Detail of my circular motor using tangential force and the equivalence with homopolar motor

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For the magnet, I have purchased a rectangular magnet whose poles are like this:

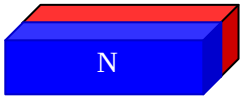


Figure 1

For making the motor, I join 2 magnets like this:

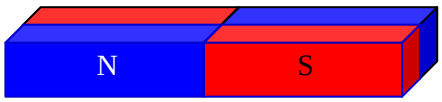


Figure 2

In terms of equivalent current generating the same magnetic field, the magnets' equivalent currents are like this:

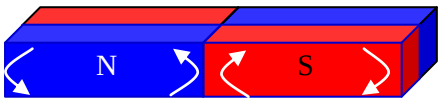


Figure 3

In order to make a stronger field, I joined 3 pairs of magnets making the block of magnet in my video http://pengkuanem.blogspot.fr/2014/02/circular-motor-driven-by-tangential.html:

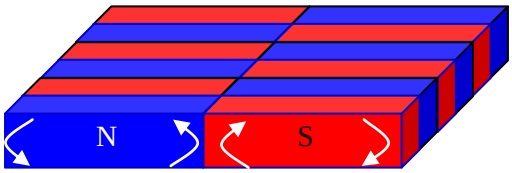


Figure 4

And the coil is positioned above the joining surface of the magnets like this:

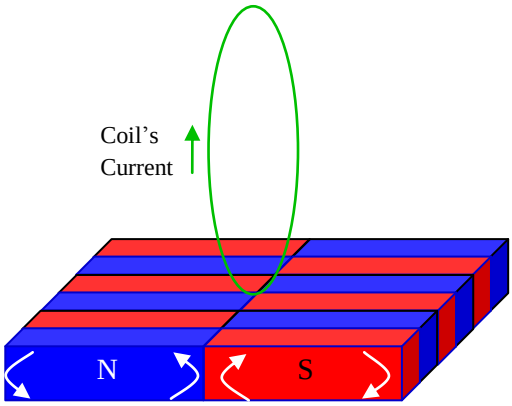


Figure 5

When we see the equivalent currents in the joining surface in the middle of the magnets, the current is directed upwardly:

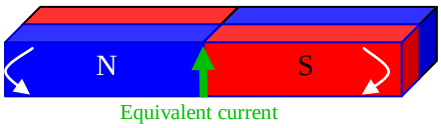


Figure 6

Now, you can see the entire setup reversely. The coil is a round magnet. The magnet block is a set of current which is the equivalent current of the Figure 6. We end up with an equivalent homopolar motor:

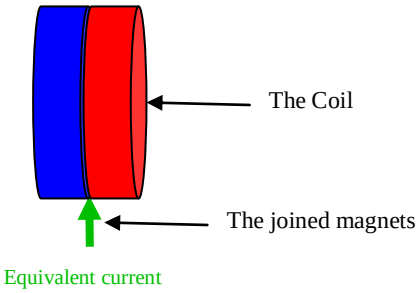
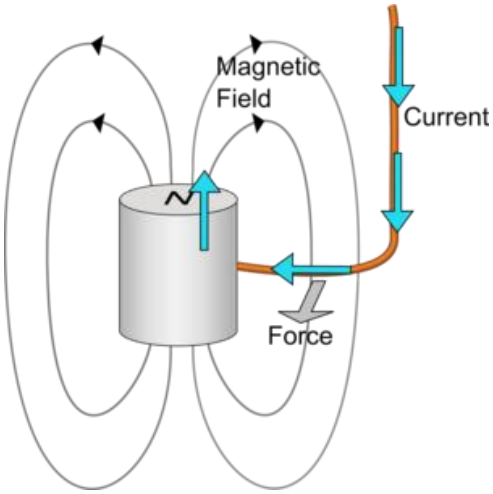
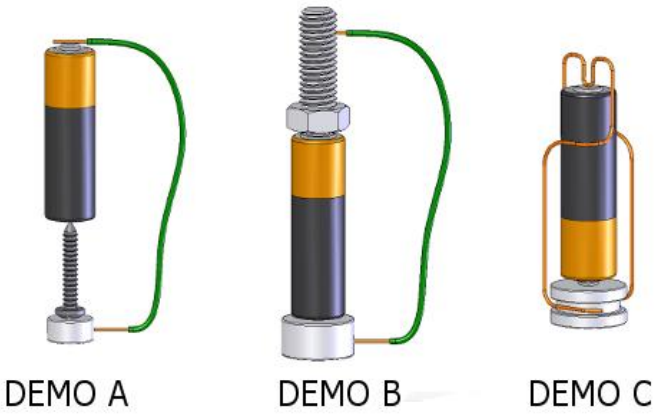


Figure 7

Here is 2 images describing homopolar motor:





So, my circular motor is the reverse equivalent of a homopolar motor http://pengkuanem.blogspot.fr/2014/02/circular-motor-driven-by-tangential.html.

There is a sliding connection for the coil for connecting current when the force is in the direction of rotation and cutting the current in other positions:

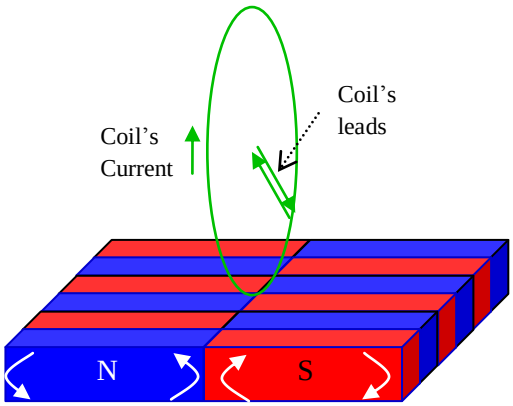


Figure 8 Current on

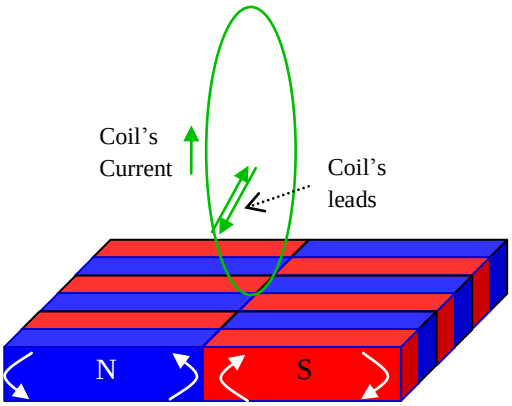


Figure 9 Current off