## ART. III.—"THE WONDERFUL CENTURY."

BY ALFRED RUSSEL WALLACE (London: Swan Sonnenschein & Co., 1898.)

THIS is a remarkable book, and no one can read it without interest and profit. It is proposed to note briefly each of the subjects treated by the author as helping to make the Century wonderful: I give the list of these subjects, and propose further on to notice each separately.

т	Modes of Travelling	S	Railway.	
	modes of mavening	(	Steamship.	
II.	Labour-saving Machinery.	1		
III	The Conveyance of Thought	5	Telegraph.	
	The conveyance of Thought		Telephone.	
		(	Matches for ignition.	
IV.	Fire and Light		Gas.	
			Electricity.	
v	New application of Light	5	Photography.	
۷.	Hew application of Light	J	Röntgen Rays.	
VI.	Spectrum-Analysis.			
		(	Conservation of	
VII	Theoretical discoveries in Physi	<b>cs</b> 2	Energy.	
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		(	Gases.	
	2 22 2 2	. (	Velocity of Light.	
VIII.	Application of Physical Princip	les {	Phonographs.	
			Röntgen Rays.	
IX.	Importance of Dust.			
Х.	Great Problems of Chemistry.		141140 MILLION	
XI	Astronomy and Cosmic Theories	. S	New Planets.	
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1777 - Televille		ſ	Glacial Epoch.	
XII.	Geology		Antiquity of the	
		. (	Genus Homo.	
XIII. Evolution and Natural Selection.				
		(	Cell-Theory.	
VIV	Discoveries in Physiology	J	Germ-Theory.	
	2.000.0000	)	Anæsthetics.	
-			Antiseptics.	
Some of the subjects are highly scientific, such as the pro-				
gress of our knowledge in Astronomy, Geology, and Physics.				

gress of our knowledge in Astronomy, Geology, and Physics. As these are outside my sphere of study, I can only notice them briefly: in the volume under review they are fully described. Occasionally, on certain subjects, the author allows himself to indulge in deep censure of those who differ from him. I cannot follow him there. I may have my own private views; but the object of this paper is to state facts, advance knowledge, and approach the Truth. A quarter of a century hence the strictures which the author has printed, will either be accepted, or laughed out of court, by the next generation: it is well not to be too confident on any subject, but to reflect on the foolish condemnation by ancient men of past generations of what is now received as absolute truth, such as the revolution of the Globe, and the like.

I. Modes of Travelling. I myself, with my surviving contemporaries, can recollect the way in which boys of my own age returned from their home to Eton College, or crossed the Straits of Dover to Calais. During the reign of Queen Victoria these astounding changes took place. In the light and serious literature of the reigns of the fourth George, and the fourth William, there is abundant evidence of the mode of travelling by horse, by chaise, by coach, by waggon, of that period. As a fact, the Queen, on her wedding-day, came through Eton College to Windsor in a chariot drawn by four horses, and stopped in front of the College to receive the homage of the school, of which I had the honour of being at that time the Captain. It must be noted that the railway, the steamship, and the bicycle, differ fundamentally from all modes of transit of past generations, and are not mere improvements of the same idea, or developments of an existing system.

II. Labour-saving Machinery. The efficiency of human labour has been multiplied by the adoption of mechanical contrivances for the purposes of agriculture, manufacture, sewing, and type-writing. The idea was, indeed, conceived at the latter end of the last century; but it marks a distinctly new departure in human industry.

III. The Conveyance of Thought. This subject is not only entirely a new invention, but so astounding, as to appear incredible. The Telegraph and Telephone mark a new epoch in human life. In Europe they have superseded an organized system of transmission of letters from city to city; but in British India they have done something more: the famous telegraphic message from Delhi to Lahor on May 10th, 1857, contributed to the safety of the Empire. No. 1864, during the time that I acted as Home Secretary of the Government of India, under the Viceroyalty of Sir John Lawrence, the telegraph was first declared open from Calcutta to London, and by order of the Viceroy I penned the first telegram of respectful homage from His Excellency to Her Majesty. We hardly realised then, that a message despatched from Calcutta at sunset would be received in London soon after noon of the same day, five or six hours before it was sent !

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" Panting time toiled after it in vain."

Still more astounding is the invention of the telephone. During the late illness of H. R. H. the Prince of Wales, it is officially reported, it was arranged that he could, in his own room in Marlborough House, hear Canon Fleming preaching in Chester Square. Music can, in the same manner, be communicated; yet both Telegraph and Telephone are still in their infancy, and the extension of their use is a problem of the future. It must be remembered that in the telephone the voice is not actually transmitted, as in a speaking-tube, but is accurately reproduced by means of two vibrating discs, the one set in motion by the speaker, while the electric current causes identical vibrations in the similar disc at the end of the line, and these vibrations reproduce the exact tones of the voice, so as to be perfectly intelligible. At Buda Pesth has been started a telephonic newspaper. At certain fixed hours definite classes of news are sent by an employé along the wires, which are laid to the houses and offices of subscribers, so that each person hears the particular news which he desires, without the delay of printing a newspaper.

IV. Fire and Light. I can recollect London deriving its light from the oil-lamp, and the torch was not entirely disused. I recollect the difficulty which the housemaid experienced in striking sparks of light with the steel and flint into the tinderbox, and the surprise and wonder with which bottles from Paris, from which light could be extracted, were welcomed by children in the reign of George IV. Then came phosphorus, 1827-1834, about the time that I went to Eton, and what fun it was to play with matches! Gas was introduced into London as early as 1813, and gradually spread everywhere, indoors and outdoors, and was deemed to be invincible, until a mightier power was developed, in Electricity, which must carry all before it. Fire was, indeed, taken into the service of the 'genus Homo' at a very early stage of barbarism, and its use has advanced with the progress of civilisation; but in a few years of this Century a greater advance has been made than in all the Centuries preceding the Nineteenth.

V. New application of Light. Everything sinks into insignificance when compared with the discoveries made as to the nature of Light itself, and its effect upon various kinds of matter, leading to the discovery of the art of Photography. In 1839 Daguerre perfected the beautiful process of portraittaking called the daguerrotype. I well recollect the head master of Eton, Dr. Hawtrey, returning from Paris in 1840 with a machine by which he took, on steel-plates, pictures of the College buildings, and I have by me photographs of the same nature of a slightly later date. At the time of the great

Exhibition of 1851 a further advance had been made, and the modern photograph came into existence, and we do not yet know the extent to which this newly discovered power can be applied : a photographic survey of the heavens on one uniform system is in progress, and the power of producing coloured photographs has, in 1891, been arrived at. The most recent of discoveries in connection with light is that peculiar form of radiation termed the X, or Röntgen, rays. They are produced by a special form of electrical current sent through a vacuum-tube, in and around which is some fluorescent substance, which, under the action of the current, becomes intensely luminous; but the substances which are opaque or transparent to it, are not the same as those to which we usually apply the terms, but often the very contrary. A book of paper of a thousand pages, and a pack of cards, wood, carbon, leather, flesh, and skin, in moderate thicknesses, are transparent to the X rays, and the exact position of bullets embodied in the flesh or bone can be detected. Many further possibilities are opened out to this new form of radiant energy, which time alone will disclose.

VI. Spectrum-Analysis. This discovery has supplied a new engine of research, by which we are enabled to penetrate into the remotest depths of space, and learn something of the constitution and the motions of the constituent bodies of the Stellar Universe. It gives us a power and a knowledge which seemed absolutely and for ever unattainable by man. The subject is too deeply scientific to allude to further here, but on every ground the discovery and applications of spectrumanalysis deserve the highest place among the numerous great scientific achievements of the Nineteenth Century.

VII. Theoretical discoveries in Physics. Our author gives two instances: (1) the Law of Conservation of Energy, (2) the Molecular Theory of Gases. The subject is too scientific to be further discussed in a popular article such as the present. Our author writes that the great principle, evolved from discovered facts, teaches us that there is no origination of force on the Earth, but that all energy either now comes to us from the Sun, or was originated in the Sun before the Earth separated from it.

VIII. Application of Physical Principles. Two subjects are treated of by our author under this head.

(1) The Velocity of Light. This was first determined by irregularities in the time of the eclipses of Jupiter's Satellites, which were found to occur earlier or later than the calculated times according as we were near to, or far from, the planet. It was then found that it required eight minutes for light to travel from the Sun to the Earth, a distance of a little more than ninety millions of miles, so that light travels about 196,000 miles in a second of time.

(2) The Phonograph. This is the invention of Edison, a citizen of the United States. The words of a speaker are heard quite intelligibly, with all their tones and modulations, at any distant time or place. I myself saw the late Shah of Persia, during his last visit to England, speaking in the Persian language in a certain position as regards a phonographic machine: when he had done speaking, and few who were present could understand what he had said, except myself and the late Sir Henry Rawlinson, something was done by the American proprietor of the machine, and, to the Shah's astonishment, His Majesty's very words came back to him out of the machine. The whole operation is mechanical. A diaphragm is set vibrating by the voice, and registers itself permanently on a cylinder of very hard wax, on an indented spiral line. This is effected by means of a fine steel-point, connected by a delicate lever with the centre of the diaphragm. When the diaphragm is set vibrating by the voice of the speaker, the steel-point moves rapidly up and down, and the resulting groove continually varies in depth, forming a com-plex series of undulations. If the cylinder be shifted back, so that the steel-point is exactly were it was at starting, and the cylinder is made to revolve and move onward at exactly the same rate as before, the up-and-down motions of the style, due to the irregular depth of the groove, set up the very same series of vibrations in the diaphragm as those which cut the groove; and these vibrations reproduce the voice with remarkable fidelity, so that the most complex and rapid voice can be heard quite intelligibly, though not exactly in the same tone of voice. These cylinders can be preserved for years. It must be admitted that the phonograph is one of the most marvellous inventions of man.

IX. Importance of Dust. "A source of beauty and essential to life." This seems a hard saying, and a strange way of talking about a positive nuisance; but it is none the less true. Our author sums up the amount of our debt to the universality of dust. It gives us the pure blue sky; it gives us the glories of the sunrise and sunset, and all the brilliant hues of high mountain regions. Half the beauty of the world would vanish with the absence of dust: dust also gives us diffused daylight: without dust the sky would appear absolutely black : we should have bright glaring sunlight, or intensely dark shadows, without any half tones. A late writer on the subject of Central Asia, C. Ujfalvy, points out the beneficient effect caused by dust, as the detritus of rock born by wind and storm has performed the silent yet beneficial work of preparing large areas of culturable soil. The overwhelming importance of the small things of this world, even the despised things, has never been so strikingly illustrated as in these recent investigations into the widespread effects of atmospheric dust.

X. The great Problems of Chemistry. We can pass these over in silence, as they speak for themselves, and are too highly scientific for discussion by others than the expert. Among the latest news is that an American chemist of high repute has solved the problem of producing gold out of silver: this might have been scouted as a dream in past generations.

XI. Astronomy and Cosmic Theories. It is impossible to do justice to this great subject. The discovery of an additional planet, Neptune, in 1843, besides several asteroids, satellites, or minor planets, was an event which could have been expected, and further additions may be anticipated. The nature of the ring round the planet Saturn has been more accurately determined; but a still greater advance in knowledge is represented by the Meteoric Theory of the Universe, and the various phenomena presented by aerolites, fireballs, shooting or falling stars, now classed as meteors and meteorites. A new conception has been formed of the possible origin of the Universe, differing from that entertained last Century: this is one of the grandest achievements of the Nineteenth Century; yet our author remarks that they bring us no nearer to the First Cause of the vast Kosmos in which we live; but we know not what future centuries have in store for us.

XII. Geology. (1) The Glacial Epoch; (2) Antiquity of the 'Genus Homo.' The details and principles of this great science have been wholly worked out in the present Century. Sir Charles Lyell's epoch-making book, "The Principles of Geology," 1830, gave a new start to all future investigations, and Cuvier's Essay on the Theory of the Earth was, with profound respect, placed aside. It must be a sad suggestion to all writers in this critical, and ever advancing, age, that their fate may be as has been that of many an illustrious predecessor whose view was limited, and whose facts were insufficient. Lyell's method was that of constant appeal to the processes of Nature, and for a period of forty years he continued to extend his knowledge. His followers have been termed 'Uniformitarians,' on account of their belief that the causes which produced the phenomena manifested to us in the crust of the earth are essentially of the same nature as those acting now. The story of the Glacial Epoch, and the antiquity of the Genus Homo, is too long to be dwelt upon further here. They offend against prejudices worthy of the greatest respect; but facts are facts, and cannot be set aside by fond legends and airy theories. The last word has not yet been spoken; at any rate, there has been an immense advance in knowledge.

XIII. Evolution and Natural Selection. The author of this work, Alfred Russel Wallace, shares with the great Charles Darwin the honour of being the apostle of this revolutionary dogma. Robert Chambers, in 1844, in his anonymous volume, the "Vestiges of the Natural History of Creation," had started the idea. I remember reading this book in India fifty years ago with interest and wonder, and a very wicked book it was then considered; and, although mild and even religious in tone, it was met with a storm of indignant and senseless abuse, and even great men, like Sir John Herschel, spoke against it for its advocacy of "so great a scientific heresy as the 'Theory of Development." Fifteen years later Charles Darwin published his book on the "Origin of Species." A great change of public opinion has followed, but perhaps the end is not yet. On all subjects, especially on such as this, there should be an absence of all bitterness, all abuse, and a calm weighing of facts adduced, and arguments based upon them. This equanimity and nobility of mind have been found sadly wanting up to this very year.

XIV. Discoveries in Physiology. This Science, which investigates the complex phenomena of the motions, sensations, growth, and development, of organisms, is almost wholly the product of the present Century. The first great fundamental conception is the 'Cell-Theory,' definitely established for plants in 1838, and soon afterwards for animal structures. All organisms originate in simple 'cells,' which are almost identical in form and structure, and which thus constitute the fundamental units of all living things. Another discovery is that of the 'Germ-Theory.' It has been proved that the white corpuscles of the blood, whose functions were previously unknown, are really independent living organisms. They inhabit our bloodvessels and all the tissues of the body, and have important functions to perform, on which our very lives depend. Their full importance can be realized only in their relation to zymotic diseases, and have an important bearing on sanitation.

Two more discoveries have been made, which have done more to alleviate the sufferings of mankind than many mechanical inventions and philosophical theories which receive a more general admiration. I allude to the use of 'anæsthetics' in surgical operations, and the 'antiseptic' treatment of wounds. Ether and choloroform were first adopted in 1848. I was present in the great battles of Sir Hugh Gough in the Panjab in 1845-46, and have witnessed the harrowing sight of the amputation of limbs of poor wounded soldiers, causing agony to the poor sufferers most of which is obviated now. The use of antiseptics saves many a life in the Hospital from the suppuration of wounds which was produced by the rapid multiplication of minute organisms called bacteria.

Our author closes the First Part of his volume by a chapter summing up the achievements of the Nineteenth Century, and comparing it with the outcome of the long roll of preceding centuries. It would require a considerable time, and a lengthy consideration, to arrive at a safe conclusion. He expands the fourteen sections which we have reviewed, by bringing the subsections into line with the sections, and records twenty-four as the great discoveries of the Nineteenth Century, which he contrasts with the fifteen of all preceding ages; but we miss from the last list the rotatory motion of the Globe, the recognition of the Planetary System, the Law of Eclipses, Cartography, Architecture, Sculpture, Tablets of Written Inscriptions in Cuneiform, and Ideographic, as well as Alphabetic, Written Characters, the Preservation of the Dead, the use of Metals, the use of Clay, a certain knowledge of the property of Herbs, and all that distinguishes the Savage from the man in a higher stage, the Barbarian, and the Barbarian from the Civilized Man.

We could have wished that our Author had closed his interesting volume here, at the 158th page. The higher critics assert their capacity to detect a second hand in what has been handed down from former ages as the work of one author. In Part II of this volume we seem to come into contact with a writer with another style, without judicial calmness, in fact a partisan. He entitles Part II "Failures." They would more properly have been treated in a separate volume, as Failures are hardly a suitable subdivision of a volume entitled "The Wonderful Century." It seems to me more convenient to add the names of these so-called failures to the list of subjects, as follows:

XV. Phrenology.

VVI Hunnotism	f Thought-Reading.
AVI. Hyphotisii	Mesmerism.
XVII. Vaccination.	
	(Criminals in Prison.
XVIII. The evils attendant on	Lunatics in Asylums,
Civilization	Armies and Navies.
	Rule of Subject Kingdoms.
	( For Gold.
XIX. Demon of Greed and	For Dominion.
Plunder of the	For Commerce.
Earth	Suffering of Lower Classes.
XV. Phrenology. The Auth	or has himself no doubt of the

substantial truth and vast importance of this discovery. He complains that it has been neglected. He gives the history of the discovery that there was a real connection between the mental faculties and the form and size of the various parts of the brain : this was in the early years of the present Century. About the year 1836-37, I remember phrenologists coming to Eton to feel the bumps of the boys' heads, as it was called, and to record opinions as to the hidden springs of character, for the gratification of fond parents. I remember reading one description of the noble qualities of a boy whom I knew very well, and whose life has not realised the beautiful character predicted for him. The author complains that people mature years are unaware that the phrenology of their youth has been wholly rejected by the scientific world of to-day, and he is sanguine that in the coming Century it will attain general acceptance, proving itself to be the true science of the mind and of practical use in education, self-discipline, the reformatory treatment of criminals, and the remedial treatment of lunatics; and the persistent neglect during the last sixty years will be referred to as an example of the narrowness and prejudice of men of science. This is the opinion of one man, " Wallace contra mundum :" at any rate there will be fair play ; no favour, and no intolerance : if in 1836 the orthodox clergy deemed the science to be contrary to Scripture, they will hardly be bold enough to do so in the Twentieth Century.

XVI. Hypnotism, in its three subdivisions of thought-reading, clairvoyance, and mesmerism. The author deplores the opposition to this branch of knowledge, which has been in evidence since the beginning of this Century : he appears to lose all judicial equilibrium. I quote his final remarks in defence of his unsuccessful protegé: he forgets that all advocates of an unsuccessful cause use very much the same arguments : "The great lesson to be learnt is to distrust all à "priori judgment as to facts: the history of the progress of "Human Knowledge, especially of Physical Research, renders "it certain that, whenever the scientific men or popular " teachers of any age have denied, on à priori grounds of impos-"sibility, or opposition to the laws of Nature, the facts observed "and recorded by numerous investigators of average honesty "and intelligence, these deniers have always been wrong " (p.211). No confident 'my doxy' theologians in the pulpit could sound the dogmatic trumpet clearer and louder.

XVII. Vaccination a Delusion. In a Chapter of 120 pages, a good-sized polemical pamphlet, the above thesis is discussed with a degree of bitterness and virulence which belong more to the faddist than the scientist. No doubt vaccination was the invention of the Ninteenth Century. I decline to discuss it further: Time will show whether the practice should be maintained or abandoned.

XVIII. The evils attendant on civilization, as evidenced by the treatment of criminals in prison, of lunatics in asylums, by the existence of armies and navies, and by the system of rule of subject-Kingdoms. This chapter really is a strange divergence from the subject-matter of the Book, "The Wonderful Century," and with all due respect to the author, he wanders into subjects of which he can comparatively have slight practical knowledge. On the two first subjects I have been occupied for the last twenty years, as a member of a visiting Committee of Metropolitan Asylums and Prisons; and though there is ample room for improvement, there is in their management nothing to be ashamed of. As regards the fourth subject, the Ruling of subject Nations, I have had long experience in British India, and the writer clearly has no personal knowledge. As regards the third subject, Armies and Navies, it is too large a one to be profitably dealt with except by military and naval experts.

XIX. The chapters on the Demons of Greed and Plunder of the Earth are a mere tirade against some of the lamentable features of the epoch: with very much that the author says I heartily agree; but the subject is one for a separate treatise, and has no relation to the subject of this Essay, "The Wonderful Century."

As my object is to call attention to the great advance of knowledge, and wisdom which characterises the last three generations of the human race in civilized countries, I have ventured to subjoin certain additional subjects not alluded to by the Author:

I. Widening of the thought of the Human Race.

- II. Geographical Discoveries.
- III. Religion in its widest sense.
  - IV. Respect for rights of others : Universal Tolerance : Altruism, as opposed to Egoism.
    - V. Absolute liberty to propagate Religious Doctrines not contrary to Morality.
  - VI. Education of the Lower Classes : Power of the Press.
- VII. Public Hospitals : Medical Knowledge.
- VIII. Linguistic Knowledge.
  - IX. Authropological Knowledge.
    - X. History and Archæology.
  - XI. Criticism, Higher and Lower, of the Records of Past ages.
- XII. Sanitation.
- XIII. Machinery of all kinds, and the work of the Engineer.
- XIV. Zoology, Botany, and Mineralogy.

I. Widening of the thought of the Human Race. The literature of the day, the lectures in Universities and Learned Societies, the speeches on platforms, must convince us that there is a wonderful advance in all classes along the whole line of human thought.

II. Geographical Discoveries. No word need be said to illustrate this fact : the veriest schoolboy of Macaulay, or the child in the Board School, bears witness to this.

III. Religion in its widest sense. Let anyone consider what was known of the religious conceptions, ancient or modern, of the non-Christian World at the commencement of the present Century. The Missionary classed them all as the kingdom of Satan. Garbled and imperfect accounts were given in cyclopædias, or books of reference. As to the Sacred Books of each Religion, nothing was known. This is not the case now. Egypt and Assyria have given up their venerable records. The great book-religions of Asia are at least understood. The animistic religions which preceded them, or which are found at this day, are faithfully and impartially described; and the whole story of the struggle of Man to find out God in all the ages, in all climes, and by all races, is revealed to our astonished minds.

IV. Respect for the rights of others, under the name of universal tolerance, has succeeded to the cruel and intolerant policy of Christian and Mahometan nations. The gentle precept which Asoka, King of North India (200 B.C.), published on his Tablets all over India, that each man should serve his Creator in the way in which he thought fit, is now the common law of civilized nations. It really represents Altruism as opposed to Egoism.

V. Absolute liberty to propagate religious doctrines is the natural corollary of the preceding principle, so long as the methods are peaceful, and not contrary to morality and the laws of the particular country.

VI. Education of the lower classes at the expense of the State, or Municipality, by means of schools, and the teaching of a free and intelligent Public Press.

VII. Public Hospitals for the poor without charge: the maintenance of medical skill in the highest efficiency.

VIII. Linguistic Knowledge. Little was known at the commencement of this Century. I bought a linguistic book at Edinburgh, published in this Century by a man of repute in his time : he stated that there were about sixty-two forms of speech in the wide world, and that all came from Hebrew. This was the old Tower of Babel story. We know something very different now : that the number of mutually unintelligible forms of speech at this day in the world exceeds two thousand, and that they belong to families with no possible connection with each other, as they are distinct and totally different outcomes of the brains of mankind. Some have died centuries ago, leaving a vast literature. Some are dying, being trodden down by the great vernaculars of the time, such as English; new languages are forming from the combination of different Languages which have come into contact. Each traveller brings home vocabularies of previously unknown forms of speech. In no branch of knowledge have wider additions been made than in linguistic science during the Nineteenth Century.

IX. Anthropological Knowledge. "The proper study of mankind is man." We have it on record beyond doubt, that the human race not only existed at a far earlier period than that which was previously received, but sprang from distinct seed-plots, differing materially in structure of body, colour, hair, yet still of the same "Genus Homo," and all with the two congenital gifts, (1) a Religious Instinct, or knowledge of a power greater than itself, and a desire to conciliate that power; (2) power of communicating with each other by articulate sounds; this indicates the dividing-line betwixt the "Genus Homo," and the rest of the animal reation.

X. History and Archæology. In these subjects the Nineteenth Century has made gigantic strides. A line has been drawn betwixt serious history and fanciful legend which passed as history. Excavations have revealed buried cities and tombs which had been entirely forgotten.

XI. The Divining Rods of the Lower and Higher Criticism This is a new science, the creation of this Century. The Lower Critic examines the texts of ancient records of past ages, and under certain rules, based on experience, works out a text as pure as can be made by collation of scores of texts collected from totally different quarters. The Higher Criticism looks under the text, and weighs the possibility of inaccuracies of the copyist, introduction of new matter into an old record at a subsequent date, corrections made by later hands, errors of interpretation, and all the manifold causes of error to which manuscripts were liable before the introduction of printing.

XII. Sanitation. The very idea seems never to have suggested itself to our ancestors. A good fire, such as that of London, or a siege by a hostile force, did what was periodically required. It is different now : a great deal more in our great cities has to be done, but a great deal has been done. The Plague in Bombay and other parts of India brings the subject home to Indian administrators.

XIII. Machinery of all kinds for all purposes, and the work of the Engineer.

XIV. Zoology, Botany, Mineralogy. No words are required to illustrate the enormous advance of knowledge in these last subjects.

It must appear to any careful inquirer that no previous Century or cluster of Centuries can be compared as regards universal progress with the Nineteenth; but it may have a superior rival in the Twentieth, on the confines of which we stand.