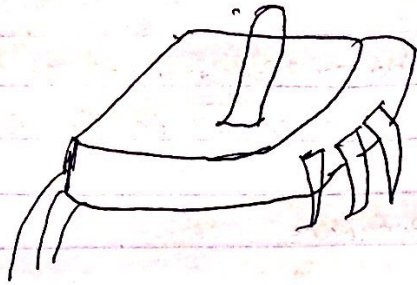


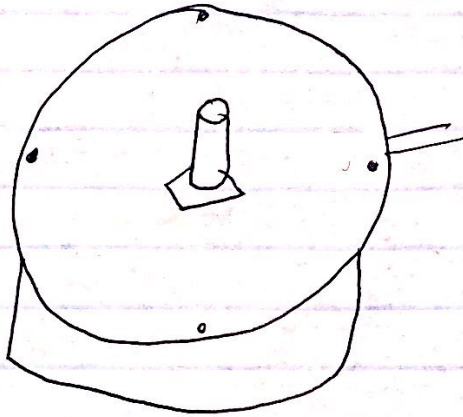
C7 Pressure Sensors

Using Strain gauge, the Pressure Sensors are sensors that measure pressure as electric signals



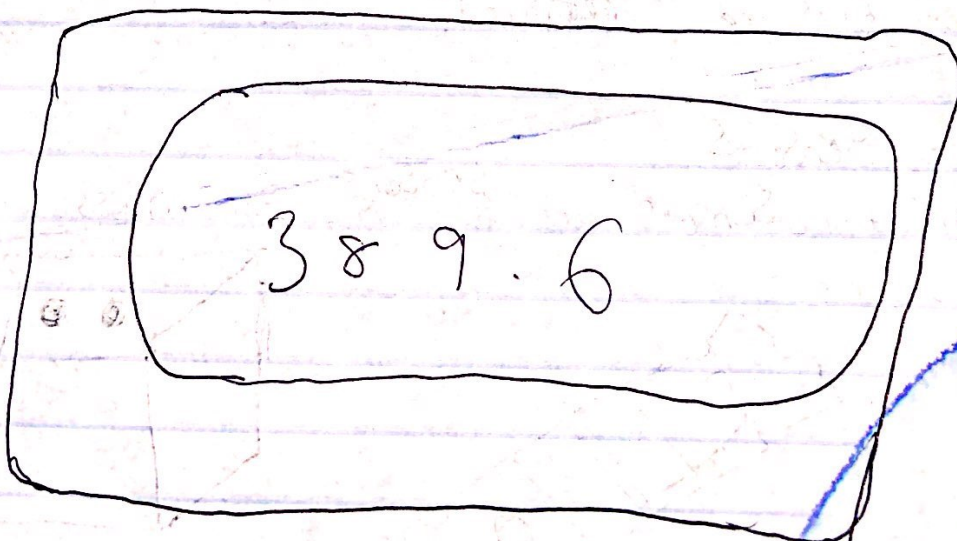
D7 Vector Sensors

The Vector Sensors is a sensor that detects the translation power in three directions. The Sensor can miniaturize because of a simple structure



Digital Indicators

Digital indicators used for it's Load Cells, Transducers and other measuring components



3) Describe briefly case studies of two medical measurement instruments

- Sphygmomanometer

A Sphygmomanometer is a device used to measure blood pressure, composed of an inflatable cuff to collapse and then release the arteries under the cuff in a controlled manner.

There are two types of Sphygmomanometers

- The manual Sphygmomanometer

- The digital Sphygmomanometer

b) Goniometer

It is used to document initial and subsequent range of motion, at the sites for occupational injuries and by disability evaluators to determine a permanent disability. This is to evaluate progress and also for medico-legal purposes. It is also a tool to evaluate findings that may indicate symptoms.

Mark-Adeyemi Victor

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17) Describe briefly with examples sensors and actuators for biomedical applications

Sensors

Sensors detect the physiological parameters or input under observation and converts it into a suitable electrical form

For example

- RTD / Thermistor for temperature

- Strain Gauge for pressure

Actuators

An actuator operates in the reverse direction of a sensor. It takes an electrical input and turns it into physical action.

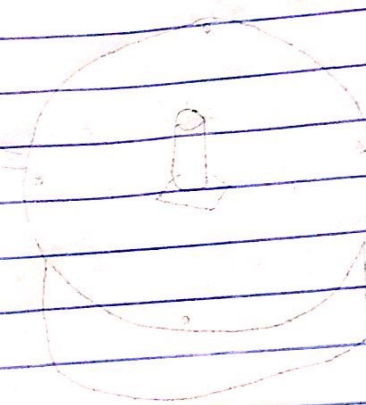
Actuators react

Example

- Alarms

- LEDs

- Displays



2 Strain Gauges

Strain gauges consist of a very fine metallic foil attached in a grid pattern, which is bonded to a device and used to measure the strain, or amount of deformation of the device when pressure is applied.

6) Force Sensors

The force sensors are sensors for mass production that use straining

