

have four elliptical funnels, each 28 feet in diameter. Her freeboard will be somewhat greater, being about 52 feet at the bow, 45 feet to the level of the main deck, 62 feet to the boat deck amidships, and 42 feet at the stern. A striking novelty will be the provision of a single pole mast forward of the bridge. At 35 feet draft the roof of the pilot house will be 70 feet above the water. No attempt will be made to emulate the speed of the famous Commodore, the 45,000 horse-power engines sufficient, calling for 21 knots sea speed.

An Ingenious Agriculturist.

Col. Frank Touvelle, a rancher living near Medford, Oregon, is said to have produced a deep-rooted vine which brings forth three crops of berries in a season, which result has been achieved by grafting alfalfa roots on the roots of the strawberry vine. Alfalfa roots deeply, and produces three to five crops a year without irrigation. It occurred to him that strawberries might do the same if the vine could be made to extend down far enough, so as to receive moisture from the soil throughout the season.

The Poison of the Borgias.

Dr. Jagot, of the Angers Medical School, claims to have discovered the secret of the mysterious poison of the Borgias. Two poisons, apparently, were

The Romance of the Earth.

(Specially written for the "Weekly Graphic" by Clement L. Wragge, F.R.G.S., etc.)

What a marvellous history is that of our little planet Earth, and how few, amid the excitement of horse-racing, bridge, and other such things, care the proverbial "two straws" about it! How very few ever pause to think of the "Romance of a Stone," picked up at random from any river-bed; to how few the history of New Zealand—carved in the archives of those faithful historians, the mountains, plains, and rivers—appeals! People, in fact, have no conception of the extreme age of the basis of this country, replete with information to those who will only take the trouble to read and understand—praying to that Royal Arch Freemason of the Supernal Whole, the Divine Architect and Mathematician, for guidance and light. Fiat Lux! What a meaning in those words! Let the scales fall from our eyes—behold!—and read our theorem of the past.

(1) Nearly a thousand millions of years ago this planet was hurled off from the sun by a process akin to that of the disintegration of the radium atom, and at once began to spin on its axis with the amazing velocity of two rotations per hour. It was then in the vaporous state—and on through vast ages it began to solidify, while the rate of rotation slowed down—and internal fires and inherent

hemisphere were vertical at the North Pole, where, during the opposite season (when the earth was travelling more rapidly), was a short, dark, steamy and reeking tropic winter, analogous to a night on the banks of the Amazon.

(6) The human life-germ—be it understood—first, we maintain, inhabited the polar north, and from these creatures was developed the great Lemurian or pre-Aryan root-race about 18,000,000 years ago, and from them the rest of mankind. Lemuria, which was the most ancient continent, was thus the cradle of the human race, and was so-called on account of the monkey-like animals, early man, that first inhabited it. It extended from what is now Spitzbergen across Central Asia and the Japanese and Malayan Islands to the Carolines, Tonga, South-Eastern Australia, and New Caledonia; and not only so, but it covered nearly the whole of what is now the South Pacific, thus embracing New Zealand, Fiji, Rarotonga, Tahiti, and Easter Island; and a kind of huge peninsula linked it up with Antarctica, and probably also Tierra del Fuego. Another huge Lemurian peninsula took in Southern India and Ceylon, and extended south-westwards to Madagascar and East Africa.

(7) In those remote times nearly the whole of the Southern Hemisphere was glacial, save for a brief tropic summer, when the melting of the ice caused such flooding as accounts for many a ravine in the New Zealand of to-day.

(8) Further tremendous periods of time elapsed, and conditions became modified, and later totally altered, by the operation of what is known as Croll's Law. The sun thus became in the right-hand focus of the ellipse, and the once genial Northern Hemisphere then became glacial, save, in turn, for its brief tropic summer. In this case, as in paragraph 7, it will be understood that the accumulation of the ice in the two hemispheres, during the long winters respectively, far overbalanced the brief tropic heat at the pole, but while the vertical sun operated in this case as in the other, the floods and erosive action of the melted ice carved in no small degree the gorges of Britain and Northern Europe, and were mainly responsible for the Bunter conglomerate, an ally of which is found in Southern New Zealand.

(9) In consequence of the growing northern ice, the pre-Aryan root-race was forced to migrate to the Southern Hemisphere, which had then become genial across that old romantic land, Lemuria, and from it, by Mongoloid migrations, developed the Moriori Polynesian and Maori races, as we now know them. And the Maori history is one of absorbing interest in connection with the subsequent breaking up of Lemuria. Think of the human tooth which we have seen alleged to have been found in the Whangarei limestones.

(10) The Easter Island statues are representative of the root-race, and the inscriptions on the rocks in Easter Island which have been translated confirm and practically describe the increasing cold in the Northern Hemisphere, and the migration aforesaid.

(11) The megalithic or ancient stone track route from Ireland and Western Europe, through Portugal, Egypt, India, Mongolia, Japan, Java, the Carolines, Tonga and New Zealand, onward to Tahiti and Easter Island, is quite in accord with the foregoing; and remember the human remains lately discovered in France, which date back from 200,000 to 500,000 years.

(12) Hence the information given by Egyptian priests to Herodotus that the sun did not always rise and set where it does now was, we are of opinion, correct.

(13) Owing to the Earth contracting internally, and to changes in eccentricity and climate, Lemuria became broken up and finally, to a great extent, submerged. Fire and ice were the destroying factors, and from the force thus let loose equilibrium was destroyed, and the Earth's axis was shifted to an inclination of about two-thirds of a right angle, as now. Yet regular axial change also operated as indicated in paragraph 15. This was probably 4,000,000 years ago. And New Zealand is ever so ancient, and is a remnant of the old Lemurian continent.

(14) The tattooing of the Maoris on their faces and on canoes has doubtless come down through enormous ages; through Mongoloid and Aryan sources; and it represents the spiral motion of the sun to and from the vertical in North polar regions when the axis of the Earth was horizontal to its orbit. Spikes on houses have a pre-Aryan origin, and refer to ancient sun-worship, and it must be

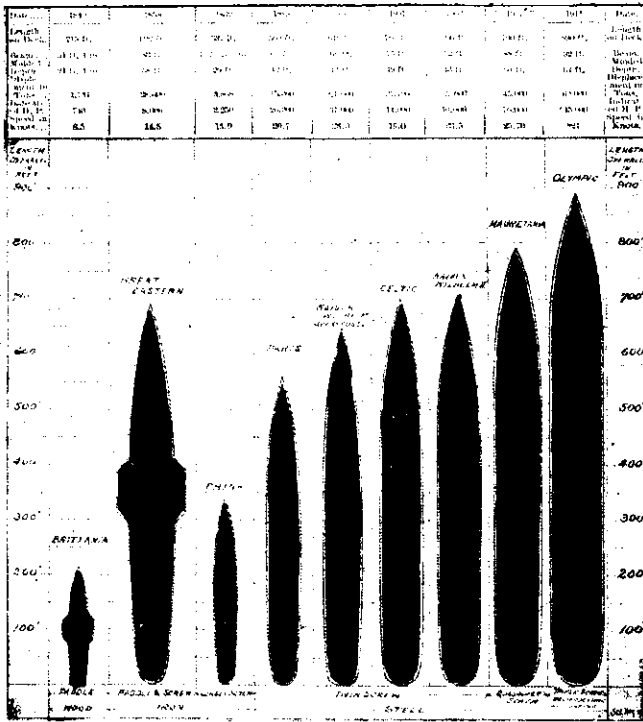
recollected that Europeans are an offshoot of the old Aryan stock.

(15) Be it ever-remembered that axial secular change is, we are sure, a fact, and that this is the Great Adjuster (apart from precession and eccentricity) with respect to climatic variations and zones on a grand scale, and may be likened to the regulator of a watch. The next axial shift will probably be when the great snow and ice cap near the South Pole carries away, as give way it must in time, for while it is accumulating it is also being undermined very gradually but ever so surely by the comparatively warm northerly winds that are co-relative to the southerly blizzards experienced by Lieutenant Shackleton. When this takes place—some thousand or more years ahead—such a tidal wave will tear up the Atlantic as will in a great measure swamp Western Europe. Sir Joseph Ward will then have been forgotten. Thus axial changes may be sudden and also regular; and we affirm that there is an actual motion of the pole among the "fixed" stars, apart from precession, of about three minutes of arc per century, which is enough to carry the poles through a complete revolution in 720,000 years or thereabouts. Thus the supposed limits of obliquity, as alleged by La Place, have been obtained from erroneous premises, and are, we maintain, without any foundation in fact.

(16) Bearing in mind what has been said, and also regular axial shift temporarily masked by sudden disturbance of equilibrium, all geological, climatic and ethnological changes at once become clear, and the history of the Earth can be read like an open book through the long ages past; while the existence of remains of tropical flora and fauna near the polar circles is no longer a mystery.

In considering the foregoing, which will set people a-thinking, we must not forget ancient records—apart from the light thrown on the matter by the inscriptions of Easter Island. From earliest times the old scriptures of the world have referred to the inversion of the terrestrial poles through vast periods. Thus there was also a time when the axis of the Earth would have been directly upright to the ecliptic, and there would have been constant spring, the intensity of which would only be modified by change of latitude. The Zoroastrian sacred books particularly refer to this, and to the constant Spring of Airyana Vaejo, and the Parsee Vendidad confirms what has been enunciated, likewise the Dendera Zodiac of the ancient Egyptians.

Finally, it is maintained that La Place did not adequately prove that the inclination of the equator to the ecliptic is always practically the same; and we say that the inclination of the poles to the plane of the orbit increases and decreases through long cycles or ages, and that there was a time when the altitude of the pole could have been measured from Delta Ceti. For Polaris and Sigma Octantis will not always be pole stars, and "there are more things in heaven and earth than are dreamt of in our philosophy." Of course, in some circles we shall be deemed a "heretic" and a fit subject for electrocution with Baracchi of Melbourne, Lord High Executioner, Hunt his assistant, and the "gentle Bates" ministering spiritual comfort. But let either of them prove that our dicta are wrong.



GROWTH OF THE TRANSATLANTIC STEAMSHIP FROM 1840 TO 1911.

*This is the contract horse-power and speed.

used, one slow and the other rapid in operation. The former appears to have been arsenious acid, commonly known as arsenic, which is only slightly soluble, and therefore acts slowly, while the quick poison was probably one of the soluble preparations of arsenic which act almost instantaneously. It is not, however, positively proved whether the poison of the Borgias owed its efficacy to arsenic, to the ptomaines of putrefaction, or to both combined.

Largest Dry Dock in the World.

The contract has been awarded by the Navy Department to the San Francisco Bridge Company for the construction at Pearl Harbour, Hawaii, of what will be the largest dry dock in the world. The masonry and cement portion of the dock alone will cost 1,670,000 dollars. Plans have been drawn for a complete system of defence for the harbour, and the construction of these defences and of the dock will proceed simultaneously.

forces caused eruptions and upheavals the extent of which it is difficult to grasp.

(2) As the solidifying process continued, and when the Earth had evolved sufficiently to support human life, the soul-wave of mankind was transferred by etheric vibrations from a planet or sub-planet that could no longer support it, and that planet was probably the moon.

(3) When this took place the equator probably cut the ecliptic at right angles, and the poles of the ecliptic and those of the Earth coincided, giving alternately a vertical and nadir sun at the North and South Poles.

(4) Croll's law of eccentricity of orbit and also precession operated, and enormous periods of time were involved in the process.

(5) When the first creatures came by electric operation, whence evolved man, the sun occupied the left-hand focus of the elongated earth's orbit, the axis was horizontal, or nearly so (instead of two-thirds of a right-angle), and the sun at the summer solstice of the northern



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