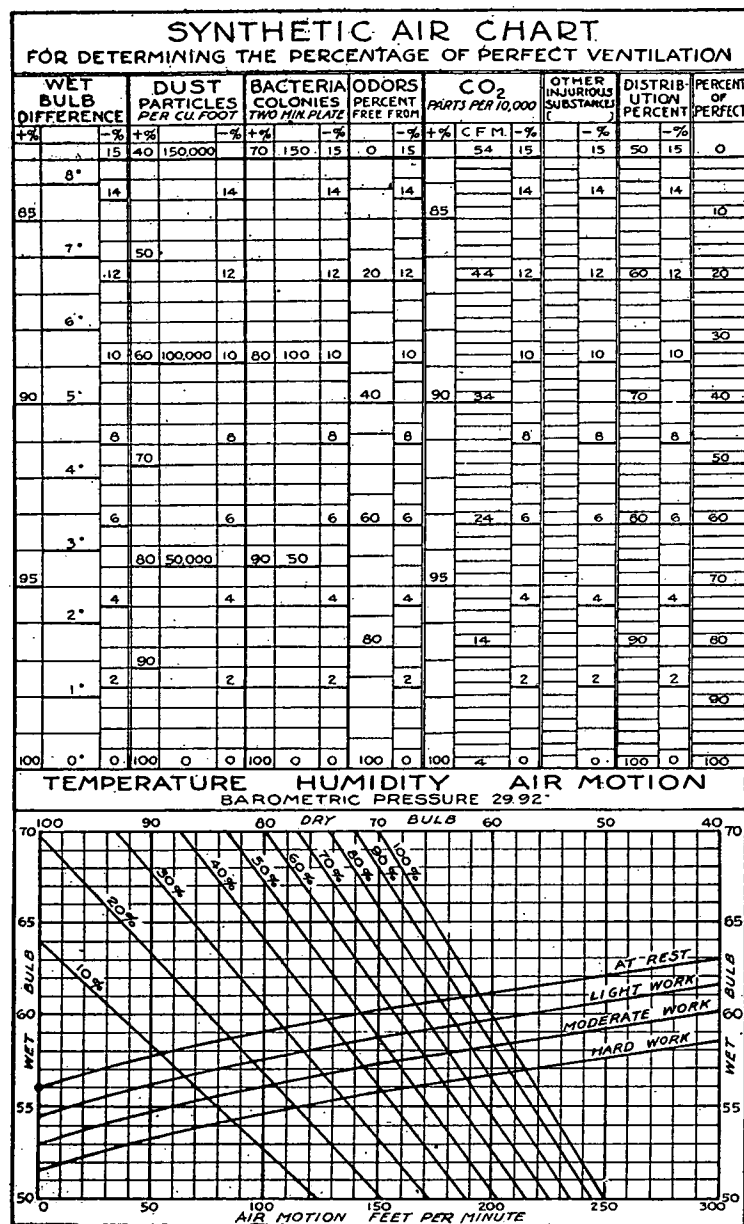




MODUS OPERANDI OF THE SYNTHETIC AIR CHART

In view of the announcement that after three years of investigation of the question of a standard for measurement of ventilation, the Society had adopted the Synthetic Air Chart for the purpose of comparing the air conditions in any room with the ideal or standard conditions, the Research Bureau worked out the following description of its method of application. It was thought that the operation of the Synthetic Air Chart might not be found entirely clear without some explanation and the Research Bureau submitted the following brief statement for the benefit of those interested, together with illustrations of the apparatus necessary to make the measurements involved.

THE Synthetic Air Chart offers a means of determining the percentage of perfect ventilation by considering all the known factors that make up the air conditions in a room. These factors with their proper weights, experimentally determined, are represented by columns arranged vertically across the chart. The base of each column represents the ideal condition, or 100 per cent perfect. Bordering on either side of the main column are two narrow columns marked “- %” and “+ %.” The former denotes the penalization to be subtracted from the Percent of Perfect column, and the “+ %” denotes the condition considering only the one particular factor.

The various factors are divided into three groups which are separated by the double lines. *First*, Wet Bulb Difference which includes Temperature, Humidity, and Air Motion; *second*, Dust, Bacteria, and Odors; *third*, Carbon Dioxide. The latter, although not really a factor, since it is not considered injurious, serves as an index of the amount of air supplied and of the distribution in the room. In addition, columns providing for Other Injurious Substances and for Distribution are given. The upper limit of any of these groups represents the condition where life would cease to exist. Hence at this point the “- %” column would indicate 100 per cent penalization. (Since the upper ends of the columns represent conditions not obtained in practice they are not included on the chart.)