

crust there is a heavy mass of molten metals, on which the earth-crust floats like ice on water. Metals do not, of course, have the same weight or specific gravity. Thus, platinum is twenty-one times, gold nineteen and one-half times, and rock only two and one-half to three times as heavy as water. Accordingly, since the lighter substance floats on the heavier, the metals in the bowels of the earth increase in weight with the approach to the centre of the earth. Let us also recall that the earth's crust is very thin in comparison with the earth's diameter. As the latter is about eight thousand miles and the former on the average about six miles, it appears that the earth's crust is relatively hardly as thick as the thin skin or membrane just inside the shell of a hen's egg. Remembering, furthermore, that the present velocity of the earth in its course around the sun, is at the rate of 82,000 miles an hour, or twenty-three miles a second, let us now try to see what would happen in the case of a collision such as the one just referred to.

At the time of the collision there would necessarily be created a tremendous air-pressure. Assuming the earth-crust to have an average thickness of about six miles, this air-pressure would be about three times as great as the resistance offered by the earth-crust. Therefore, if we do not take into account the velocity of the planet colliding with the earth, we shall calculate the time required to pile up the Rocky Mountain Range and its table-lands, at not more than six minutes. This time would be