

# Scandinavian Draisine **Build One**

The easiest machine to propel by far is a “**Draisine**”, but not as easy to build as the track bike. We could email you the **AutoCAD** code for the wheels and the building jig, to get them **laser cut** by a firm local to you, it is free.



Finished Machine



Tube cutting in the Lathe **Square tube is much simpler.**

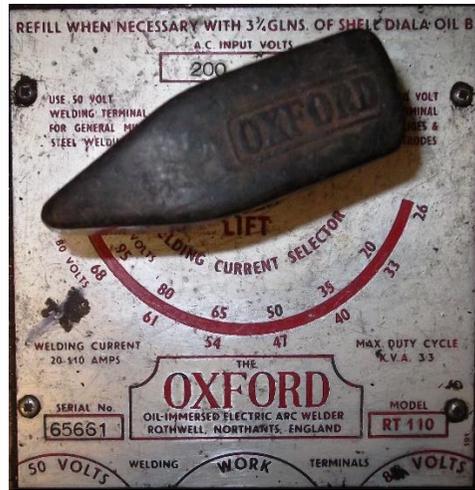
## Skills Needed

**Wheels** Welding, Stick or MIG for the spokes

**Frame;** Brazing or MIG welding for the ERW steel tube. (ERW –Electro Resistance Welded)

**Lathe Turning;** for bearing holders and round tube cutting

**Equipment needed – MIG is far simpler if you have one** (you will not need the Gas Equipment.)



Small stick welder, it is old fashioned, but so am I.

Mark Egerton's MIG welder



Gas equipment for brazing

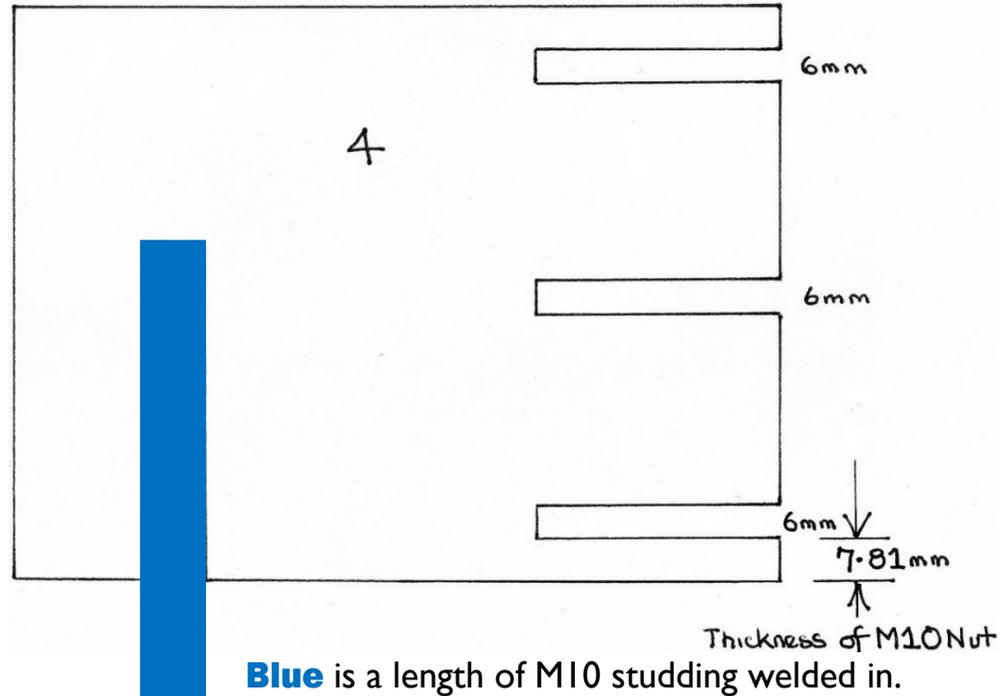
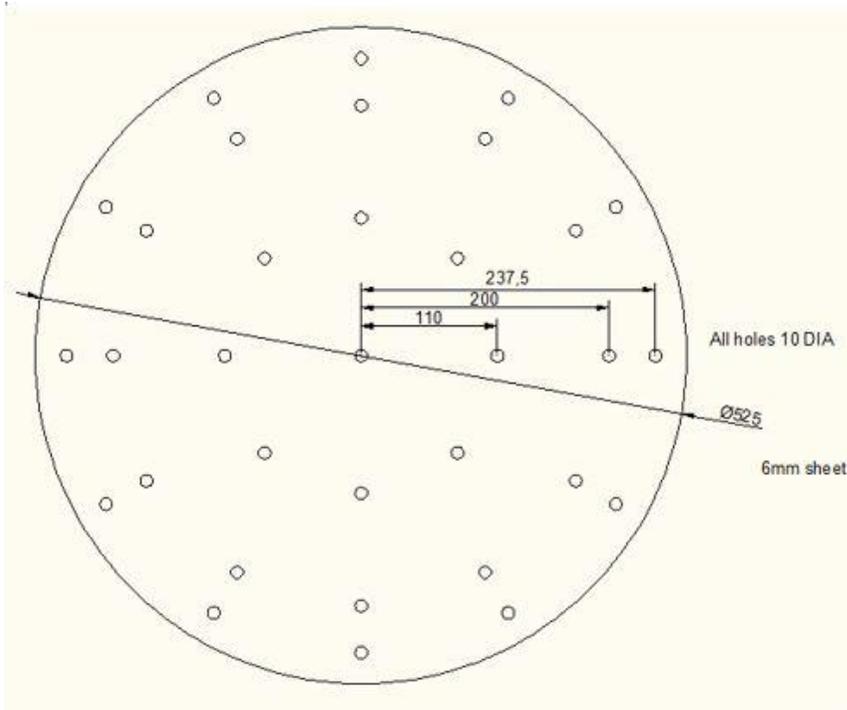
A band saw saves time

Raglan Lathe

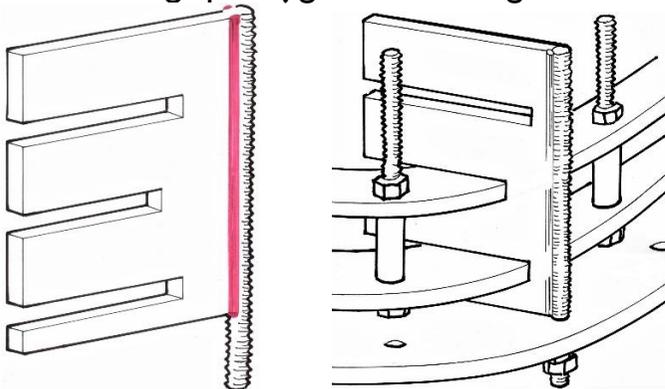
Magnetic Right Angles

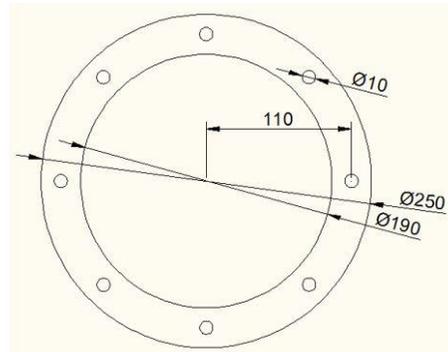
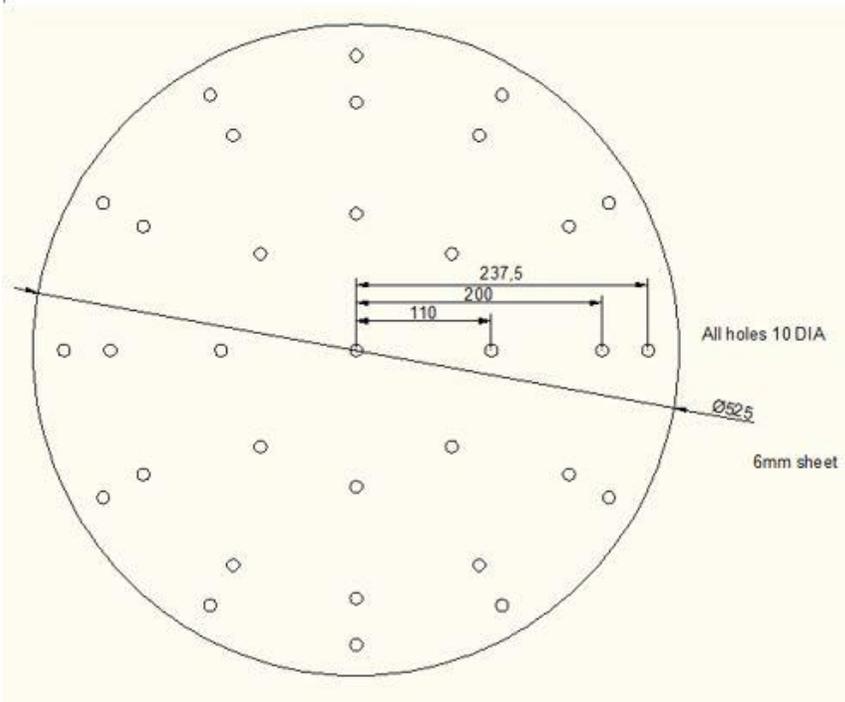
**Draisine Wheel Welding Jig.** The “Fingers” help keep alignment true and avoid eccentric wheels.  
**AutoCAD** code (*It is free*) for the wheels and Jig plate **TO DO** and “Fingers”. You get them **laser cut** by a laser cutting company local to you.

## Redesign in Winter 2021/2 “FINGERS”

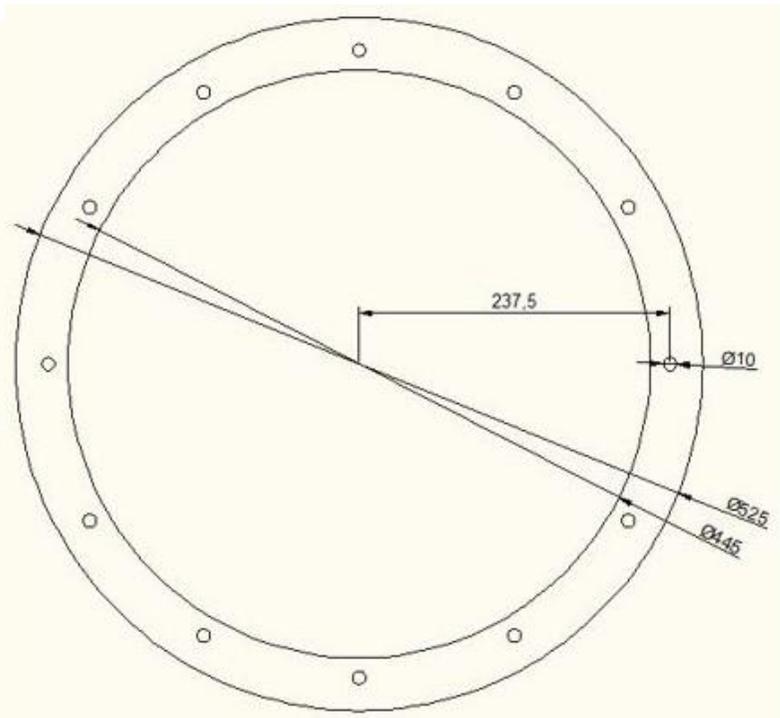
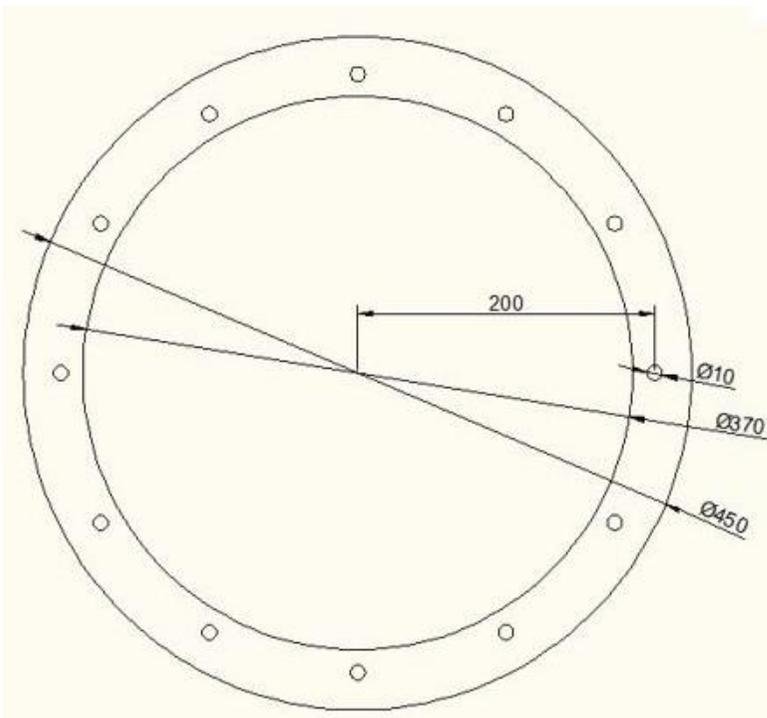


Use existing spare jig holes for fingers.





**Some of the Laser cut parts**



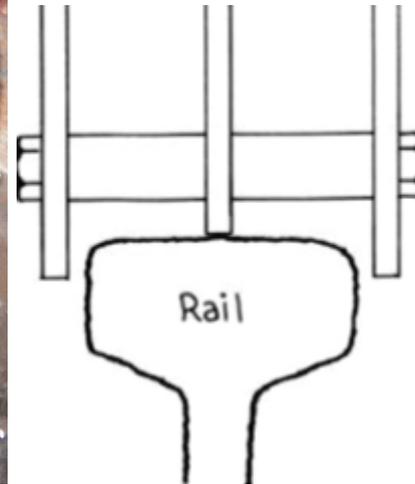
**Outrigger wheel 6 split spokes 8 holes, all rings the same size.**



Old Jig Design in use, without fingers

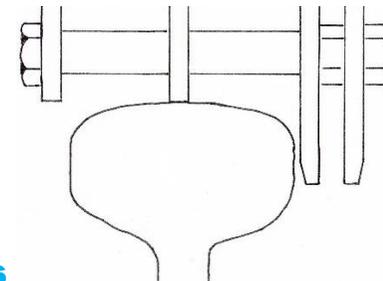
**You need to weld the spokes on this design. We will try to design a spoked centre disk and do without welding as an option**

## Front wheel 6 split spokes 12 holes



Front wheel on jig (the wheels under the operator have outer discs larger than the inner to “grip” the rail head).

**This type of wheel does not go through points in one direction, you have to get off and push the machine over them**



**A 4 wheel machine would have wheels like this, and would go through points**

**Back wheel** 6 split spokes 12 holes **Fingers** would use the holes inside the ring.





Bearings and carriers before brazing up.

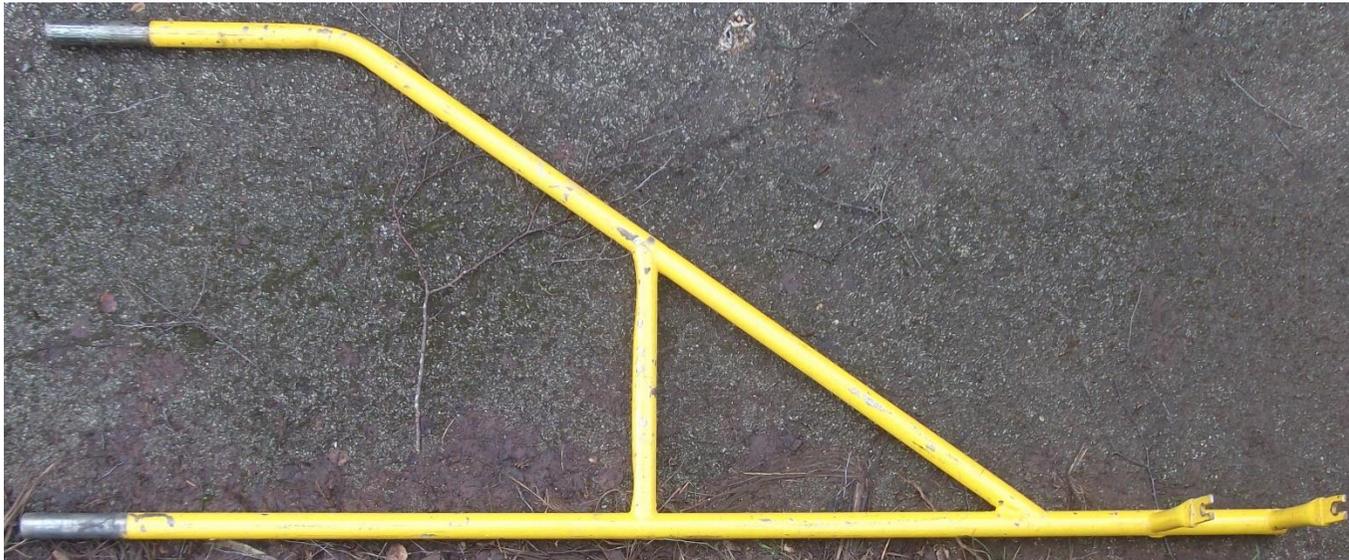


Jig in use attaching bearing carriers to frame with braze.



**Pillow Blocks would be simpler**

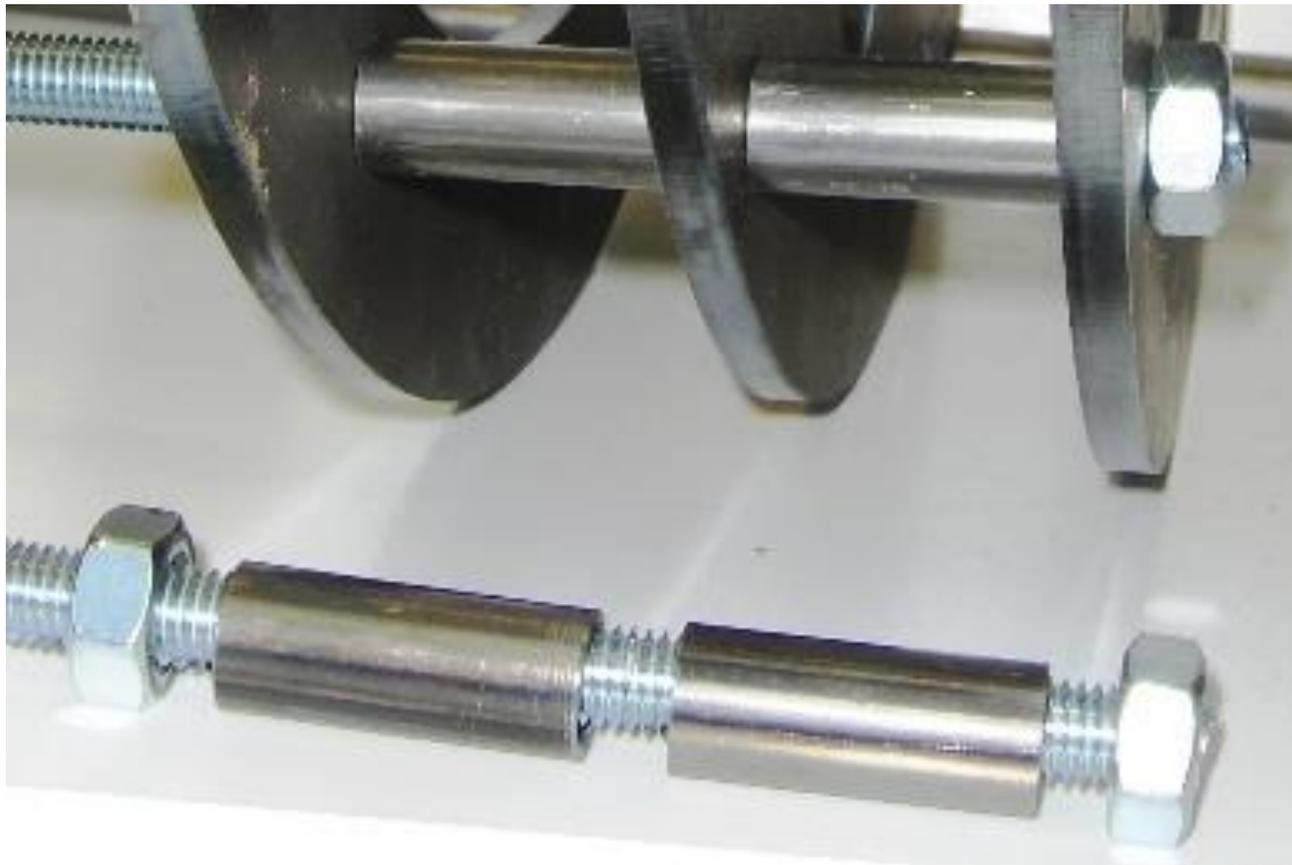
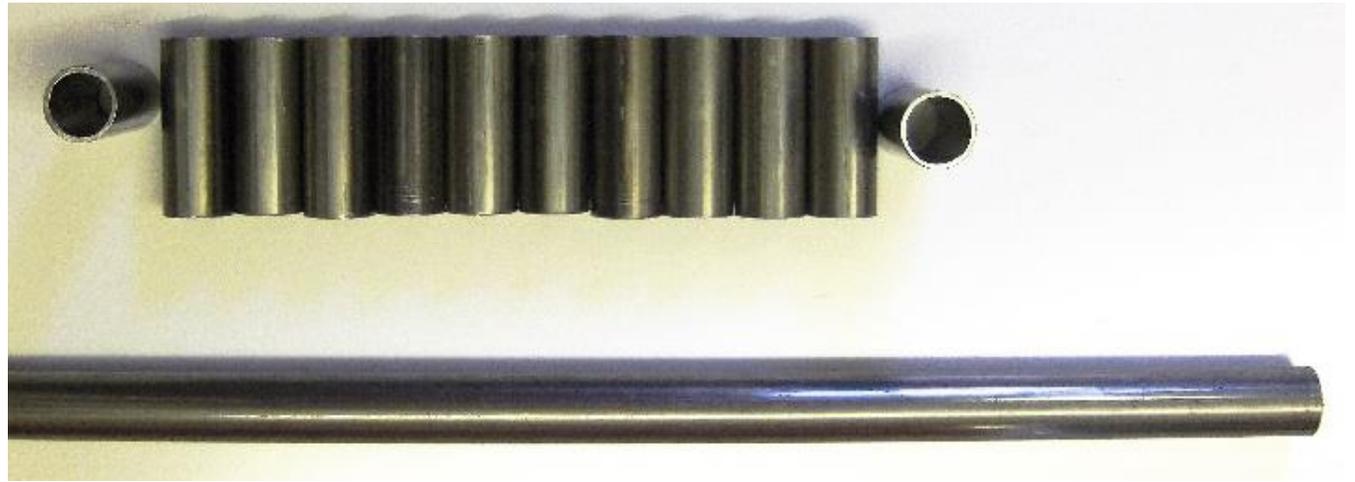








## Wheel Spacers on studding



Photos Trevor Catterson