different wheel designs, loaded with different weights, and rolling it along known sandy surfaces. Data was collected and recorded for each configuration. Data was collected using lab view software; a force gauge transmits to a force collection device. As a result of the data suggesting interesting trends, new configurations will be tested in the future.

My initial sketches represent the material used to build a functioning apparatus (Fig. I). The sketches were altered upon the completion of the functioning test apparatus (Fig. II).

In the data collection process, three trials were conducted, a series of six weight conditions were comprised in order to obtain meaningful data. The weight conditions initiated at zero and ended at five pounds. These conditions were developed in order to compare the draw-bar pull force for each of the tested wheels under every considered weight condition. The weights tested played essential roles on the accuracy and precision of the data collection process. Three different wheels were tested, each having different treads and wheel widths. Variation within the tested wheels allowed for very interesting results. Each wheel type was tested under the six weight conditions. The differences in wheel widths allowed for data analysis in comparing the wheels and the depth of the wheels treads, under the weight conditions represented.

**RESULTS**

A series of six weight conditions were comprised in order to obtain meaningful data. The weight conditions initiated at zero and ended at five pounds. Under each weight condition three trials were conducted. The weights tested played essential roles on the accuracy and precision of the data collection process. Three different wheels were tested, each having different treads and wheel