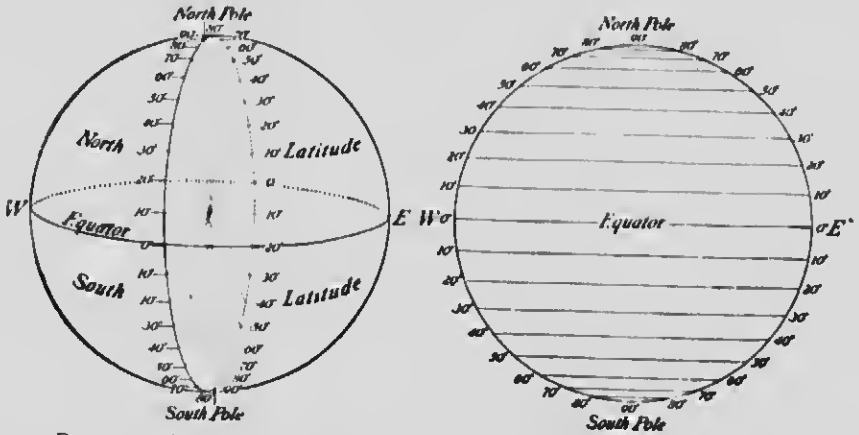
position of objects on a part or the whole of the earth's surface.

Maps drawn to show in a detailed way the features of a small section, like city or town maps, or the plan of a farm, are very much easier to draw and to read than are some of the maps in this book, where the whole world has to be represented on less than one page. Such detailed maps are said to be drawn on a large scale, while maps like those of the world which are used in this book are drawn on a small scale. Scale is usually expressed by a line drawn to show how many miles on the earth a given length represents.

On all maps of larger areas the meridians

Map Projections. In large-scale maps the meridians run up and down the map, and the parallels across the map. Owing, however, to the fact that the earth's surface is curved and the map sheet flat, it is very hard to show large areas in their true proportions on a map. This can readily be seen by any one who tries to flatten out a large piece of orange peeling without breaking it. Therefore, world and continent maps are drawn according to some definite plan which will tell the truth as closely as possible. These plans are called *projections*. For our purpose it is only necessary to remember that the meridians show the north-south lines, and the parallels the east-west lines. By the study of these lines we can tell the direction of one point from another, and by studying the scale we can estimate distances between them.



Degrees and parallels of latitude by means of which places are located with reference to the equator.

of longitude and the parallels of latitude are shown as continuous black lines. These lines are numbered to show the position of the area they inclose in relation to the Greenwich meridian and the equator.

In comparing areas on different maps the scale on which the maps are drawn must always be taken into account. Continents should be compared on a world map; the countries of a continent on a large-scale map of that continent; and the states or provinces of a country on a large-scale map showing the entire area of that country. It is only by knowing the scale on which any two maps are drawn that we can accurately compare all or parts of their areas.

V. THE CONTINENTS AND OCEANS

Distribution of Land and Water. As we look at the globe, which is our best representation of the larger features of the earth, we see that its surface is made up of land and water. About seven tenths of the surface is water and the remaining three tenths land. Deep under the water, however, there is rock forming a part of the solid earth. It is in the greater depressions of the rock mass that we have oceans.

When the interior of the earth cooled sufficiently, it caused the crust to fold itself into the mountains and ridges, it may be supposed that the waters of the ocean, obeying the law of