CIHM Microfiche Series (Monographs) ICMH Collection de microfiches (monographies)



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques



Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

12X

16X

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

/	Coloured covers/					Coloured pages/		
	Couverture de coule	ur			L	j Pages de couleur		
7	Covers damaged/					Pages derungsa		
/	Couverture endomn	nagée			L <u>r</u>	Pages La stat, tes		
	Covers restored and	/or lamina	ted/			Pages retti en ano/or la		
	Couverture restauré	e et/ou pei	lliculée		L	Pages restriction p	elliculées	
-	Cover title missing/					Pages discoloured, stain		
	Le titre de couvertu	re manque	•		(r	Pages décolorées, tachet	tèes ou piquées	
-1	Coloured maps/					Pages detached/		
	Cartes géographique	is en coule	ur		L	Pages détachées		
-	Coloured ink (i.e. o					Showthrough/		
	Encre de couleur (i.	e. autre qu	ue bleue ou noi	re)	LV_	Transparence		
	Coloured plates and	l/or illustra	tions/			Quality of print varies/		
	Planches et/ou illus	trations en	couleur		LV_	Qualité inégale de l'imp	ression	
_	Bound with other n	naterial/				Continuous pagination/		
	Relié avec d'autres	documents	5		L	Pagination continue		
	Tight binding may	cause shad	ows or distortio	on		Includes index(es)/		
	along interior marg				L	Comprend un (des) inde	1X	
	La reliure serrée pe distorsion le long d			619		Title on header taken fr	om:/	
	distorsion le long d	e la marge	niteriewie			Le titre de l'en-tête pro		
٦	Blank leaves added					Tiels man of issue/		
within the text. Whenever possible, these have been omitted from filming/					Title page of issue/ Page de titre de la livraison			
	li se peut que certa	-	blanches aiout	ées				
	lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont					Caption of issue/		
						Titre de départ de la livraison		
	pas été filmées.					Masthead/		
						Générique (périodiques)) de la livreisen	
						1 Generique (periodiques) de la livraison	
\square	Additional commen Commentaires supp			re some	creases ir	the middle of th	ne pages.	
	them is filmed at the	reduction	natio shashed	helow/				
	item is filmed at the ocument est filmé au				s.			
10X	1	4X	18X		22 X	26×	30 X	

20 X

V

24X

28X

32 X

The copy filmed here has been reproduced thanks to the generosity of:

Archives of Ontarlo Toronto

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the lest page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, end ending on the last page with a printed or illustrated impression.

The lest recorded freme on each microfiche shall contain the symbol → (meaning "CON-TINUED"), or the symbol V (meaning "END"), whichever applies.

Msps, pletes, charts, etc., mey be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hend corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method: L'exemplaire filmé fut reproduit grâce à le générosité de:

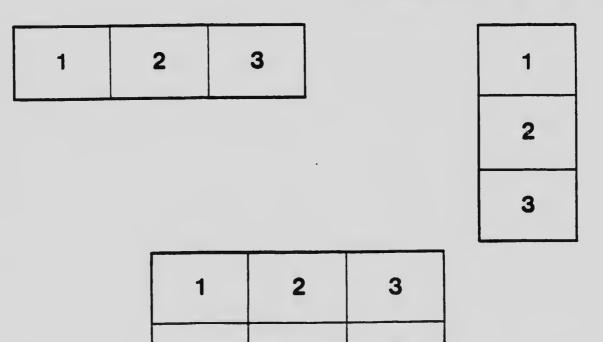
Archives publiques de l'Ontario Toronto

Les images suiventes ont été reproduites svec le plus grand soin, compts tenu de la condition et de la netteté de l'exemplaire filmé, et sn conformité avec les conditions du contret de filmage.

Les exemplaires originaux dont la couverture en papier est Imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'Impression ou d'illustration, soit par le sacond plat, selon le cas. Tous les autres exemplairas originaux sont filmés sn commençant par la première page qui comporte une empreinte d'Impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apperaître sur la dernière image de chaque microfiche, selon la cas: le symbole —> signifie "A SUIVRE", le symbole V signifie "FIN".

Les certes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite. et de haut en bas, en prenant le nombre d'images nécessaire. Les diegrammes suivants illustrent la méthode.



5

4

6

10

THE LATEST MILESTONES IN THE HISTORY OF CIVILIZATION

1915

106

"The World Moves by the Creative Power of Man"

By LT.-COL. A. E. BELCHER



(Reprinted from Papers and Records, Vol. XVI, Ontario Historical Society.)

THE LATEST MILESTONES IN THE HISTORY OF CIVILIZATION

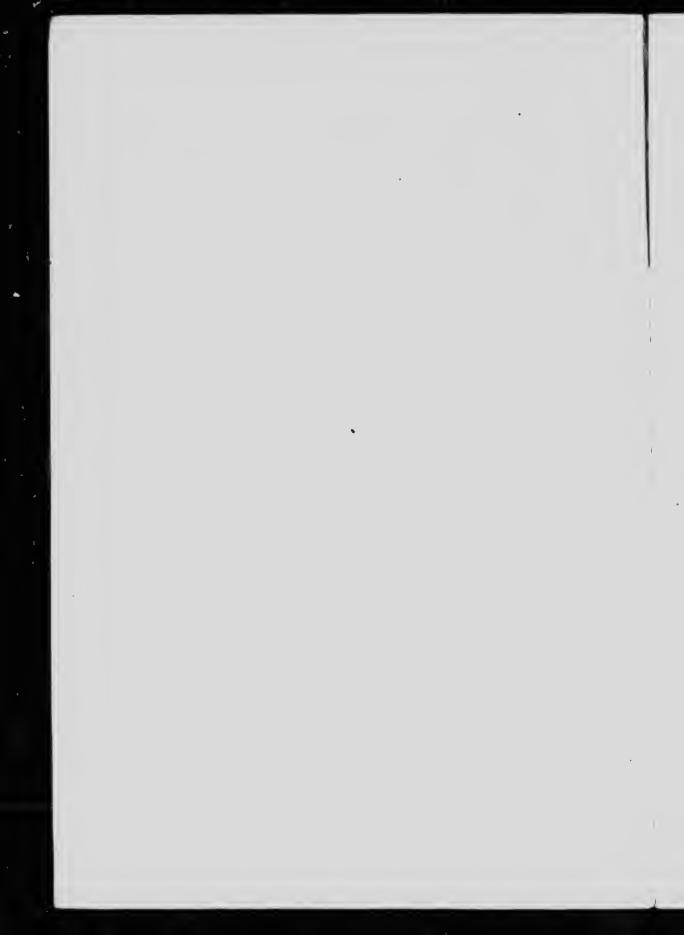
"The World Moves by the Creative Power of Man"

By LT.-COL. A. E. BELCHER

Provenlad (10 e traper. 1. Particound Puldury with Compliments and toronto + CI fillelder 1 215

1. 1.1

(Reprinted from Papers and Records, Vol. XVI, Ontario Historical Society.)



THE LATEST MILESTONES IN THE HISTORY OF CIVILIZATION.*

"The world moves by the creative power of man."

BY LT.-COL. A. E. BELCHER.

Some years ago in a municipal address I used these words: "The World Moves," to arouse the people to a sense of what was taking place and (predicting to some extent) what was rapidly coming into the work of life and the lives of the people, by the efforts of the great men who were giver their time, their means and their genius to solving problems, to producing marvels of mechanism, diving deep into the unknown depths of the myst lious; uncarthing and producing what seems impossible and incredible: and it would seem that we are approaching that period where the Divine in man is becoming more apparent, as he who was created a little lower than the angels, and was given dominion over the earth and air, has commenced to reign. His conquest over material conditions, step by step, one advancement after cuother, has begun, and the onward march is still in progress. Man hus proven himself great: he will go on and prove himself still greater. Even now we raise our heads us we observe the wonders and glories of the present day.

In this increanary age, in the mad race and rush after the "almighty dollar," few stop to think, or try to do, what in them lieth. Thank God for an Edison, Bell, Marconi, Burbank, and others. What time have we given, or what effort have we individually made, to make the world and the people thereon better, brighter, happier; or to think out some one thing that would add to the cornfort, ease the labour, or increase the blessings? Some will answer, "What can I do?" The Creator said, "Let us make man and let him have dominion over all the earth." Perhaps that which is proving us most God-like in our creative power, is the rapid advancement that has been made in, or during, the last century, especially in the last thirty-five years, and it will be interesting and educating to make some comparisons. It is difficult to determine where to commence.

Looking backwards, to me the conditions now seem to be more like a dream than a reality. It appears to me the ninete inth century is the most fascinating story of man's upward progress, or as 1 would prefer to say, man has exhibited his mastery of mind over matter, and proven that he partakes of some at least of the divine attributes.

There is no parallel to be found in the misty ages of the past. Let us glance at the past and compare it with the present. There is at least one billion nine hundred millions of people in the world; of this immense host there is not more than one in a million who saw the commencement of the las' century. At the commencement of the twentieth eentury, of this innumeraction will see its end.

*A paper read before the York Pioneer and Historical Society, March 2nd, 1915.

The question that has agitated philosophers of the past has been how to live. The question most interesting to us is when to live. Gladstone, a past thinker among men, said that "of all ages of the world the last fifty years of his life he would select." It would take volumes to picture the changes that have taken place since our forefathers wrote 1800. Centuries have come and centuries have gone, but for unparalleled and matchless achievements to benefit mankind, all the former centuries put together are not equal to the nineteenth. We should be grateful that our lot has been cast in this part of an enlightened and progressive history-making age; this is a priceless privilege; we have a heritage kings never had, and the common people never dreamed of, in the centuries of the past.

They had days of tinder boxes and no sloves, when churches and schools were unheated. Days of huma _ slavery, unscientific diet and short life; days of bad roads and slow travel; the log cabin and the town unlighted; days of superstition and religious intolerance. Those were the days spoken of by our grandfathers as the good old days. You and I may be ever so poor, yet we can have more comfort and conveniences in our humble homes than the monarch and the millionaire had a hundred years ago. Many living to-day were born before the postage stamp came into use; the popular pen was the goose-quill; one of America's greatest writers learned to write by tracing the letters on the sand; hooks were a luxury and found only in the homes of the rich. The public school did not exist, colleges were few, and universities none. When people began writing '18 instead of '17 it was a different world. Steam had not moved a boat or a car, electricity had not begun to talk, no oil wells were giving light to the world; the great achievements of Fulton, Watt, Stephenson, Howe, Morse, Edison and hundreds of others were never heard of. From 1800 to 1912 has been the longest step the human race has eve. taken on this planet.

To the amazing progress which has rapidly created a new world, this continent has contributed more than its share. Fulton started steam boats on the Hudson, Morse made wires talk, Field abolished the difference of a week between the old world and the new. Some one has said that necessity is the mother of invention. I think natural genius and God-given talents play a part. In this new world man entered the wilderness as a rude settler and God had made him a child of progress. Man touched the bitter apple and it became the golden pippin; he touched the sour grape and it became the Catawba; he touched the forked stick and it became the steel plow; he touched the rude sickle and it became the reaper; he touched the old wagon, now an iron engine; the hollow log into a steam ship; the iron wire into a steel cable. He touched the raw cotton and it became calleo; and the cocoon became silken garments; he touched the sea shell with strings across its mouth and it became a piano; he touched the rude type and it became the printing press. Soon the wilderness was a garden and the solitude became " rity. Where once rose the smoke of the Indian wigwam and the sound of the

edicine Man's drum, there rose instead the hum of industry, the halls of science and the temples of religion. Viees became virtues, slaves became citizens, for ... man is the ehild of progress because he is the child of God. Steam and electricity are the twin powers of the century. To Fulton belongs the fame of the first steam boat in 1807. The birthday of our late Queen Vietoria. May 24th, 1819, the first steamer that ever erossed the Atlantic. or any other ocean, started from Savannah to Liverpool and crossed in twentysix days. That was nearly a hundred years ago. Now the time is often less than six days. Say above a hundred years ago, there was not a mile of railroad in the world. There \rightarrow now a total of over 670,000 miles. Last year's earnings of all the railroads of the world was \$50,000,000,000, an amount beyond human conception. In the year 1800 the revenue of Eugland. Scotland and Ireland and all the colonies of the British Empire was less than the earnings of the New York Central Railway in 1900.

In 1802 coal was rediscovered and sent to Philadelphia, and strange as it may seem it took years before any more was shipped, and then Colonel Shoenuker was arrested for taking money under false pretences, for the people considered the stuff obly good to build sidewalks with. To-day this is the univer fuel that cr___s power for steam on land or sea.

Before 1814, the -r of my birth, there was not a foot of telegraph wire anywhere in the wor. In that year, 1814, Morse sent the first message, "What God has wrought." Prior to 1858, when Cyrns Field's first Athantic cable was lace, if took ten days to communicate between the two continents. "It was estimated that on January 1, 1913, there were 13,540,800 in use two against the whole world. Our present day judgment would be that the best barometer the world has had in civilization during the century is the postal system. It was in 1837 that Rowland Hill introduced the postage stump in England. In 1800 there were only a few post offices in all this fair Dominion, and less than a hundred in the United States. To-day there are hundreds of thousands During the year 1900 the United States allow the had 23,000 postal cars, a solid train over seventeen miles long, filled with mail, weighing some 22,000 tons.

We could talk of the arts, the sciences, the press, the pulpit, education, books and hundreds of other things that have done so much for advancement; but what have the untions done during the past hundred years for humanity? As in the first years of the nineteenth century, so in the first of t' twentieth-wars and reasours of wars. Then, as now, Europe trembled mader marching orders; Napoleon was exiled. Whose turn will come next? In this there is food for thought, remembering the recent wars in China, the Philippines, South Africa, Turkey, the Balkans, and Mexico, and now this world-wide crnel war. We have not reached " Peace on earth and good-will to men." down nineteen bloody "Christian" centuries. Emerson exclaims, "Nothing can bring on peace but the triumph of principles." As is the case with individuals, so it is with nations. The energy and enterprises which freedom brings, count for so much in natural life, that it has revolutionized the world for a wider education, and a truer Christianity. This is the dominant feature of the most progressive race on the face of the globe. Wherever the banner of our nation has been planted it has been in behalf of a better civilization and the advancement of the brotherhood of mankind. A striking example is from the beginning of British rule in India. There eams a gradual cessation of the bloody wars between native rulers and by foreign invaders, which had saerificed so many lives and destroyed cities and homes from the earliest history of that great and densely populated peninsula. No native prince in India ever built a road. When Britain assumed the government there was not a mile of road over which a wagon could pass. There were, in 1917,

210.000 miles of the very best highways maintained by public authorities. In 1854 India had twenty-one miles of railway; in 1916 there were 35,833 miles, connecting province with province, city with city, penetrating the native states, bringing them into close relationship, carrying the native products to the seaboard, and in towns bringing to the natives the products of other parts of the world. In 1856 there were in all India 753 post offices; in 1916 there were 69,012 post offices and letter boxes.

There were 86,067 miles of telegraph lines in 1916 that handled 18,129,748 paid messages. There were in 1904 36,000 miles of eanals, irrigating 47,193.925 acres; not an acre of this produced before Britain's occupation. In 1866 educating the masses began, and in 1913-14 there were nearly 8,000,000 pupils in the schools of India. The exports from British India have grown from \$64,000,000 in 1848 to \$620,000,000 in 1914-15, while the imports during the same period grew from \$41,000,000 to \$555,000,000.

I have referred so much in detail to these as an example to show that all nations do not abuse imperialism nor make unrighteous war for territorial acquisition, but for the uplifting of humanity. The desire of all enlightened nations has been to improve the economie, social and moral conditions of the races. The past century, and so far in the present one, has brought many strange and unparalleled blessings to mankind. Statesmen have recognized the fact that universal education is the keynote to power, and the more we develop this the more do we unfold the divine and ereative power in man.

Have the nations made as much moral as material progress? There are certainly more people living in the world than there were a hundred years ago. Are the people better from a religious point of view? The Outlook says. " In the beginning of the ninetcenth century God was conceived as an embodied Person inhabiting some central place in the universe, the great first cause, the creator of matter and force." The present tendency is to conceive of God. not as a great first eause, but as the one holy, omnipresent, universal eause: the supreme and eternal energy from which all things proceed. These are two conceptions of the human race a hundred years apart. Voltaire, that brilliant Frenchman, predicted that "The nineteenth century would find that the Bible would be remembered only as an historical event and that men would have no more use for it." What do we find? that his name and predictionhave almost been forgotten, while the Book of Books has never attracted so much attention, and its influence upon the world has never been so potent as it is to-day; never was it read and circulated so widely. It has a fast anchorage on the hearts of humanity, because we find that in the past century 300,000,000 have been circulated, while at least 500,000,000 more are found in Christian homes. It is estimated that Great Britain and the United States contribute to the churches the stupendous sum of \$200,000,000 yearly. Through reading this great Book of Books, we draw inspirations that put us on a higher plane and ineite loftier ideals, and what with time, opportunity and ample means we are unfolding day by day the many hidden secrets that have not as yet been revealed to us.

Some few of the marvellous and wonderful things that have always been with ns, but only lately become known, I venture to draw attention to. A giant in the land, known by the name of "Hydro," was always with us but not in evidence until the Provincial Government took him by the hand and appointed the Hon. Adam Beek to introduce him: and although he is still young he has performed great feats. From present appearance he is destined to eut a great figure in the future. Water is the natural mate of electricity. They go together and cannot get along without each other. Electricity, like water, traverses the earth, trees, clouds, etc., and comes to us at our bidding. In 1876 Edison sent a current of electricity through a vacuum and confounded the Solons, who declared that there could be no light without combustion, and no combustion without oxygen. Edison got his light without either of them.

What our forefathers were satisfied with, and what we have been depending upon, is fast disappearing. Anthraeite coal will be exhausted in less than 200 years; many oil wells in Pennsylvania that produced abundantly are now dry; a hundred years ago whale oil was the chief illuminant; petroleum is from coal deposits, stored and preserved in nature's laboratory; you empty the pocket and you exhaust the supply. Human mind has now evolved so that man in a degree controls nature. The hidden divine in him is unfolding, and the way he controls nature is by loving her and working with her, never opposing-just as the Creator intended. Man can make pyramids and he can remove mountains. He can crumble the hills to dust, transport them to distant points, and then reconstruct them. The buildings of the future-will be concrete; the Egyptians knew the secret and it died with them, but we have now rediscovered this inexhaustible building material. The mountains, rockribbed and lasting as the sun, are nothing but natural concrete-God's concrete, mixed, smelted and melted by heat and pressure and time. Man con now supply heat and pressure, and can eliminate the item of time, and can make granite in a day. Concrete is the coming material for constructions: none can dispute its qualities. While other things were becoming dearer, it was becoming cheaper. It is now serving us in many capacities : in future it will become the hand-maiden in our homes.

Take, again, the work of our own Graham Bell, of Brantford, to whom we are indebted for the telephone with all its usefulness, speed, comfort and advantages, linking man to man, home to home, town to town and nation to nation. Let it speak for itself. In October, 1907, at the initial test, telephone communication, without wires, was maintained between the United States Navy Yard and the eruiser *Vigilance*, a distance of five miles; the *Tennessee* kept in touch with the Navy Yard a distance of twelve miles, and on one of the Old Dominion steamers, off Cape Charles, nursic and messages were clearly heard a distance of twenty miles. Talking without wires through brick walls has been successfully accomplished. It seems only a short time since Marconi startled the world with his great achievements in wireless communication, but it is now a comparatively old story; yet, nevertheless, new features are presented day by day, until now he can send sounds over oceans, and it will not be long until a sound can be sent and will echo around the world. Man can to-day build a comparatively good dwelling in a day, and a large manufacturing plant in forty days.

Edison gave us the use of all sorts of contrivances for brilliantly lighting our streets and homes, bottling up the human voice which once had an existence and has gone, so that we who are left can recall and reproduce it at our pleasure; and made it possible for the poprest of us to have the best of music, of voice or of instruments, in our homes, besides innumerable other things in other lines, all the outcome of his genius and power over matter and the elements, which are now and always have been round and about us.

What of transportation—one of the chief factors in our business as well as our social life? Look back upon the ox team, and now see the bicyele, the automobile, the trolley, and the airplane, all of which have come to stay. Milton wrote in his day: "In future we will touch a button on the wall and a figure will spring forth to serve us." Surely Milton prophesied. Behold the submarine boats, which run under water at a high speed, with entire erews on board bottled up in their prison without discomfort.

And only a short time since, when 'phone and telegraph systems were all put out of business by a great storm of rain and wind, the Lackawanna Railway operated all their trains within a radius of one hundred miles from New York by the wireless station. Eventually we will be able to communicate one with the other by a wondrous telephone system, lately invented, viz., a pocket edition of wireless by which one is able to communicate at some distance with persons supplied with duplicate instruments.

Dr. Barringer Cox, of Bedford, New York, has an invention of a wireless apparatus which may be strapped about the waist and deftly hidden in the folds of a cloak. A picture I have seen shows Dr. Cox with his caue, or receiver, raised for a message. The apparatus has a range of eighteen miles.

We have air ships which can sail upside down, can steer against adverse currents as nicely in the air as a boat upon the water, and will shortly sail in the air across the ocean. We now know that we can send messages through the air without a wire, but it has just been announced that a man has succeeded in sending wireless power to some distance. This means that the new invention will dispense with wires and complete the development of navigation of the air, through a flying machine, which will receive its power from the ground without wires, and, avoiding the carrying of fuel and a heavy engine, will be enabled to conquer adverse winds. At present there are new facilities for travelling on land and sea. A Swiss inventor has devised a roller skate with large pneumatic wheels that will go over ordinary roads. Peter Hewitt, in trying to build an aeroplane to sail in the air, discovered a new type of boat that would travel on top of the water. The "aster the boat was driven the more it rose to the surface of the water, and skimmed along the top at a tremendous rate.

What of Luther O. Burbank, the wizard in plant life? He has been enabled to grow yellow violets on trees; he has made grain bear two heads on the same stem where one grew before, so that every acre of land will yield double in the future. The wild pea he has reduced in size and made it as tender as the French pea. He has made the eactus of the desert so smooth that one can rub his face along the leaves without suffering irritation, and at the same time made it as delieious a food as the egg plant. The wild eactus of the desert can be grown on millions of acres of waste hand and become as valuable as alfalfa land of to-day. Cattle will live for ten months without any water other than that which the cactus furnishes, and they fatten upon it better than on ordinary meadow grass.

Our forestry commission estimates that in twenty years our forests will all be gone; there will be little wood left to build houses with and very little wood left to make paper with. In the future straw, palmetto and cactus will furnish our paper. But in twenty years we may raise new forests, for Burbank has taken the English walnut and erossed it into the California, and in fourteen years these trees stood eighty feet high, their branches seventy-five feet aeross, and the trunks free from branches ten to fifteen feet in height. The studies of this great man, the products of his thought, the plants growing and developing in his garden, his ideals, purposes and plans, would mark him as a wonderful example of the divine in man.

We are seeing miraeles accomplished in thise days; a hundred years ago men shook their heads solemnly and said the limit of human invention had been reached. The inventions in the past few years keep us busy speculating on what may come next, for we know little of the real nature of things on earth and can loose ourselves in conjectures. Even now the wireless is used for stopping trains, independently of the engineer. We can now make daylight by artificial means. Sir Oliver Lodge says we can control the weather and supply rain or shine; if rain is wanted we must send up negative electricity. The heat of Sahara deserts can be trapped, packed and sent to all parts of the world. We have wireless telephone from a moving train, and wireless 'phones from house to house. We will be able to see each other when we are telephoning to one another, for seeing by wire is no longer a dream. Our canal boats are now drawn by "electrical numles," in the form of the trolley. Will it startle you to be informed that Professor Delage has artificially produced life? The intervention of the male parent was replaced by a purely chemical process. He obtained real sca nrehins furnished with the most characteristic organs, spines, pedicels, etc. Several were able to elimb up the glass sides of the vessel in which they were developed. These urchins are high in the animal scale, higher than worms and a little below insects. They have a nervons system, a well developed alimentary canal and framework of bone to which the muscles, which work the teeth, are attached. Delage formed the theory that they could be reproduced : this he did by using tannie acid for the purpose of eoagulation and liquefication-just such a process as takes place in the development of an egg after fertilization.

We now see New York's forty-eight-storey building: the thirty thousand ton steamships: the trans-Atlantic wireless telegraphy; the war airships: the wonderful moving pictures: Edison's eement house that can be built in a few hours. Why not quote, "Speak to the earth, and it will teach thee."

You have all heard the expression, "There is nothing new under the sun." That phrase has come down through the ages, but the wealth of ideamen bring forth in a never-ending stream disproves it. A genius has developed an apparatus that ships may telegraph one to the other through the depths of the ocean by Morse code, when thirty miles apart: speech can be heard onehalf mile distant.

A new battleship is being constructed which will be driven by electricity: even now, every task aboard ship from peeling potatoes to turning the monster gun turrets is done by electricity.

And now we have an invertor who can supply an aerial, wireless-controlled torpedo, which could be launched from the top of a tower and mash any enemy's ships. The wireless operator directing its flight can keep in touch with it and absolutely control its movements.

Wireless waves sent five miles have started the engine of a motor car.

The experiment was made at the Indiana State fair and has naturally, in the present state of the public mind, suggested new possibilities of destruction.

And now they are providing us with a burglar alarm which actually shouts for help. It is called the "watchful voice." The inventor found a man with a weil-nigh deafening voice which he has styled the "burglar proof tone." Its "Hello!" can be heard for miles in open country and also when the voice yells "Police! Help! Stop thief!" This voice he harnessed to his phonographic burglar alarm, and it was intensified by a mechanical process. It is the greatest thing since the automatic piano. The "watchful voice" has much to recommend it even in its mildest moods.

Remarkable success has been obtained by a young Italian engineer, who in his latest experiment fired explorives contained in a gutta-percha bag covered with fibre and enclosed in a poceelain box, which again was placed in an asbestos box with a wronght iron casing. These elaborate contrivances were sunk in the River Arno. Ulivi, the inventor, took his ray apparatus ten miles away from his objective. Within thirty minutes of receiving the signal Ulivi's apparatus exploded the sunken mines. To further test the apparatus Admiral Fornieri sank corded bombs at different points and within fifteen minutes Ulivi's apparatus had scoured the river, located the bombs and exploded them. He now intends to perfect a new apparatus eapable of firing explosives within eighty miles.

Edison chains that electricity is a cure for the world's alls, but until we know more about ourselves it will be difficult to tell what can be done with electricity as a medical aid. He once asked DuBois-Reymond, the physiologist. "What makes my finger move? It is not heat, light, electricity, magnetism; what is it?" In the future we will have a new supply of electricity direct from coal without steam boilers.

Another achievement in wireless communication has been announced by the American Telephone Company. Just about three weeks after the human voice was heard at Honolulu by wireless from Arlington, Va., observers listening at the Eiffel Tower in Paris heard an engineer of the company greet them at the Arlington Station three thousand miles away. Communication is now an established fact from the Atlantic seaboard to Hawaii, a distance of 4.6⁽¹⁾ miles.

Jokes often end in truths. Some joker said that some cereals were made from peanut shells, and the man who said eandy would grow in the fields proves it by producing some seventy-five different sorts of candy from alfalfa Presently we shall have alfalfa flour, which is superior to all other flours for baking.

Coal is sunlight locked in profound sleep, and I believe there are secrets in using the power of the sun the key of which is yet to be found. Than will yet discover the ways of controlling and hoarding the sun fire as it pours into the world from the heavens. He can learn the ret of rocking the sun fire to sleep, so that he may awaken it at will. He will learn to use this fire as it comes into the worthin its infinite plentitude. It is said man is destined to live in the world for millions of years to come. He must not be afraid to chain and control the heat of the sun. We will, doubtless, be attempting to signal the people of Mars within the next century. Professor Bickerton, President of the London Astronomical Society, in a late lecture on life in Mars, predicted that in the 1 nre people of the earth will be in communication with Mars.

Our wildest imagination cannot picture what our descendants I see, hear and enjoy. We do not know but the story of Aladdin's Lamp will be repeated one hundred years hence, and a fairy palace be creeted in a night, because the great work of Edison, Marconi, and other inventors has stimulated hundreds of men to renewed efforts, and the thoughts of thousands of bright boys are turned toward scientific pursuits and engineering careers.

Emerson says, "We come to our own and make friends with nations which the ambitions chatter of the schools would persuade us to Jespise." No man may know the future or even guess what may not look feelish in half a century. The possibilities of talking over water, or sending sound thousands of miles, has always been here, but man has only now discovered it. We may be only beginning our conquest, and time may yet solve the problem of utilizing the tremendous power engendered by the rise and fall of the tid. If we only knew how to apply this power, we could run all the machinery used in factories, and light and heat the cities of the world and houses of the people. It was only very lately that we harnessed up the might Niagara; the bit is in her mouth and the hand of man controls and guiles her.

The Creator has provided for the future supply of energy, as the Victoria Falls, with a volume twice as large as Niagara and twice as high, is estimated to produce thirty-five million horse power.

If nature has placed obstacles in the path of man, one by one they are being overcome. The millions of money and the ye: hat have gone into the struggle through his science, and his brains, aye, very life-with these nature will be overcome.

This is a new age, a new country and a new people. We are not called to go back but to go forward to higher levels of living. This is our day. We are glad and grateful to greet the unborn future. The past inspires us, the present enthralls us. The future draws us upward and on. We may respect ourselves as creative spirits, each having a special tack to do what no one else can do, showing our wonderful individuality To-day we labour to advance the life and interests of this age. Thonsands of us have the habit of thinking in a large and social way. This makes us aspire to attain, and to prove that progress is the law of life. In these moments our thoughts are lofty and our vision clear. Our deeds she 'I be noble. We become aware of our nulimited strength; self-distrust eauses cowardice; therefore, we may srust ourselves to think and ponder and consider, that we may know more and more. Through knowledge we gain power. In a reasonable measure man has mastered the clements. He has conquered the earth and subdued it. He has made the air ard the water to carry him. All this means an activity which is litting to man, and proclaims him to be a creative spiritual being. Man must continue to plant new ideas which shall grow, blossom and bear fruit into new and serviceable institutions. We are capable of producing greater things still, each person filled and growing with a sense of our creative ability. Let us make the most of ourselves: the present is the child of the past, and the present can also be a creative parent of the future. For each of us there is access to all the creative power, all the goodness and all the progress which the world contains and of which human nature is capable. Change is a law of life. This many-sided marvel rules corrywhere. We have plucked the heart out of the great mystery and we stand to-day on the eve of great conquests, possessing the great conquering power which has been transmitted to us by the Creator of all things. Naturally, we respect the institutions inherited from former ages, but still more we should respect our capacity to create other institutions which shall more fully express our aspirations, and better serve every high human purpose.

There is money enough in the world to pay men to give their best thoughts in this direction. Most of us remember when a millionaire was a euriosity. Thousands of past inventions and discoveries occasion our gratitude and thanks. and we should not forget the "One Mind" that controls the universe and holds the planets in their places. Have we been but dreaming in the past, and are we thoroughly awake even now? For hath He not said, through St. Paul the Apostle, "Eye hath not seen nor ear heard, neither hath entered into the heart of man, the things which God hath prepared for them that love him." This does not mean, as so many imagine, that all this is to be revealed in the hereafter—but now! But there is a condition, and that is the greatest thing in the world—love. And the greater and truer our love, the more rapidly all will be revealed to us. David said, "Lift up your heads ye gates." So may we exelaim and act, we in our richness of the privileges of life; rich in luxuries. rich in comforts; rich in blessings; rich in companionships and friendships; rich in the gospel of salvation, which has never advanced in price, free to all: rich in the prospects of a better inheritance. Lift up your heads, acquit yourselves like men, measure up to the possibilities of your original creation in the image of your Creator, and only a little lower than the angels, and exclaim :---

> "For all that is, and for all that was, And ever more shall be, Thank God our Heavenly Father, Each day on bended knee."

Now, Mr. Chairman, we live in a great country; we are a great people; we acknowledge no superior; we live inder the folds of a great flag, that we should all be proud to follow; that flag represents our nationality and our faith. It is the flag of three crosses, whose attributes are sacrifice, mercy and benevolence. This flag is the hope of the oppressed. It has often been assailed, but has always been carried to a triumphant place.

> "Ever victorious over the world, Honour it, stick to it, keep it unfurled. It shall not be beaten, round it we'll stand. The flag of old Britain, the flag of this land.

For centuries it's floated on high, On earth and on sea, against the blue sky, True sallors and soldiers it never will lack. The flag of old Britain, the old Union Jack."



