mineral resources.

## CLIMATE.

But notwithstanding the resources of soil, the extensive mineral deposits, and the vast 47°, the mean temperature for the year is 40° supplies of game which the plains, forests, rivers and lakes of the country contain-still another fatal prejudice in the way of the early settlement of the country remains to be removed. According to the popular impression the rigor of the climate, the length of the winters, and the depth of the snows, render most of the country uninhabitable. This is a sheer fallacy.

It is now understood, generally, that the temperature of any given portion of the earth's surface does not depend entirely upon its latitude. About three-fourths of the earth's surface is covered with water, and the diurnal motion of our planet, with other causes, maintains perpetual ocean currents from the Equator towards the Poles. Thus, that wonderful current in the Atiantic, known as the Gulf Stream, by carrying a large volume of heated water through the ocean directly to the coast of Europe, gives to the Rocky Mountains, which again curve the that country a climate far more temperate than line southward along the eastern base of the corresponding latitudes on this side of the range, until meeting with a depression it passes Atlantic.

ally those conducted by the officers attached to Ocean nearly ten degrees north of Quebec, the the Japan Expedition, have established the exis-starting point. I have carefully examined such tence of a current in that ocean, entirely analo- meteorological tables of the country as have gous to the Gulf Stream of the Atlantic. This been kept at the forts and trading posts within gulf stream of the Pacific exerts the same influ- it, all of which, without exception, indicate a ence upon the climate of the western coast of climate in those high latitudes much more temour continent in modifying the temperature, that perate than would prevail were it not for the its congener of the Atlantic does upon the west- causes which I have meutioned, and perhaps ern coast of Europe. Astoria, at the mouth of some others which future scientific research and the Columbia, and Olympia, on Puget's Sound, discovery may make manifest. the one near the 46th the other near the 48th parallel of North latitude, have a climate similar cessary. In no part of the country treated of to that of Baltimore, in latitude 391/2.

far into the continent. The great water-shed of traders, and there are physical causes why it the mountains, spoken of in an early part of should be so. Recorded observations at the this discourse, occurs in a most marked depres- trading posts, and of late years in Minnesota, ession of the coast, it being only about 5,000 feet tablish the fact that the prevailing winds of winabove the level of the sea. Through this gap in ter are from the West and North. Those coming the mountains, several hundred miles in width, from the North, instead of precipitating moisture and sucking up through the valleys of the inter-in the form of snow or rain, constantly have their locking streams, through the canons and gorges, capacity for retaining moisture increased as they a vast body of warm air direct from the ocean is progress southward to a milder region. Those carried constantly out eastward over the plains, from the West must first cross the mountains, tempering the climate in all its course, until whose snow-clad peaks condense the warm air meeting with the colder winds from the Atlantic, emitted from the thermal currents of the Pacian equilibrium of temperature is effected.

of equal temperature-drawn east and west when it passes in this condition over the counacross our continent, after passing west of the try to the east of the mountains. Lakes, begin to curve northward, cutting par- In a letter from Hon. H. M. Rice, the present

exceeds this vast undeveloped Northwest in allels of latitude diagonally, until they pass the Rocky Mountains, after which they run north-

> ward nearly parallel with the coast of the Pacillo. Thus, at Quebec, for example, in latitude Fahrenheit. A line drawn from Quebec westwardly, to pass through every point at which the mean temperature, for the year, is the same, would bend southwardly at the start, affected, doubtless, by the cold winds which sweep down unobstructedly from Baffin's Bay through Hudson's Bay, but curving northwardly again as it approaches Lake Superior, passing through that lake north of the 45th parallel. Proceeding westwardly from Lake Superior, the line still curves northward, passing nearly half a degree north of Lake of the Woods, which is on the 49th parallel, cutting the southern terminus of Lake Winipeg north of the parallel of 50°. crossing to the north side of the Saskatchewan River to nearly the 52d parallel, and then proceeding due west for a short distance, where it is met by cold winds from a snow-capped range of west of the mountains, where it suddenly bends

Late researches in the Pacific, especi- to the north again, passing out into the Pacific

As regards snows a word or two only is neare the snows equal in depth to those of New The influence of these thermal waters extends England. This fact is well known to the fur fic, diminish its capacity for retaining mois-As a consequence, Isothermal lines-or lines ture, and in effect wring it perfectly dry,

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