

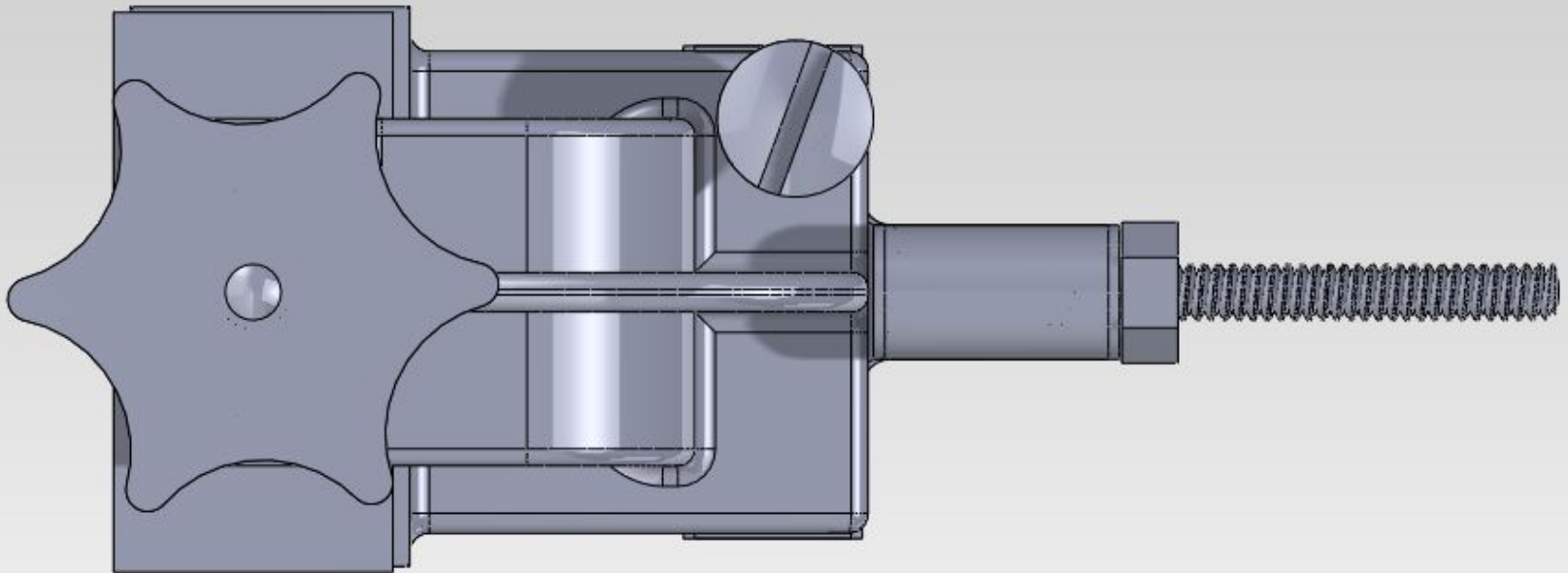
Hold Down Clamp

A detailed 3D CAD rendering of a mechanical hold-down clamp. The device features a base plate with a central slot, a vertical threaded rod passing through the slot, and a large, black, T-shaped handle at the top. A curved, U-shaped bracket is attached to the side of the base plate, with a horizontal threaded rod extending from its end. The model is shown from a three-quarter perspective, highlighting its mechanical components and assembly.

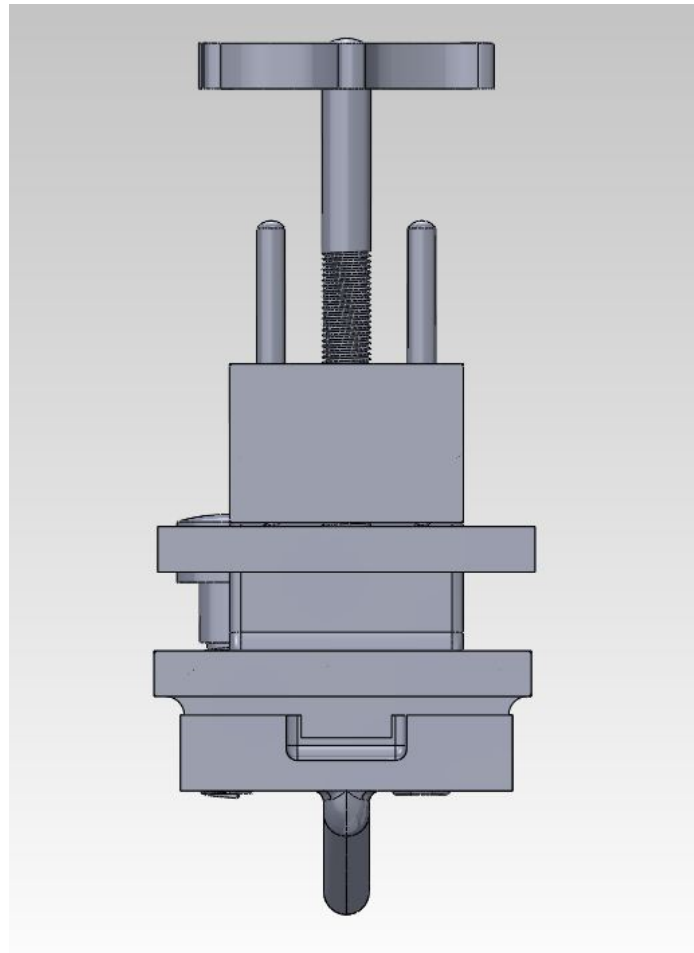
ENGR 125 - Engineering Graphics:
Reverse Engineering Project

By:
Jerome Brown
Brian Shockey
Arnold Chand

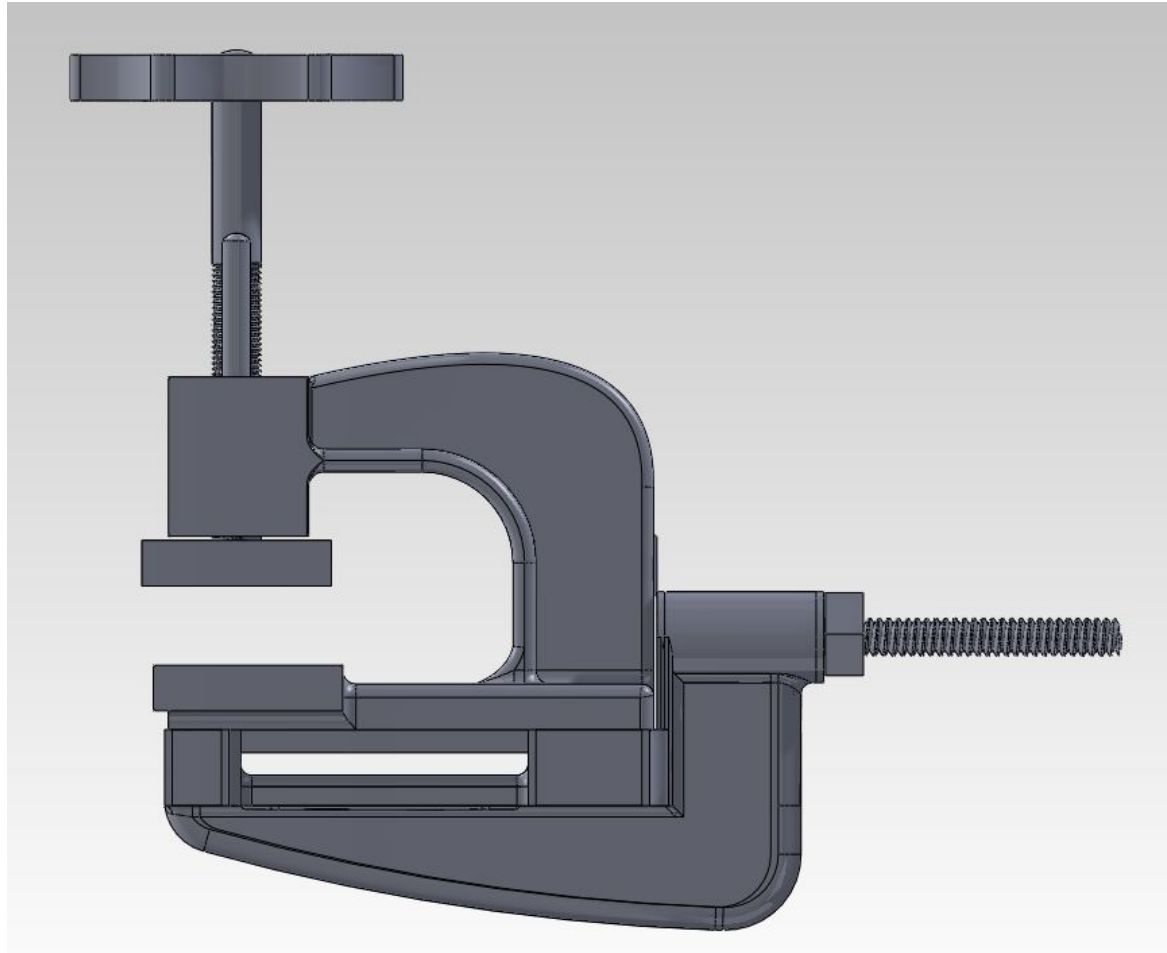
Top View



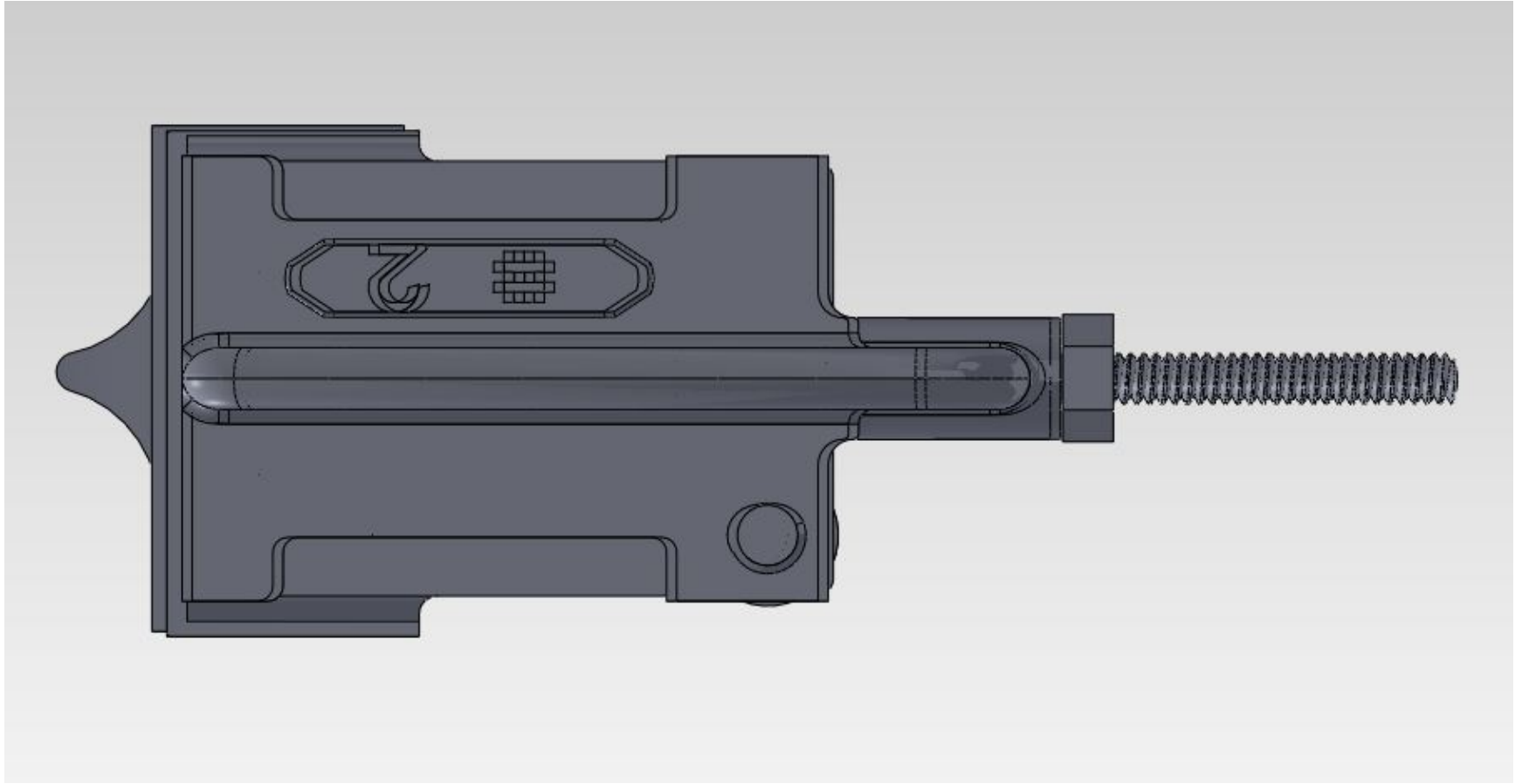
Front View



Side View



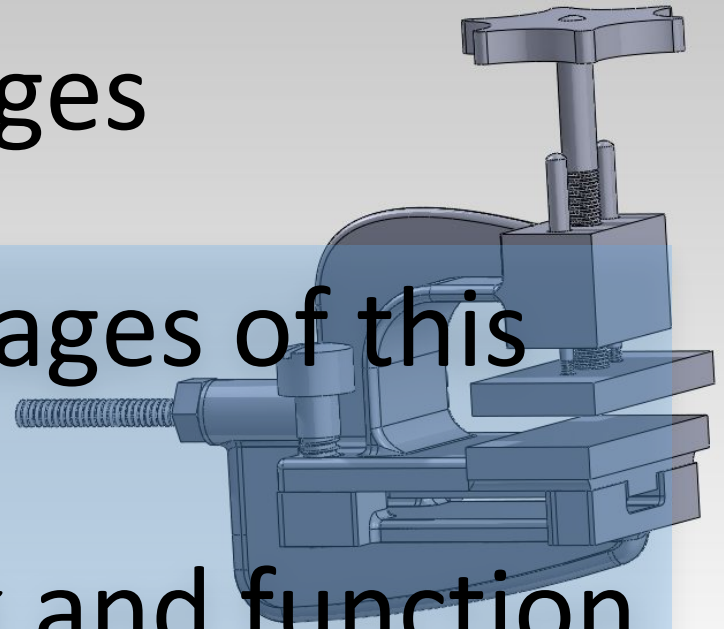
Bottom View



Advantages

Some of the advantages of this model:

- To be able to work and function properly
- Almost accurate design from the clamp itself

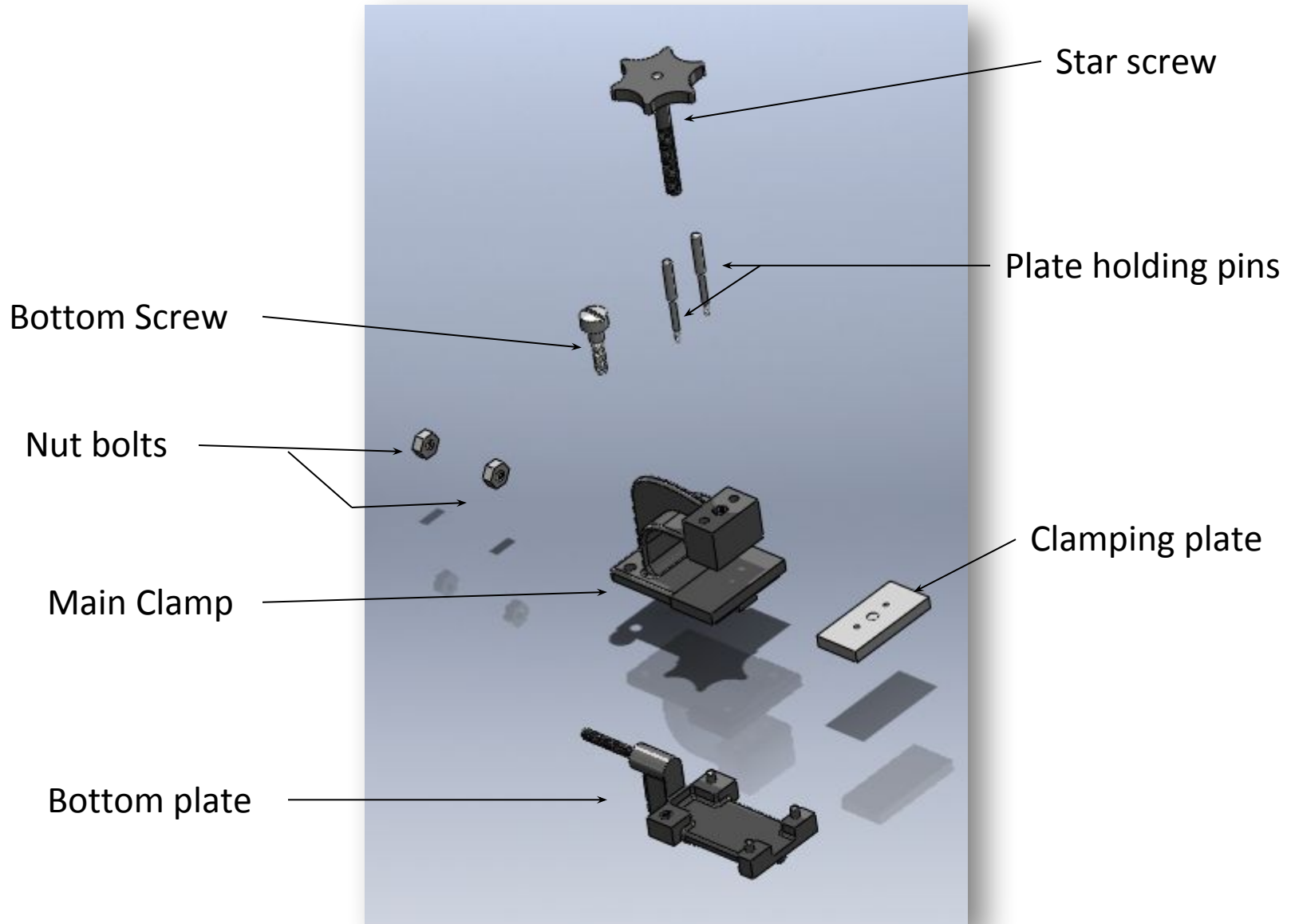


Disadvantages

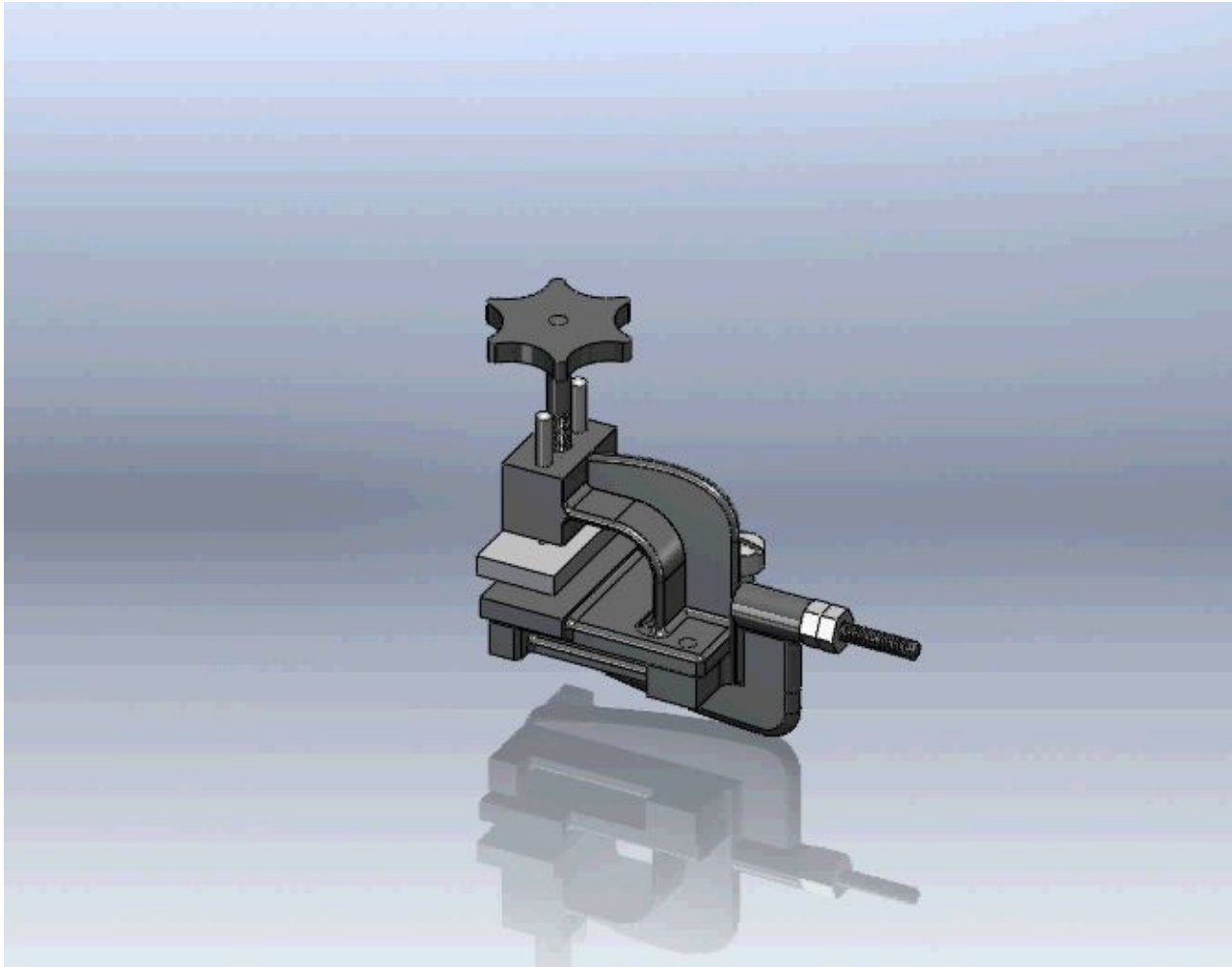
Some disadvantages of this model were:

- Threads on the screw and the holes do not match properly
- Nut bolt had to be reduced in size to fit the end screw of the clamp
- Spring was not attached to one of the pins to pull up the holding plate

Exploded View



HOLD DOWN CLAMP



Serviceability

- Will be able to hold two pieces together to either glue those pieces or for some other use.

Changes Recommended

- The spring could have been in the star screw than have two pins holding the plate
- Instead of a screw in the back that will only fit in the wall, why not have another clamp to hold it on a table.