

### Science Notes.

Mr. Nikola Tesla has recently returned to New York from Colorado, where he has been conducting experiments in wireless telegraphy at a high altitude in the Rocky Mountains, and says, in an interview:—"to illustrate the efficacy of my latest methods, I need only say that, whereas with finely adjusted Hertzian appliances a lightning discharge can be detected at a distance of only three hundred miles at the furthest, with my methods it is easy to observe the effect at a distance of eleven hundred miles."

#### SUPPOSED PLANETARY CURRENTS.

"While investigating feeble electrical actions transmitted through the earth, I made observations which were most gratifying to me. Chief among these were the observations of certain feeble electrical disturbances which could barely be noted at times, and whose character showed they were neither of solar origin, nor produced by any causes known to me on the globe. What could they be? I thought incessantly of this for months until finally I have arrived at this conviction, amounting almost to the knowledge, that they must be of planetary origin.

"It seems to me that only men absolutely stricken with blindness can hold that the earth is the sole planet inhabited by intelligent beings."

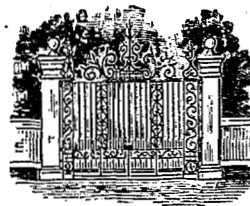
#### TO COMMUNICATE WITH MARS.

"I have perfected my transmitting apparatus to the extent that I can undertake to construct a machine which, without a doubt, will be fully competent to convey sufficient energy to Mars to operate delicate appliances such as are used here, for instance, delicate telephone and telegraph instruments. Since we ourselves are so advanced, is it unreasonable to believe in the possibility that of the various planets of the solar system, one, if not more, may be ahead of us in evolution? Where there are the heat of the sun and moisture, life must originate, and must go on developing as a stone must fall to the earth.

Sir Robert Ball's lectures at the Royal Institution on "Great Chapters from the Book of Nature" have been thronged with young people, the fifth address, entitled "The Evolution of the Moon," was finely illustrated. The craters of the extinct volcanoes came out with perfect clearness, even to the shadows thrown by the outside edge of the basins. The beds of the vanished oceans of the moon were also demonstrated. Sir Robert told the tale of time and tides, and the effect of the moon on our earth. He also compared the spin of the earth to the spin of a humming top. A top gradually ceased spinning because of the friction of the point on which it rested, and because of the top's contact with the air. The earth had no such obstructions, but there were causes, such as the tides, to stop it going round. The effect was very slow, and in a thousand years the day would be shortened only by the fraction of a second, so that we need not trouble much about it. After showing and explaining some more pictures of lunar scenery Sir Robert Ball said that the moon was now 240,000 miles away. There was a time when it was much nearer, and millions of years ago the moon was actually connected with the earth. The earth was then a molten globe, and the day was only a very few hours long. The moon was gradually getting further away from the earth, and in millions of years' time would be twice as far away as it was now.

### Outside the Gates.

#### WOMEN.



THE Federation of Australia is accomplished, and the following message, from the Queen, sent through the Governor-General, finds an echo in the mother-heart in the old country:—

"Accept my heartfelt congratulations for the New Year and wishes for the

welfare of my New Australian Commonwealth."

To which His Excellency has sent the following reply:

"On behalf of the people of the Commonwealth and myself I return thanks for your Majesty's gracious Message and reciprocate your Majesty's good wishes."

It is cheering to note that a most liberal response is being made in reply to the Princess of Wales' letter asking for funds in aid of the Soldiers' and Sailors' Families Association. The wealthy must see to it, that these poor defenceless ones do not suffer unjustly in the cause of commercial security and Empire.

Lord Roberts is to be presented by the women of Ireland with a magnificent Star of St. Patrick, composed of brilliants and rubies.

It is somewhat to be regretted that the few women invited by the leading organs of the press to send new century greetings did not *all* avail themselves of this unique opportunity to bring before the public the intolerable position of women tax payers, who are the only human beings at large in this country who are taxed without representation, because the lunatic, the criminal, and the pauper, all exercise the franchise as soon as they are let loose from durance vile.

Mrs. Bedford Fenwick sent the following message to the *Daily Express*:—

"The Nineteenth Century has been an era of stress and storm for women. Economic conditions have compelled increasing numbers to earn the bread they eat. They have gone forth in thousands, animated by extraordinary pluck and energy, but have been called upon to face impossible conditions of labour.

"A few have won fame and laurels, and lived content; thousands have toiled unceasingly and lived sparingly; many have fallen by the way. A few stalwarts have found voice to demand justice from the State. They have pleaded patiently for a full half century for the fundamental basis of freedom in all civilised countries—political enfranchisement.

"Give us the vote,' they say, 'and remove the bar sinister from the escutcheon of the British people. Wipe out the indelible stain that they are born of mothers who are not recognised as British citizens.'

"What will the Twentieth Century bring to the world? Surely the fulfilment of God's law that together male and female shall have dominion over every living thing that moveth upon the earth.

"Let our Sovereign Lady Victoria, Queen and Empress, crown her bounteous era by setting her sign manual to the edict which will free the sex of which she is so illustrious an example, and live for ever in the memory of a free people—the greatest ruler of all time."

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