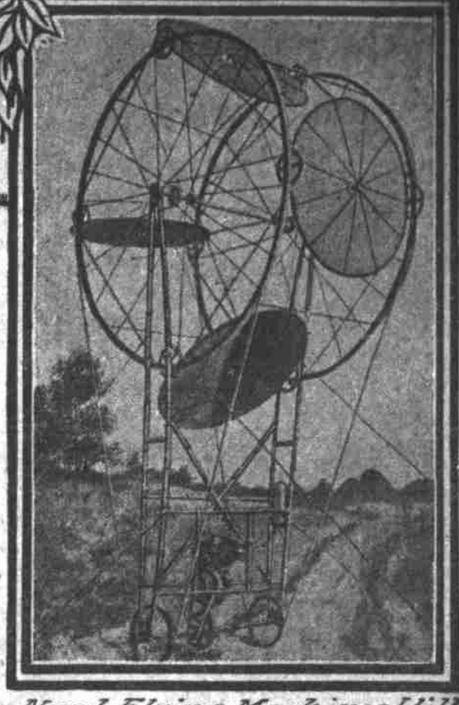
LOOKING FORWARD through 1909

Peary Now in Winter Quarters Like This, May Reach the North Pole.

The Rifle Grenade, Latest Device to Make War More Terrible, May Insure Universal Peace.



Novel Flying Machines Will Receive Attention.

What the World May Witness Before Another Year Rolls Round

THE new year of 1909, so near at hand and regarded with expectation only of the little things which immediately concern their fortunes and their vocations by the majority of mankind, is very big with possibilities to the race as a whole—possibilities so many and so huge that, should all of them come to pass within a wondrous twelvemonth, almost the whole aspect of modern civilization would be altered.

That all, or nearly all, those amazing possibilities will be realized ultimately is fairly certain; that they can reach full fruition during the coming year is more than doubtful. But that a sufficient quota of them will be things of such common use and familiarity as to make a profound impress upon our daily life is assured, if the history of man's progress during the century past can be taken as any criterion.

What, then, will be the salient changes which this old world of ours will present to our eyes when midnight of December 31, 1909, rings out the old year that is now the new; and what are some among the strange, amazing boons by which man's genius and his already vastly multiplied resources are liable to transform his little planet's face?

If you can look into the seeds of Time,
And say which grain will grow, and which will not.
—William Shakespeare.

AMID all the changes which the hurtling times may reveal, what is that one promising the most salient consequences upon mankind's life and habits as they are lived?

Beyond doubt, the world today looks forward most expectantly to human air flight. But how will it come—in what form?

The triumphs of the Wrights, striking as they proved during this last year, have afforded assurance only of the feasibility of the aeroplane, and that upon a scale of actual accomplishment smaller than the automobile. At best, the "machine heavier than air" remains in the condition of the bicycle.

Yet a single year might well prove sufficient for such a craze for flying as the bicycle inspired for the wheeling madness in an earlier day; and already the boys of the generation have given indications that they, in their reckless daring, may prove the true pioneers of the universal flight.

But the last word has not been said of the dirigible balloon, even as the first word has scarcely been uttered of the tetrahedral kite, that strictly scientific invention of that famous scientist, Professor Alexander Graham Bell, whose latest adventure employed an aerodrome of more than 4000 tetrahedral cells.

Nor are these all. Every principle known in aerostatics is receiving its due attention by reason of these recent, first victories of man over the stubborn air, that one element which had ever defied the assertion of his universal supremacy.

Most strange among the applications of man's present knowledge of aerostatics is the flying machine that literally climbs the air, devised by J. E. Shearer, of San Francisco. Motor-driven wheels catch the resistant air like parachutes and force the apparatus upward, as a swimmer might rise from the bottom of a lake by treading water.

MAY HAVE RACES IN AIR

Of all forms into which man's protean flight is now transforming itself, none can be surely defined as the ultimate hope, and all may find their due place in the economy of aerial transportation. Less than full twelve months of the fateful and auspicious year of 1909 may see the city parks so many launching and landing places for the racers of the air in numbers suddenly reminiscent of the cyclers, who were their prototypes on land.

That marvelous spectacle may, indeed, be the most amazing thing we people of the new year in the new century are destined to behold; yet the old earth holds secrets that may prove far greater in their discovery than the now certain flight of man. What of the face of the earth and the inhabitants thereof?

No more apparently useless, and no more inspiring, high emprise has ever been essayed than that stern, unyielding assault upon the mystery of the North Pole by the indomitable Peary, now at the verge of his fifth attack.

For centuries the quest of the Holy Grail by the Knights of the Round Table remained the inspiration of heroic song and story. But no myth of human courage, no saga of sublime devotion to the ideal of indefatigable daring, from the epics Homer sang to the labors of a fabulous St. George, will ever rival these grimly furious onslaughts upon a mystery whose solution is as useless as it once seemed remote, by a prosaic, indomitable man of this modern, prosaic world.

And the wonder of it is that this time, before the summer of the new year is over, it is more than possible his inflexible will may have conquered. "Farthest North" was his record on the last trip, when hunger alone withheld him from the coveted goal, only 200 miles away.

By October of next year the truly great explorer, Peary, may be back with man's most coveted, most useless and most splendid discovery as his own. The world will hail him as the discoverer of its ultima Thule; but history and philosophy will recognize him as the sublime incarnation of the eternally momentous mystery—the stubborn will of man.

Far more keenly interesting to science, and of far more direct concern to mankind, is the advance that may be recorded in that wonderful new world opened to our knowledge by the bold declarations regarding life and sensation in the plant kingdom by Francis Darwin during the year now closing. The son of Charles Darwin and president of the British Association for the Advancement of Science, he, nevertheless paralleled in this young twentieth century the bold Columbus of the fifteenth in his arraignment of the world's lauded knowledge of its laws and in the huge hemisphere of discovery which his modest claims may open to mankind.

"We must believe," declared Mr. Darwin, "that in plants there exists a faint copy of what we call consciousness in ourselves."

That averment, supported by the evidence and arguments he propounded, was but little appreciated by a popular intelligence amazed and absorbed by the more concrete and obvious demonstration that plants can see.

But the bold, unequivocal acceptance by so distinguished a botanist of the full theory that there is consciousness, and perhaps individuality, in the plant kingdom, is in reality man's discovery of that vast, unknown world upon which alone he and the members of all animal species subsist.

The difference between the results flowing from such a positive knowledge and the consequences that come from the chance experiments of blind ignorance is incalculable. Complete demonstration and universal recognition of that tremendous truth during the coming year would revolutionize the world's harvests more radically than the recognition of the principles of stock breeding that have changed the animal world, over which man now reigns supreme.

The face of this world—how completely may not man alter it, or, at least, begin to alter it, within the year 1909!

The Alps, those chill and changeless sentinels of Europe from the time of omnipotent Rome to the present, may nevertheless be changed, even as we Americans are changing our hemisphere by cutting its appendix. Pietro Caminado, an Italian engineer, has laid out a plan for joining by canal Genoa with Basle and the North sea.

A series of tubular, inclined locks along the mountain slopes, such as he has proposed, could be devised, in the opinion of leading Italian statesmen, that would profitably carry a 15,000,000 tonnage a year.

In the United States the twelvemonth of amazing possibilities may bring about the inauguration of the grand inland waterways system, now so urgently needed and so universally demanded by the people. And, even before that comes, the nation is likely to awaken to the imperious necessity of safeguarding its dwindling forests upon a scale adequate to the requirements of the future and the appalling neglect of the present—a magic change, indeed, from the desolate wastes left by this autumn's scarring forest fires to a face of nature crowned with living green.

Already, if the almost assured value of one important discovery of this year satisfy the high expectations it aroused, the process of papermaking from cornstalks bids fair to stand between the suffering forests and the devastating pulp machines.

Devised and perfected in the Department of Agriculture at Washington, the announcement of the availability of cornstalks as a substitute for wood pulp was instantly followed by the organization of a half million dollar company for the exploitation of the material.

In the South, where cotton is returning to its kingly throne, the invention of a cotton picking machine that, it is hoped, may be in extensive operation next year, will transform the snow-flecked fields to outdoor harvestings rivaling the enormous steam reapings of the spacious West. That alone will be a change almost epoch making in its consequences.

At sea, there is the likelihood that the old sailing ship, long believed to be as doomed as the galleys of Cleopatra, will make alliance with the engines of the land, no less an authority than Lewis Nixon having averred that the sailing ship of the near future, utilizing the gas engine as an auxiliary power, will return as the world's freight bearer.

More than that: The steamship, it would appear, has already reached the limit of its development. Rear Admiral Chester has shown, after a tour of naval inspection through Europe, that the logic of war, like the logic of speed and economy in transportation, points to the gas engine, even on war vessels the size of battleships. The seas in 1909 may see the forerunners of the new navies of the earth, from which the huge smokestacks and the high top-hamper will have vanished, leaving barely the hulls of long, deadly motor boats of high speed, and with radii of action equal to those of the world itself.

The new year will behold—for they are already made and operated—amphibious autos that glide like muskrats from land to water, and the podoscaphe, which, composed of two long, parallel boats, is propelled over the water's surface by a rider seated between them.

A notable increase in electric traction will diversify the nation's roadways, and in some appreciable measure, replace the smoke-belching locomotive of the steam railway, while it is far from impossible that the primitive pedestrian may avail himself of the newly invented foot cycle, that lets him run on wheels twelve or fifteen inches in diameter, the motion of the foot, operating a spring, furnishing motive power along smooth and easy roads.

We are destined next year to live more and more numerously in dwellings built entirely of cement, although they will still be among the more wealthy who can afford the ornate luxury of such concrete homes as have become popular. The one-piece concrete dwelling for the poor man, promised by Edison, awaits its commercial practicableness at his creative hand. Yet any day, among those pregnant 365, may bring about its completion and witness the magic rise of hundreds of such houses, as though the poor man, become a modern Aladdin, had acquired power over genii who can build cities overnight.

If the next big war should come during those near twelve months, the automatic rifle, firing twenty-five shots from a strip of cartridges in lightning succession, may be opposed to the flameless gun, of which the Maxim noiseless rifle was the forerunner in 1908, and both, at closer quarters, may be opposed by soldiery flinging the terrible rifle grenade, which is now attracting so much attention in Europe, and which enables every man to play the part of shrapnel cannon.

There may be no war. But the piping times of peace promise to lend the eye to the ear, and the ear to the eye, in two fields of pleasure and profit where the supplementing of either sense has been eagerly awaited. The transmission of a mirrored likeness by electricity, so that she who telephones can see him who answers, is among the hopes of applied science that may bear fruit before the new year is as old as this; and, nearer consummation than that, there is the endeavor to combine with the cinematograph such an adaptation of the phonograph that the magic screen will give a complete reproduction, to hearing as well as to sight, of any performance, dramatic or operatic.

MAY REMAKE MAN

All these wonders, and many more, are liable to be flung forth, like some opulent largesse, from man's munificent brain and hand. But what of the well-nigh omnipotent ruler himself—what of that creature to whom his Creator so long ago gave the dominion of the earth with its land, its ocean and its air? Will he remain the same in the midst of the changes where he rules as despot, defying the earthquake and the hurricane, braving the convulsions of the shaking earth as coolly as he transforms his bitter seedlings to the fruits of his primal paradise? What is the new year to make of Man?

It may remake him utterly, from the very heart in his body to the infinitesimal corpuscles of his blood.

Into his hands, at last, the secrets of the ages, for which he has so vainly longed through the generations, may fall as simply, yet as astoundingly, as the apple dropped on Newton. Before December 31, 1909, darkens into the eve of another year, man may know how to determine the sex of his children. The averment by Professor William E. Castle, of Harvard University, of his discovery of the mathematically precise laws governing reproduction and sex determination in the higher animals, is regarded as being the farthest advance yet attained toward the definite solution of the problem of sex. If all that such a discovery foreshadows prove true, incalculable modifications must ensue in the propagation of the race.

In France, Dr. Stephen Leduc is steadily progressing along the line of his experiments with electrical anesthesia, experiments which, should they prove completely successful, will give to mankind freedom from pain without the penalty all other anesthetics exact, penalties that too often reach the extremity of death.

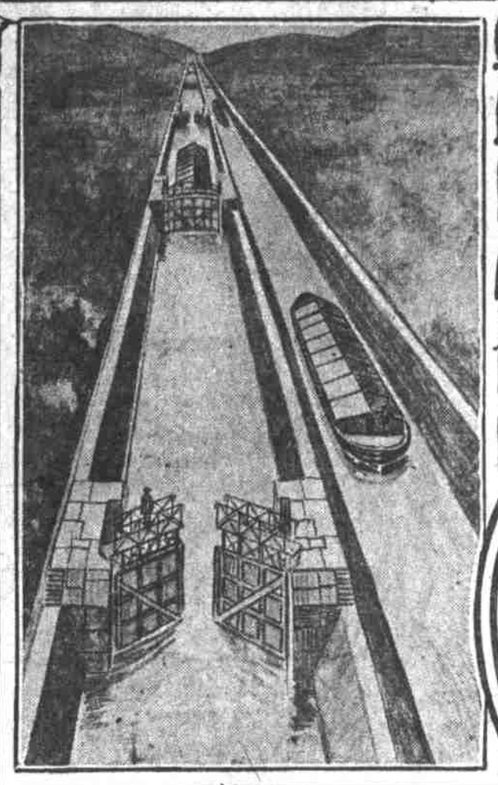
With such an ideal anesthetic as the electrical current may soon prove to be, the miracles of surgery thus far performed must remain merely the dawn of marvels that will hasten to accomplishment. Again and again the human heart has been pierced and sewed up and handled, and the patients have lived. Again and again, at the Rockefeller Institute, has Dr. Alexis Carrel transplated vital organs from beast to beast and major bones from man to man, while Dr. Simon Flexner, of that institution, has held out the hope that, at last, the organs themselves can be transplanted in man.

In the wide field of sanitation this country is being astoundingly awakened to the possibilities of prevention of disease, and in athletics no less an authority than Dr. Dudley A. Sargent has given the weight of his opinion in favor of a return to the all-around, hale and healthy athlete of ancient times as being a better man and a more valuable asset to the nation than the specialized, chronic contestant in some one form of exercise.

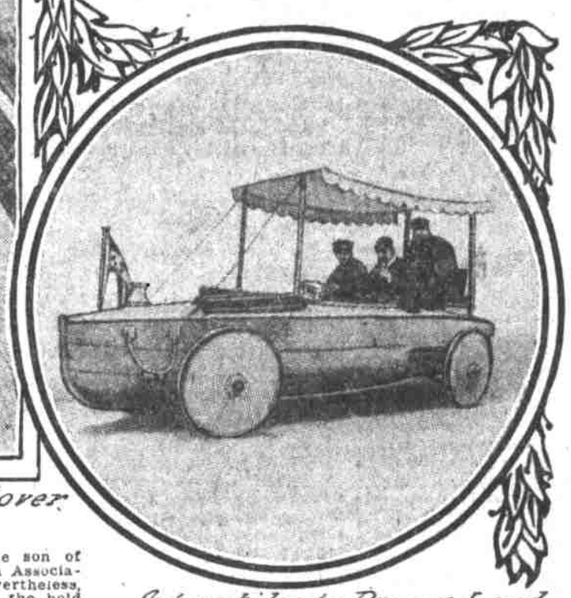
The army of the United States will fall into line with those of Germany and Great Britain in seeking immunity from typhoid by means of vaccination. The army medical board has decided that voluntary vaccination be introduced, with the likelihood that it would first become operative in those army posts where typhoid is most a menace. Abroad vaccination has been found to be a notable preventive. Before the year is over the immense advantages of typhoid vaccination may have become so apparent that its use among civilians may inaugurate the movement to extirpate one of the scourges most familiar to our civilization.

So, within and without, the new year may remake man himself during the scant and swiftly fleeting days when he is remaking his world.

Such Devices May Aid the Lazy Pedestrian.



The Plan of Building a Canal over the Alps May Take Shape.



Automobiles to Run on Land and Water Alike Have Been Constructed.

"THE WOMAN WHO DID EVERYTHING"

THERE is a very High-Spirited and Ambitious Young Woman of New York and of Weehawken, of Boston and of Brookline, of Washington and Alexandria, of Philadelphia and Bryn Mawr, of Chicago and Evanston, whose real name is the Average Female, and who is still Extremely Tired.

She is not yet Recuperated from her recent Resolve to Attain Perfection, and her sole Source of Gratitude is that she has escaped the Sanitarium.

She Began with the Resolve that she would Learn to Play the Piano, a Segment of her Education which she Discovered had been Neglected by her Too Indulgent Parents, and she Instantly Began to Practice Five-Finger Exercises three Hours a Day.

Soon afterward she Noted an Unwonted Sense of Fatigue in the Lumbar Muscles and all along the Spinal Column, together with a Slight but Alarming Disinclination to Discuss with her Dearest Friend the Price of Plumes and the Status of the Soul. It was Apparent that Both her Body and her Mind had been Unfitted for the Strain of Modern Existence. It was then that she Became Exceedingly Busy; she Became Known as the Woman Who Did Everything, and her Name is Legion.

HASTILY Consulting a Lady Animal Trainer for $5, she learned that she was in Dire Need of Athletic Exercise, Supplemented with Vapor Baths and Turkish Massage, to which she Took like a Duck to Water. She found that it Consumed only Two Hours to get In and Out of her Gymnasium Suit and Fix her Spinal and Abdominal Muscles as per Schedule with the Proper Intervals for Dumbbells, Indian Clubs, Wall Exercisers and Breathing Between Stunts. The Baths and Massage, Occurring only Twice a Week, did not Count as Interruptions to her Halcyon Days.

However, in the Course of her Exercises, she Noticed that there were Several Angles upon her Anatomy which might Well be Dispensed With. The Lady Animal Trainer Assured her that Nothing but Fancy Dancing for the Lower Limbs and Fencing for the Arms and Torso, together with Horseback Riding and Japanese Walking, would Supply the Desired Pulchritude, and was Also Kind Enough to Recommend her to Professors of those Arts who had Just Reduced their Charges from $3 a Lesson to $2.75.

The One Hour Each, upon Alternate Days, which she Devoted to the New Courses Admirably Balanced the Other Hours She was Giving to Baths and Massage.

Just at that Period, there was a Great Literary Revival in her Neighborhood, Mingled with Hectic Excitement over the Discussion: Is Bernard Shaw a Plagiarist from the Venerable Bede.

Being Nominated to Champion the Cause of the Venerable, she found Three Hours, after her Piano Practice, all Too Short for her Literary Researches; and, Meanwhile, her Dearest Friend Remarked, Sympathetically, that her Hair Certainly was Looking Thinner.

She Succeeded in Unearthing a Perfect Treasure of a Scalp Specialist, who Charged her only Fifty Cents for a Daily Treatment Lasting Half an Hour, Exclusive of the Whole Hour she Always Had to Wait and the Half Hour it Took to Get There.

Her First Quarter of Instrumental Music Having Expired, her Instructor Explained to her that he was Profoundly Gratified with her Progress, and was Now Realizing What a Crime it was to Allow her to Sit Mute while she Possessed a Voice that would Terrify Tetrazzini, and he was Connected with a Conservatory Jammed Full of Song Birds.

Because of her Great Promise and upon Condition that she Must Practice and Study at Least Three Hours a Day, he Believed he could Induce the Director to Accept her as a Conservatory Student at $50 a Quarter.

She Joyfully Consented, but Observing that her Fancy Work was Now Being Shamefully Forgotten, she Began a Dining-Table Doily Five Feet in Diameter with the Firm Determination that she would Finish it Before Easter, if she had to Work Two Hours a Day—which she Soon Perceived she Must Do.

Her Financial Resources being Almost Wholly Engaged, she Deemed it Necessary to Acquire some Useful Accomplishment which should Supplement her Income, and she Contracted for a Course in China Painting, which Occupied only Three Hours of her Spare Time and Promised Rich Rewards Inside of Seven Lessons.

Unfortunately, some Slight Symptons of Dyspepsia Made it Requisite that she Devote Some Further Time to a Course in Scientific Cooking, where the Regular Lessons Lasted Three Hours. She Effected a Compromise upon Two Hours Daily, on Condition that she should Memorize All Recipes as she Went Along, and she was Thus Able to Consider the Advisability of Receiving the Addresses of the Most Popular Young Fellow in her Set, who had the Reputation of Being a Stayer from Stayersville and Never Quit until 11.30 P. M.

Profoundly Perplexed, she Sought to Readjust her Day's Schedule; but she could Find no Way. In the Midst of Her Distress, she Suddenly Discovered that Already she was Working 25 Hours Out of the 24.

Realizing that she had Accomplished the Impossible, she Emitted a Cry of Joy, and said to him:

"Alberic, you Come Around This Evening at 8 o'clock. I'm Through with the Whole Business!"

This is not an imaginary sketch, but very close to a real thing that happens today pretty nearly everywhere.