

ARTIFICIAL HEARTS

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1986 Jan 2

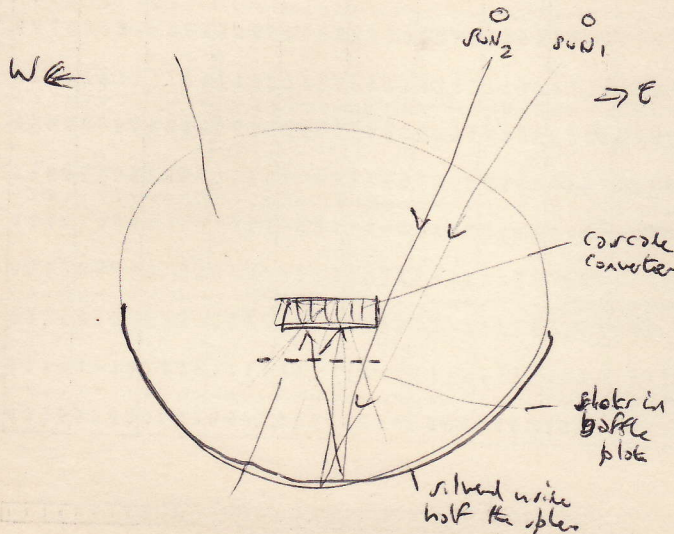
It is possible that mechanical hearts (e.g. the Jarvik 7) fail because the living heart is not just a receiver of impulses but also feedback signals, or part of the biochemical mechanism. If this is so, when the living heart is removed the body ceases to receive the feedback and closes down.

The problem could be avoided by still leaving ^{at least} the outer part of the living heart and putting the synthetic hearts ~~to~~ wholly or partly inside it. Mechanical valves in hearts do not seem to have reject problems.

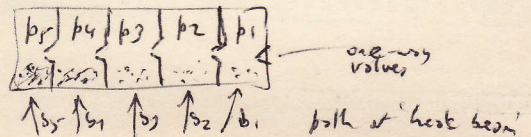
- The whole question of what signals the heart receives and sends needs much further study. There may be a complex electrical/chemical system.

SOLAR POWER CONVERTER

1986 Jan 10

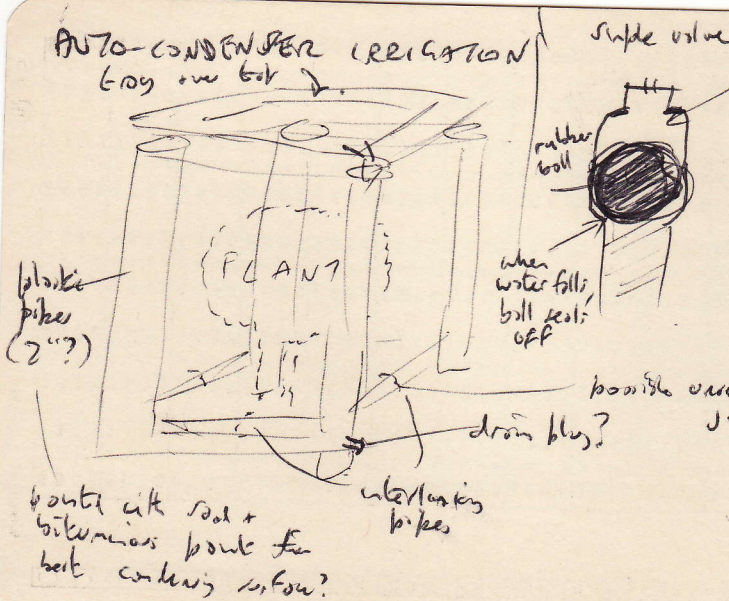


The concept is to combine the idea of the half-silvered sphere boiler and a compressed air energy storage device. The focus of the beam holds a cascade converter consisting of a set of cells holding air at successively higher pressures. As the sun moves, the beam power through slots to heat air in p_1 and increase its pressure to pass some into p_2 , which at that time is heated by from the beam. Effect cascade to build up max. pressure in p_5 . Spacing of slots determines exposure/shade periods, increasing pressure in cells.



AUTO-CONDENSER IRRIGATION

1986 Jan 2



It seems likely that Arizona tall cacti, baobab trees etc are able to get water by condensing it on their chimney-shaped structures. This effect could be used to irrigate plants in arid areas by enclosing each tree with a frame of pipes (3', 8', 12' high?) which contained water. ~~Water~~ Water could be added initially, or a collection tray added over the top of the frame to direct rainfall into the frame. Excess would be leaved down to the plant.