

WHERE THE NEW-YEAR BEGINS.

MR. PHINEAS FOGG, that immortal hero of the ever interesting Jules Verne, who traveled round the earth in eighty days, found that by traveling the whole distance against the apparent motion of the sun he had gained a day, which enabled him to gain also his bet. How did that come about?

About the first lesson in geography taught the child is, that the earth is round like a ball, and that it revolves on its axis once in every twenty-four hours, thus causing day and night. They also know, that all places on the same meridian or in the same longitude, have at the same moment the same hour of the day; while the time becomes faster as the meridians nearer the rising sun are crossed, and slower if the movement is in the opposite direction. There are 360 degrees in a circle,—360 degrees of longitude around the globe. In the day of twenty-four hours there are 1440 minutes, from which it is evident, that it takes but four minutes of time for the sun's rays to reach one parallel of longitude after the other. It is also evident, that there must be some line on the earth, imaginary or real, where in an instant a jump is made from the thirty-first day of December to the first day of January. Now where is this line?

It is shown very distinctly on our map, by which it will be seen that the date-line starts from the South Pole and strikes pretty nearly direct north; then inclines east of New Zealand, bends gradually to the northwest, running on the eastern side of Australia by the Hebrides and New Guinea into the Chinese or Yellow Sea, where it attains its most westerly projection. Now it makes a bending sweep to the east and north, which, leaving the Celebes and Borneo to the southwest, passes around the easterly lying Philippines, then takes a bend northeastward to the east side of the Japanese Islands, and up through Behring's Straits, then inclining a little westward, it takes the shortest road to the North Pole.

Now by the map, this line is seen to touch land at but one place, and that at its most easterly point, and here consequently the inhabitants first receive the sun's rays heralding the light of the glad New-Year. Now suppose the sun was there at seven o'clock on the morning of the new year, and that a ship is anchored a mile to the eastward waiting for the dawn to steer its way into the port; as the sun gilds its topmost mast and sails, it is Sunday morning, the 31st of December, 1882. In an instant the rays touch the highest rock of Chatham Island; it has crossed the line and the merchants date their blotters, if they work on that day, "New-Year's, Monday, January 1st, 1883," and thus the Chatham Islanders are ahead of all the world in the matter of time. But in two hours the sun has passed the thirty degrees between Chatham Island and Australia to the south, and Japan, part of China and Siberia, more towards the north, and for all that distance it is the first day of the year. As the sun marches rapidly around at the rate of a degree in four minutes, the New-Year is caught up all around the world, until when its day's journey is finished, the whole earth has spent the first day of 1883, and the people of Chatham Island begin to count Tuesday, January 2d, 1883.

It is evident from this that a ship, making a voyage around the world, to preserve on her log-book the whole distance the same dates as that of the part from which she started, must in crossing this line, if the voyage be eastward, drop a day in her calculation, and if it be westward count it twice. Ship-masters, however, do not always wait till the line traced on our map is crossed, to make their change in the date, but usually make it at the 180 degree of longitude from Greenwich.