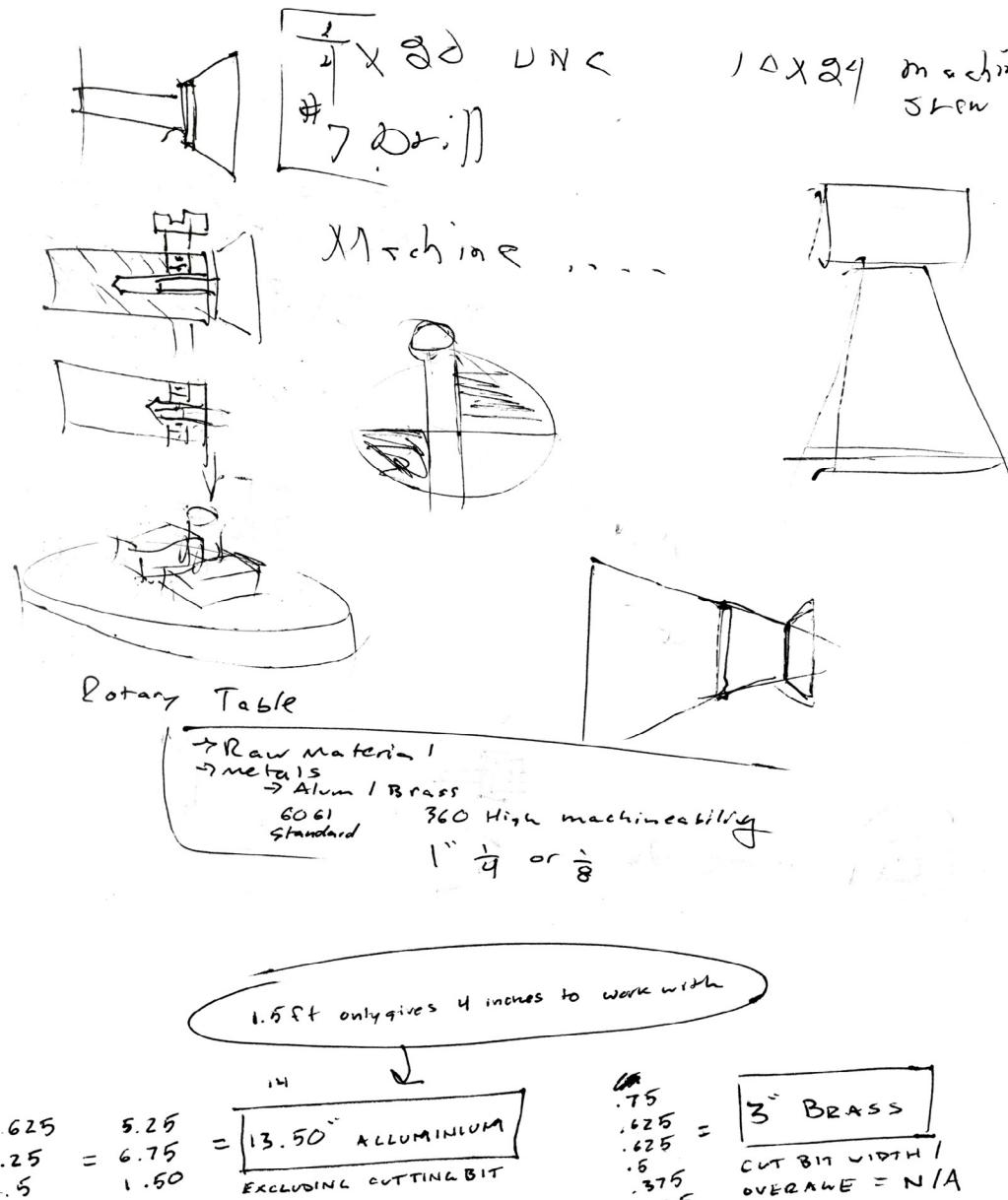


PAWN

Forward but attack diagonally.

"FIGURING IT OUT"

Being my first time using the metal 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.



ALRIGHT, LET'S GET STARTED!

I needed a rotary table to mill the top portion of my pieces. I wanted to make sure the shop had one before I started. They had two!



JUST KIDDING!

They were both broken...



PROCESS_001

In fear of having to change my design, I was relieved when my professor, Gerry, 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

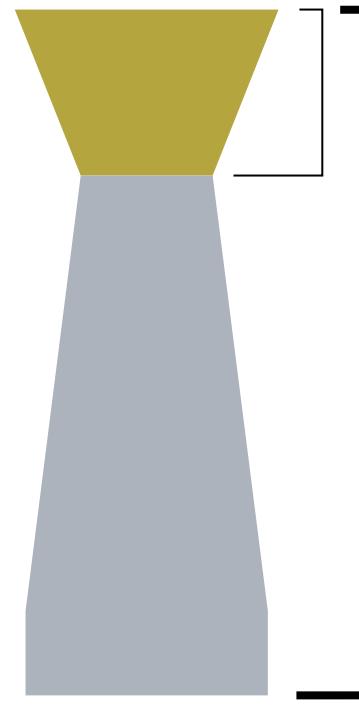
Using the rotary table, patterns were milled into the crowns. I then sanded and polished the pieces and used epoxy to hold them together.



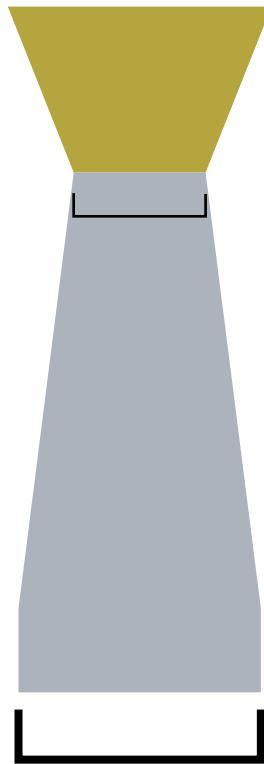


FIBONACCI PERCENTAGES

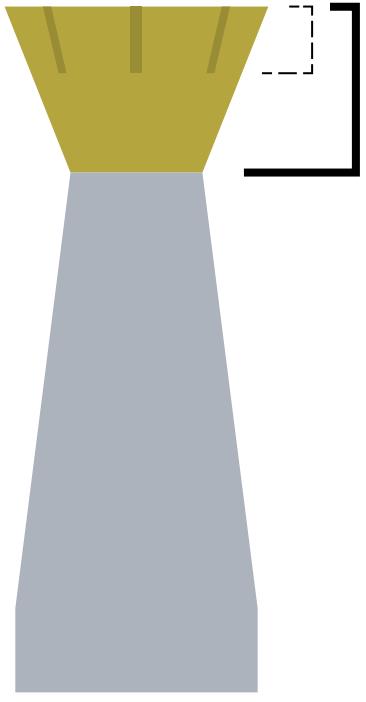
Focusing on family of form, I used fibonacci percentages to maintain proper proportion within each piece.



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 (cont).

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.