

## THE EARTH.

FRAMED AND FURNISHED AS A HABITATION FOR MAN.

BY THE REV. W. ARNOT, M.A., GLASGOW.

But there is another characteristic of the sea, which, as matters go among men, ought to be more effective in stirring us up to gratitude; inasmuch as preservation from a near and great danger affects a human mind more than those many benefits which distil as the dew from heaven, and are therefore seldom observed. Dutchmen never forget their dykes. They know well that these earthen walls constitute the constant and only barrier against a desolating inundation. When you hear the storm at midnight, and think of the poor Hollander sleeping beneath the level of the sea, with nothing but a mound of earth between him and a deluge, you turn on your other side with a thought of thankfulness that Englishmen are not at the mercy of the treacherous element, as it is fashionable to call it. There you are reckoning without your host: at this moment we depend on a mechanical contrivance to defend us from a deeper flood. If the wheels of the huge machinery should be clogged and stand still to-night, the sea would, before morning, cover our highest mountains, by the mere operation of the ordinary law of gravity. You are aware that the earth is not perfectly spherical, and that it revolves rapidly on its own axis.—These two facts bear an intimate relation to each other, and together exercise a decisive influence in making the world a fit habitation for man. If either fact were changed, the earth would be no longer habitable.—If the globe should become a perfect sphere, while its diurnal revolution continued, the water would be all withdrawn from the regions round either pole, and heaped up in a deep and all-devastating ocean across its midst: if, on the other hand, the revolution of the earth should cease, while the configuration of its mass remained unchanged, the waters would recede wholly from the middle regions, and form in two great circular seas around the poles.

The case stands thus:—The diurnal revolution being necessary in relation to day and night, light and heat, and other es-

sential qualities of a human habitation, the form of the globe has been moulded accordingly. It has been made in the main spherical, but with a comparatively minute deviation. The diameter which would pierce it through the poles is about twenty-six miles shorter than the diameter which would pierce it through the equator. If the solid matter of the globe were perfectly spherical in form, the centrifugal force of the revolution on its axis would raise all the water in a ridge with the culminating line on the equator: but the globe has been cast in a mould which gradually rises by a gentle slope from either pole till it terminates in a ridge twenty-six miles in height, girding it round the centre. This elevation of land in the middle regions of the globe precisely counterbalances the centrifugal force of its revolution; and therefore the disposition of land and water, with the earth whirling round, is the same as it would have been on a perfectly spherical body at rest. This is, perhaps, at once the most beautiful and most palpable adaptation in nature. It is a mark of the Maker's hand left upon his work.—“Glory to God in the highest” is inscribed upon the earth below; and so large are the letters in which the inscription has been written, that he who cannot read it must be helplessly shortsighted or wilfully blind. It is because an Almighty arm keeps this ball always swinging round, that we can lie down to sleep without the fear of being awakened by a deluge.

But we must turn now from the great reservoir in which the water is contained, to the channels by which it is distributed.—In this department new and equal wonders meet our eye. Whether we look, on the one hand, to the veins and ducts of the human body, or, on the other, to the rivers and clouds of the earth and sky, we find an apparatus at once complicated in plan and simple in operation for carrying on the circulation of the system. But look to the streets and lanes of our cities, and, notwithstanding recent efforts to improve them,