face of the above Zones of the Chart. Therefore as this aspect of the design forms one of the very foremost improvements of the new invention, we will close this part of the exposition by a few illustrations and problems taken from one of the finished Maps.

In the first place the author has a great desire to state that the principles of this scheme was first derived, and is founded, on Plato's recommendation, which recommends that all celestial and terrestrial quantities in this division of Science be undertaken through a graduated mechanism of Applied Geometry. Now the merest child in Geographical Science knows that the earth's axis with its two poles have an annual reciprocal six months sunlight and six months darkness. This terrestrial phenomenon is therefore one of the finest illustrations given by this device, for by the motion given on the face of the Map to the earth's axis and poles the operation optically becomes both striking and interesting even to the merest tyro on the subject. By the degrees of the northern and southern semicircles, the true position and place of each pole is obtained, as each degree stands for the orbit motion of the earth in every twenty-four hours time. Again, to solve problems of the different planetary conditions of the earth's sunlight and darkness, all that is required is to remember that if the north pole is moving from A to B, on the Map, the north pole is constantly in sunlight. On the other hand it will be observed that in the Southern Hemisphere the south pole has been moving from B to A in the southern total darkness. So to fix the earth's axis and both the poles at the exact spot on the Chart for any day in the calendar, the SINES and COSINES of the two semicircles solves that point.

We will now in closing endeavour to explain the following general problem in the use of the invention :