

**PROGRESS OF ASTRONOMICAL SCIENCE.**—Seventy-five years since, the only planets known to men of science were the same which were known to the Chaldean shepherds thousands of years ago. Between the orbit of Mars and that of Jupiter there occurs an interval of no less than three hundred and fifty millions of miles, in which no planet was known to exist before the commencement of the present century. Near the close of the 17th century, when Kepler had pointed out something like a regular progression in the distance of the planets as far as Mars, which was broken in the case of Jupiter. Being unable to account for this, he conjectured that a system with any theory he could form respecting it, he hazarded the conjecture that a planet really existed between the orbits of Mars and Jupiter, and that its smallness alone prevented it from being visible to astronomers. But Kepler soon rejected this idea as improbable.

**KNOWLEDGE OF THE WORLD NECESSARY.**—Nothing has so much exposed men of letters to the contempt of the vulgar as their ignorance of things which are known to all but themselves. Those who have been taught to consider the institutions of the schools as giving the last perfection to human faculties, and who are content with a wrinkled with study, yet waiting to be instructed in the minute circumstances of propriety, or the necessary forms of daily transactions; and quickly satisfied with the progress for modes of education, which they find to produce no ability above the rest of mankind. *Boles*, says Bacon, can never teach the use of books. The student must learn by converse with mankind to reduce his speculations to practice, and accommodate his knowledge to the purposes of life.

**CHEMISTRY AND MATERIALISM.**—The renowned Liebig delivered a public lecture on "Animal Chemistry" at Munich, on the 16th of January, in which he took occasion to declare, from his position as chemist and naturalist, his opposition to the widely spread views of Molschott, Veget. Matter, &c. which are most generally promulgated. He pronounced himself, with dignity and energy, against the "deniers of mind and vital power," and illustrated and combated, from his profound acquaintance, their erroneous theories on pure scientific ground. He showed how impossible it is to explain, on chemical principles, the existence of even the lowest connecting parts of an organism, of a cell, or a muscular fibre—and how much more difficult an account for the mysterious processes of life and thinking by a change of matter. He demonstrated how unable materialists were to distinguish organic from inorganic substances purely chemical. Nothing, he said, was more absurd than to derive the process of thinking and willing from a phosphoreous of the brain, as Molschott had done; and that, in the case of the latter, and then, (material of thinking), would be contained in bones, which have four hundred times more phosphorus than the brain.

**COAL AND WOOD.**—Wood used as fuel generates heat more rapidly than coal; but a pound of the latter (anthracite) will evaporate three times more water than a pound of wood. As a compact fuel, coal, therefore, is the best for use in generating steam, because plenty of draft for rapid combustion can easily be obtained by a blower or tall chimney. As wood contains a great quantity of oxygen, and anthracite coal none, less air is used from an apparatus which needs to be supplied with coal than anthracite coal is used. This is the reason why the atmosphere of apartments heated with wood fuel produces, as it were, a more genial influence, and why colds are more readily contracted. Hence, also why it does not require such an amount of cold air from the outside to supply the fire.

**CAMP AT WINCHESTER.**—Instructions have been given to the Ordnance Department 500 acres of land in the neighbourhood of Winchester shall be purchased for the purpose of forming a permanent camp of 500 men.

**EARTHQUAKES.**—There are two theories respecting the cause of earthquakes. Let the igneous theory, which maintains, that the earth was once a molten fiery ball, and that its interior is still a fiery mass, and is sometimes caused to generate waves, which produces oscillations on the surface.

21. The electric theory, which attributes the shocks to disturbed magnetic action in the crust of the globe—that the shocks are nothing more than powerful electric currents.

As earthquakes are local, those who dispute the igneous theory assert, that if the interior of the earth were a molten mass, and earthquakes were caused by waves of fire, fluid, &c. the oscillations would be equally strong on every part of the earth's crust.

**NEW REMEDY FOR SEA SICKNESS.**—Mrs. Emma Willard of Troy, proposes a new remedy for this unpleasant sickness, which consists in forcibly expelling the impure air, from the lungs, and filling them with pure air. This is her advice:—  
"Make your chest as small as possible by drawing down your ribs, and pressing your arms to your sides; throw out the air by a violent and long-continued exhaling, blowing it from your mouth as if engaged in blowing up a fire. Then change, and make a forcible inhalation, opening your chest to its fullest dimensions by standing erect, and raising your arms from your shoulders. Three or four of these long forced breaths are sufficient to relieve a severe case of sea-sickness."

**INTERESTING PORTRAIT.**—The ship *Frigate Bird*, at Philadelphia, from London, brought a fine original portrait of the famous British patriot and statesman, John Jay, which had belonged to the late Mr. McGregor of the British Parliament for Glasgow, and is to be presented by him, through Mr. Buchanan, to the Congress of the United States.

**ADULTERATIONS OF QUININE.**—The high price at which sulphate of quinine can now be had in its purity, has led to its extensive adulteration. Physicians and the public should be on their guard, and only obtain the article from the most reliable sources, else they may be using arsenic, pipicrin, or strychnine, for all these are employed for adulterating purposes.—*Medical Gazette*.

**SCOTTISH FACT.**—It is estimated, that every one who dies in the besieged Schanapool, has cost, on an average, far more to France and England than a gospel missionary would have cost, according to the usual remuneration, in every part of the globe.

**MORTALITY OF BUTCHERS.**—An article of recent date in the *London Medical Times*, states, that the highest rates of mortality are found among the butchers, as is shown by official statistics, and confirmed by careful observation. The fatal disease, which sometimes attacks the butcher, does not seem to indicate enduring health.

**A PASHA ATTENDING HEATH.**—A letter from Jerusalem states, that on a recent Sabbath, his Excellency, Kiamil Pasha, attended the English service in company with his two secretaries, and followed us for as far as the door by a long train of servants. Who would have anticipated such an occurrence a few years since!—Christian church bells ringing in the Holy City, and a Turkish Pasha walking gravenly to church.

**THE EASTERLY WINDS.**—Letters from Amsterdam state that a singular spectacle now presents itself, which has not been known for the last half century; the Zuyderzee, in consequence of the long continuance of northerly and easterly winds, is almost dry. Between Geneminden, Blockzijl, Lemmer, Kampan, and Harderwijk, the bed of the sea may be crossed dry-footed, and the water in the smaller vessels are everywhere high on the sands.

(From the St. John Morning Courier.)

The Railway Bills, as passed the Legislature, provide for the issue of Debentures to the amount of £200,000 sterling per annum for the purpose of raising money to construct, will be determined a good deal by the state of the money market in England. When Mr. Fisher began his arrangements with Messrs. Gurney and Co. in consequence of the war, which then appeared likely to last another year at least, he raised money at an unusually high rate, raising money. Both himself and his colleague, Mr. Robertson, were surprised, we believe, to find that the rate of interest was not maintained for 1856, at six per cent. This, it is expected, will completely finish the road from the Bend to Shelbide, and provide for the extension to the station, &c., during the present year.

It is very easy for parties who some months since ridiculed the idea of raising money of our Government succeeding in raising money at such a time, to try now to misrepresent the terms. It is enough for us to know, that we have made very high bids, and that we have had money to build our Railways, as Canada, with all its resources, made in very good time; and we are not to be surprised to find that the Government succeeded in raising money at such a time, to try now to misrepresent the terms. It is enough for us to know, that we have made very high bids, and that we have had money to build our Railways, as Canada, with all its resources, made in very good time; and we are not to be surprised to find that the Government succeeded in raising money at such a time, to try now to misrepresent the terms.

We refer to this subject now for another purpose. Although we only get £50,000 sterling during the present year, and probably could not have raised more than £100,000 sterling, authority under the Bill to exceed £150,000 additional debentures. Thus, if in 1857 and 8, we had raised money at an unusually high rate, we could get the extent of £50,000 sterling, an amount with the £50,000 that, and the £200,000 which will be paid to Jackson, will make up the whole of the money required by the end of 1858.—Now, assuming that the Government fund this full amount, it is pretty clear that the Government will be enabled to complete the line of Railway completed, and the others commenced.

Some one might be thought to be good judges, say, that our Railways can be built by the Government, when payments will be cash, for a sum not exceeding £2000 sterling a mile, on an average, and a good road would be made, that a contractor of eminence, has always expressed his willingness to build the line from Shelbide to the Bend, and we are not to be surprised, and we believe it is, there is nothing to prevent the whole line from Shelbide to St. John being built in the present year, and another year in 1857, besides an expenditure of considerably upwards of £100,000 sterling on the two extensions by that time.

We are not to be surprised, to complete from Shelbide to the Bend as soon as possible; then to complete from St. John to Hamilton, for which we have already raised money, and the part of the road, therefore, may also be opened next year.—We believe that the line to the Bend will be completed in the present year, and a little, as on as particular parts are finished. The extensions will be surveyed during the present year, and the expenditure will commence upon them as soon as possible. Many have preferred seeing the line already under contract completed first, but this was found impossible, principally because of the feeling of the counties on the upper part of the River St. John. The Attorney General was not willing to incur the expense of surveying immediately, and as he had been so instrumental in securing the commencement of the work, it was not to be expected that he would not have been so instrumental in securing the extension to Shelbide to St. John to Woodstock was assented to. This, of course, also led to the provision for the extension to Chatham, already secured by the old Bill.

We have been a little surprised at the dissatisfaction which some parties in Fredericton are at, and the feeling of the people, that the Railway secured to Woodstock. They have a survey immediately, and during the next two years an expenditure which will make up the whole of the money required for the line. Then they will get their full share. The delay is a very small one, and we can assure them, that the Government will not be so slow in the Province boundary, is estimated here, and will receive the most influential support, if it should be necessary to raise money.

If for instance, in 1852, when the Facility Bills were passed, an arrangement similar to that now made had been effected, we should not have been so long in completing the whole road from Shelbide to St. John would be completed and in full operation, several

miles of road towards Miramichi would likewise be completed; part of the road from Fredericton to Woodstock would also be completed; and the work would be proceeding on the whole line.

It is useless, however, to argue a point which is so plain. We may well express our thankfulness that we have got rid of the old contractors. It is altogether idle to say, that they would ever have completed the work, even if Government had not provided for it in the summer. Their present conduct with respect to Canada, shows that they are not to be depended on for providing for the extension of a road of traffic with which they will, we fear, seriously embarrass its railway movements for some time to come.

It is not to be expected that the action of the Executive in taking the necessary steps to set the work in motion. It is necessary, we believe, that the Government should proceed to England and finish the arrangements. But, in the meantime, preliminary measures may be determined, both with respect to the line between Shelbide and the Bend, and the survey of the extensions. We trust the Executive will do their duty as promptly and energetically.

**HASZARD'S GAZETTE**

Saturday, April 26, 1856.

There are some expressions which derive their force from the circumstances of the situation of the person using them. For example Mr. Coles in speaking of persons who in the ordinary course of their right of address to their Queen referred to in these terms, it is true, on the conduct of the present administration, calls them persons "eating the bread of their Government," those members they have had the ingratitude—for that is the import of the speech—to find fault with. When he says that they are "eating the bread of their Government," he is calling himself the leader of the Government it is best to meet it at once. Does Mr. Coles really mean, that he is not to be put in office, in the receipt of a public salary, of no consequence how small or how little—that the fact of his receiving such salary constitutes an offence, and that he is to be considered "whose bread he eats"? Yes, he does mean exactly this, in other words, "You are to a certain extent, eating the bread of your Government, and we believe it is, there is nothing to prevent the whole line from Shelbide to St. John being built in the present year, and another year in 1857, besides an expenditure of considerably upwards of £100,000 sterling on the two extensions by that time." We are not to be surprised, to complete from Shelbide to the Bend as soon as possible; then to complete from St. John to Hamilton, for which we have already raised money, and the part of the road, therefore, may also be opened next year.—We believe that the line to the Bend will be completed in the present year, and a little, as on as particular parts are finished. The extensions will be surveyed during the present year, and the expenditure will commence upon them as soon as possible. Many have preferred seeing the line already under contract completed first, but this was found impossible, principally because of the feeling of the counties on the upper part of the River St. John. The Attorney General was not willing to incur the expense of surveying immediately, and as he had been so instrumental in securing the commencement of the work, it was not to be expected that he would not have been so instrumental in securing the extension to Shelbide to St. John to Woodstock was assented to. This, of course, also led to the provision for the extension to Chatham, already secured by the old Bill.

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