PERISTALSIS MOTOR

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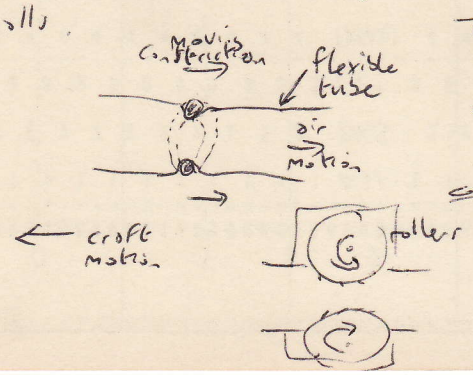
1988 Aug 14
(Roy. Botanic Gdn)

For low-force air motors, eg to propel a vacuum balloon along, perhaps a low-energy and quiet possibility would be a sort of "peristaltic" tube where the air was urged along by travelling changes in the shape of the tube's walls.



done with a physical template, eg passing a moving ring along the tube, or the same effect might be simulated with inflatable rings (or sections of a helix) which were inflated in sequence to give the same travelling-wave effect. There would be no need to try and fill the whole tube. The same effect might be got with rollers (sketch with 'microbuckets') and a square tunnel.

OPTICAL CHARACTER RECOGNITION

1988 Aug 10

- Present methods of character recognition appear to be based on matching with 'dot-matrix' patterns.
- Better and more flexible results might be obtained by coding each image into postscript curves/lines, and scaling to a standard size. This might be less sensitive to variations in photocopying, character separation etc.

Actually the technique is needed anyway, for automatic postscript coding of figures and drawings. Obviously the computer processing needs are higher - is a postscript-decoding chip feasible?

GRAVITY / GRAVITATIONAL CONSTANT

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a) The centre of gravity of the Earth-moon system is not at the centre of the Earth - well accepted - but ca. 1/80 up the ~~way~~ orbital separation.

b) The Gravitational measurements and the Earth's surface or wherever must be integrated over the whole mass of particles of the Earth. They should also, perhaps, be integrated to include the masses of the moon, the sun, and the rest of the Universe? Or, is the latter the cause of gravity?

Is gravity uniform in all directions from the Earth? We could expect it be slightly lopsided if the Earth is towards the edge of a saucer-shaped galaxy