

the United States will come in for a third interest as arbitrator.

The importance of this discovery to the commercial world can not be over estimated. There are mountains in Neptune as large as France. It is peopled by races so unsophisticated that a judicious missionary expedition, promptly backed up by a few gatling guns, would get rid of them permanently. These immense slopes are covered with the finest timber. Bananas and blunderbusses thrive without cultivation, up to limits of perpetual snow. Gold, silver, iron, copper, copperas, lead, coal, coal oil, slate, sand, clay, jewellery, general stores, boots and shoes, groceries, etc., abound within a few miles of fine natural harbors. There are rivers five times the length of the Mississippi, and deeper than Darwin's philosophy. All that Neptune needs is development and sufficient capital will be forthcoming for the purpose as soon as the question of ownership has been settled so as to secure the rights of property.

With this wonderful instance of the result of deductive reasoning to guide him, a gentleman, who, for obvious reasons, shall be nameless, but who enjoys the confidence of the Toronto Physical and Astronomical Society, began operations on the moon, determined to redeem its character as a useful member of society, and to dispel the charge that it was dead and a drone. He reasoned in this way: If the moon had an atmosphere anything like what we have on earth, its cloudy part would float above the surface of the planet at a height of not more than one or two miles, the densest parts being lowest. Again, the moon moves eastward around the earth at a mean rate of about forty miles per minute, so that if the atmosphere of the moon were analagous to ours the maximum of time that could elapse before the body of the moon eclipsed a star, from the first contact with its atmosphere, could not be more than two-thirds of a second. Under such circumstances and conditions as are possible in observing an occultation, is the human eye capable of recording anything of such short duration? He doubted it, and straightway began to reason that for anything we know to the contrary the moon may have an atmosphere of great density. He next began to study gravitation, and ob-

serving that one side of the moon is always presented to us, therefore its centre of gravity must be on the side next the earth. As on the earth the densest matter gravitates toward the centre, so it must be on the moon, with the result that the water would lie on the top, or upper side of the moon, with the atmosphere above the water, unless they have a new kind of gravity up there, which is unlikely, as Newton's invention is faultless, and his patents perpetual. From arguing that it might be so, he fell or rose, as the case may be viewed, to contend that it must be so, and therefore set about to try to prove it. Much had been done by means of photography. Success was only relative; why could he not outstrip others, as they in their turn had done to others that went before? He would try, and so began with plates of the moon-bottom, as he styled it, and hoped to save time by means of spectrum analysis. This is a simple operation that any school boy can perform if he only knows how. You take a piece of the stuff, or in the case of distant stars having a good light, take some of the light and put it in a spectrum; you then burn the analysis, and the residuum indicates the nature of the stuff, or light. In the case of the moon, as he could not get any of the stuff, and the light was not good, he put some pictures of it in his spectrum, but no analysis appeared. He then burnt the pictures to see if it would bring out the analysis, but it didn't come out right. He next tried enlarging, and again enlarging the photographic plates, being very careful about his chemicals and exposure, and in time succeeded in getting plates sufficiently minute in detail to show parts of the surface of Luna on a scale equal to a distance of 100 yards. He then employed a powerful glass to view the plates. The result was gratifying. He could not get the colors, but from the crystallization of the rocks he made out the different ores of metals known to us. The lead ore, galena, abounded, as did also several silver, copper, iron, cobalt, and nickel ores, but the great mass of the Lunar mountains consisted of gold and platinum ores, mixed with the heavier of the precious stones. Sapphires, emeralds, opals, Scotch pebbles, and the like, formed the base of whole mountain ranges; lakes and rivers