a single year's mortality." The formula is, that, for the age x, the rate of mortality or the ratio of the dead to the living for that age is expressed by

$$a\,b^{c^{x}}$$

where, a, b, c, are constants which differ for different tables. From this the Professor drew the following conclusions;

1. The rate of mortality invariably increases from youth to old age.

2. This rate is continually accelerated even in a higher ratio than in geometrical progression.

3. In early manhood, the rate does not differ much from a slow arithmetical progression.

4. There are no crises or climacterics at which the chances for life are stationary or improving.

5. There are no periods of slow and rapid increase succeeding each other; but one steady, invariable progress.

6. The law, though not the rate of mortality, is the same for city and country, for healthy and unhealthy places, for every age and country and locality; and this law is that the differences of the logarithms of the rates of mortality are in geometrical progression.

OZONE OBSERVATION.

Prof. Rogers gave an account of some observations made by him on the existence of ozone in the atmosphere. In the first instance these were made at Boston, and he here found winds blowing from the sea heavily ozonised, while those from the land were less so; on removing, however, fifty miles inland, he found the indications of ozone apparently independent of the quarter from which the wind was blowing, and depending more on its velocity; in a calm there being but slight ozonic effect, the increase being marked with the violence of the wind. This was to have been expected from the imperfect character of the mode of observation, since the effect produced on the test paper would depend on the quantity of ozone brought in contact with it, and this of course depended on the quantity of air that passed over it in a given time. To remedy this defect, he had arranged an apparatus by which the number of cubic feet of air passing over the test paper could be measured.

Dr. Webster, of Norfolk, added an important observation, "*Last year, while the yellow fever was at Norfolk and Portsmouth, I kept an ozonometer constantly exposed to the air, and never detected ozone. This year I have used the ozonometer in the same place, and at the same period of time, and I find ozone in abundance.*"

THERMIC EFFECT OF THE SUN'S RAYS.

In a paper, by Mrs. Eunice Foote, some interesting results of experiments on this subject were given. The experiments were made by exposing freely to the Sun's rays a thermometer, with blackened bulb, enclosed in a glass receiver, which contained the various gases experimented on. The effect was found to be greatest of all in Carbonic Acid gas: for example, when in air the thermometer stood at 106°, in Hydrogen it stood at 104°; in Oxygen, at 108°, and in Carbonic Acid at 125°. It was also found that the thermic effect was increased in air by an increase of its density and also by an increase of the moisture in it.

(*To be continued.*)