

## INDOLENTE

As I cannot compete with Daryl's performing engines and boats, I first built a fishing boat model powered by a slow speed pop-pop engine. Pursuing this idea I explored another type of boat and another type of engine.

The idea was to build a two diaphragm engine with 2 slightly different frequencies, both of them being low. The low frequency is got by means of big boiler and long pipes.



Here are the engine parts before assembling. To match long pipe with not too long boat, the pipes are bent. Daryl will recognize the copper bends he gave to me when I met him.

In fact I built 2 engines in one: one burner, but dual boiler with no internal connection between chambers. One chamber is bigger than the other one because the tube which connects them is closed at the other end. The bigger volume involves a lower frequency.



On the left the lower frequency chamber. On the right one can see the plug soldered on the pipe in the "small" chamber.



Engine assembly.



After some difficulties to fill both sides with water the engine ran as expected. Loud sound with 2 frequencies. But what was not expected is the fact that burnout doesn't occur simultaneously on both sides. And I experienced several soft metal melting.

To avoid this and to ease filling with water I finally drilled a hole in the plug to connect both chambers together. Now it is a 2 diaphragm engine with only one frequency. But it works fine and loud.

As such an engine had to propel a slow speed boat, I built a barge. Hull length: 45cm.



Stern



and bow from starboard