**Multipurpose Machine Single Motor Driller, Cutting And Grinder**

**Abstract :**

This paper presents the concept of Multi-Function Operating Machine mainly carried out for production based industries. Industries are basically meant for Production of useful goods and services at low production cost, machinery cost and low inventory cost. Today in this world every task have been made quicker and fast due to technology advancement but this advancement also demands huge investments and expenditure, every industry desires to make high productivity rate maintaining the quality and standard of the product at low average cost. We have developed a conceptual model of a machine which would be capable of performing different operation simultaneously, and it should be economically efficient .In this machine we are actually giving drive to the main shaft to which scotch yoke mechanism is directly attached, scotch yoke mechanism is used for sawing operation. On the main shaft we have use bevel gear system for power transmission at two locations. Through bevel gear we will give drive to drilling centre and grinding centre. The model facilitate us to get the operation performed at different working centre simultaneously as it is getting drive from single power source. Objective of this model are conservation of electricity (power supply), reduction in cost associated with power usage, increase in productivity, reduced floor space.

Keywords: Scotch Yoke mechanism, Drill bit, Bevel gear, Hacksaw, V-Belt Drive.