

"CENTURY OF PROGRESS"

By RUFUS C. DAWES

President, Century of Progress

IT is an interesting coincidence that Chicago received its charter just as the world was entering into what might be called the Age of Science. The period beginning about 1800 was one of great activity. It began with the discovery of the Voltaic cell, which was followed by the discovery of electrolysis and by the announcement of the wave theory of light; then came the discovery of the connection between electricity and magnetism, and the epoch-making announcement by Faraday in 1831 of the laws of electromagnetic induction.

In brief, these were the foundations upon which the Century of Progress we shall celebrate were established. The enormous increase in man's knowledge of nature's laws was accompanied by the realization that the forces of nature might be applied to the purposes of man. Prior to this time man had never made use of steam or electricity, and had only the most imperfect conception of chemical energies. By the use of all these forces, the living conditions of all men in all parts of the world have been materially modified. Science now profoundly affects us all, and those who work for the advancement of science, or for the explanation of science to the popular reader, are the ones who work most effectively for national wealth and for the comfort, as well as the enlightenment, of men.

AN EPOCH IN HISTORY

By WALTER DILL SCOTT

President, Northwestern University

THE last few decades constitute an epoch in the history of civilization. This epoch is not characterized by any single line of progress but at least one of the most outstanding aspects is the progress that has been made in the natural sciences.

The most profound discoveries have been those made in our universities' laboratories. During previous decades many such discoveries have been made in laboratories but they lay dormant for decades or even centuries. The steam engine was invented in the laboratory of the University of Glasgow by James Watt in 1769. But the locomotive did not become a practical reality and in general use until a half century had elapsed.

At the present time worth while inventions and discoveries are utilized immediately. **Popular Mechanics** is one of the most effective of all agencies in shortening the "lag-time" between the discovery of important scientific phenomena and their application to promoting the welfare of mankind.

THE "EYE" OF MILLIONS

By BARRON COLLIER

FOR thirty years **Popular Mechanics** Magazine has supplied the eye through which millions have watched the astounding progress of our scientific developments.

In addition, this magazine has constantly fanned the latent spark of inventiveness in thousands of minds, thus bringing to the world new inventors and new inventions without number.

That its great work may continue, is the wish of every earnest disciple of man's progress.

MAN'S LIFE BROADENED

By GEO. W. BURPEE

Consulting Engineer

THE thirty years during which **Popular Mechanics** has been published have, without doubt, witnessed greater progress in the application of science to human activity than any 100 years up to that time.

I believe that the application of science will continue at a rapidly accelerating rate in the future (even though it may be interrupted from time to time by periods of depression like that through which we are now passing) and that the public needs information about developments such as **Popular Mechanics** provides.

I cannot believe but that it is a waste of human life for men to do what machines can be made to do, and for that reason I feel confident that the future will witness more and more extensive use of mechanical appliances and the release of human beings from mechanical labor for purposes which we may not now clearly see but which we feel will result in greater intellectual and spiritual growth and, therefore, greater happiness.

In addition to the increase in leisure time made possible by mechanical means, man's whole life is broadened by increased facilities for travel and communications and growth of knowledge of the universe about us, and our great problem now is to adapt this increasing ease of living, possible only through the development of mechanical means, so as to increase the sum total of happiness.

UNLIMITED POWER

By LEE DEFOREST

THE past thirty years has seen radio, or wireless, grow from nothing to one of the most important factors in the daily life of mankind. Its science has been developed from the Maxwell and Hertz equations to many ponderous volumes of intricate mathematics and involved theories.

These three decades have witnessed our first actual acquaint-

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ance with the electron, and a knowledge of its basic importance in almost every branch of science, an awakening realization of its gigantic possibilities in industry.

In the field of electricity this period has been especially marked by the development of the electron tube which, more than any other instrumentality, has made possible our most significant researches in physics, as well as the entire industry of radio and long-distance communication. It has greatly enlarged the horizons of man's thoughts, and the scope of his living.

Yet these thirty years, magnificent as they have been in achievement and progress, are but a promise of what the remainder of the century may witness in the ascent of man from the dark depths of the past.

Now begins the search for new sources of power, unlimited in volume, and at costs so low that freedom from heat and cold, hunger or numbing fatigue, leisure for thought, a realization of the best in life and living, will become the heritage and right of every man.

It is a safe statement to make that of all the people interested and active in aviation today at least ninety per cent have at one time or another been ardent and earnest readers of **Popular Mechanics Magazine** and that aviation owes your magazine a very real and sincere vote of gratitude for all it has done during the past thirty years to record and express in a popular way to a tremendous group of people the various developments and advancement that have been made in aeronautics.—*Porter Adams, National Aeronautical Ass'n.*

The last thirty years have achieved the work of centuries in the freeing of man's spirit and in his conquest of material forces. **Popular Mechanics** has recorded this great history with extraordinary fullness and fascination. It has had an enormous influence in waking and keeping alive the interest of multitudes in the development of human power in numberless ways, great and small.—*Rupert Hughes.*

Popular Mechanics during the thirty years of its existence has performed a worthy public service by giving to the people in popular form an account of the outstanding inventions, developments and scientific discoveries which have brought to all nations manifold benefits whereby burdens have been lightened and comforts for homes and communities have been distributed.—*C. F. Bailey, Newport News Shipbuilding and Dry Dock Co.*

There could have been no finer record of the progress and achievement of this country than your magazine. I have known it since its first issue and I had the very great privilege of knowing the founder and from talking with him of knowing some of his aims in the publication. No magazine founded on the principles which he had in mind could have done other than be the success that your magazine is.—*Ray Long.*

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SPEED AND PROGRESS


By W. H. COVERDALE

Consulting Engineer


FROM small beginnings and through a development which has occurred largely during the lifetime of **Popular Mechanics Magazine** we in the United States and Canada have arrived at a point where we can now see business joyriding on the wing of an aeroplane, flashing on a radio spark across continents and seas, and following chemists to the brink of worlds newer than Columbus ever discovered.

Today the most backward nations, whose customs have not changed since before the Christian era, are those where man is still the beast of burden and the ox cart is still the unit of transportation—who depend upon creaking water wheels instead of steam turbines, and upon hand scythes instead of harvesters! What a far cry from their simple requirements of food and shelter to our highly complex and intricate life as typified by the vacuum cleaner, the electric refrigerator, the wireless telephone, the motor, the radio, and the aeroplane! Man power, animal power, wind power, steam, electric, and gas engines—from 100 pounds of metal per horsepower to five horsepower per pound of metal—from less than four miles per hour to more than four miles per minute!

And just as the railroads fifty or sixty years ago bound the continent together and made it possible for California and Oregon to join the Union, just as their construction and operation made us nationally minded, so, today, the aeroplane and



Contrasting the Old and the New Method of Cooking, the Modern Kitchen Range Has Superseded the Old Coal Stove in a Few Years



The Wright Brothers Airplane on Its Starting Rail at Fort Myer, Virginia, in 1908, Marking the Beginning of Modern Aviation

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wireless telegraphy by their further annihilation of distance and time, are making us internationally minded—our isolation is a thing of the past; we are quickened with a new activity, a new life; and we must broaden the scope of our mental view to meet the new conditions as quickly as air speed broadens our geographical horizons.

Everywhere the old barriers between nations which caused diversity of interests are being torn down by faster communications which produce community of interests. The old Biblical question, "Who is my neighbor?" can no longer be answered with only a local meaning, because air travel has made New York and San Francisco as neighborly today as New York and Philadelphia were a couple of generations ago; and it is not too much to say that the further progress in the science and practice of air talk and air travel which reasonably may be expected in the next few decades will make neighbors of all human inhabitants on this earth, and will contribute more to our knowledge of the inhabitants of other planets than all previous conquests of mind over matter which history records.

The events of the last thirty years since **Popular Mechanics** Magazine was first conceived in the mind of its founder, bear out, as never before, the tradition that the history of the world's advancement is the history of the science of communication. Speed and progress go hand



Entrance to **Popular Mechanics** Building; the Structure Was Completed in 1922 and Is Cited as One of the Most Modern of Its Kind



A Modern Steam Turbine Plant; Such Sources of Power Have Come as a Development of the Past Thirty Years with the Growth of Industry



in hand— where one is, there you shall find the other also. The wise Lord Bacon told Queen Elizabeth that a nation required but three things to make it great and prosperous, namely, a fertile soil; busy workshops, and easy conveyance of men and commodities from place to place; and the historical Macauley wrote, "Of all inventions, the alphabet and the printing press alone excepted, those inventions which abridge distance have done the most for civilization."

The crude "horseless carriage" of thirty years ago—regarded principally as a plaything of the rich—has become a highly perfected piece of transportation, utilized by almost every family in the country. Greater strides than ever before have been made in conquering disease and in alleviating suffering and in countless ways we are constantly served by the products of modern science. The next thirty years will witness advances even more amazing than the wonderful accomplishments of the past three decades.

—F. H. Payne, Assistant Secretary of War.

I recall with what pleasure I read **Popular Mechanics** in the early years of its career. I have been a constant reader ever since and would not wish to miss an issue, even though I am a subscriber to several highly technical journals in chemical engineering and related subjects.

—W. D. Turner, Columbia University.

Throughout the three decades of the twentieth century through which we have passed, an era preeminent in history for mechanical, scientific, and educational advancement, **Popular Mechanics** has kept the record of inventional attainment.

—Franklin D. Roosevelt, Governor of New York.

Not the least wonderful thing that has happened in those thirty years, in my opinion, has been the all-around success of **Popular Mechanics Magazine**. It has been more than an interesting record; it has been an inspiration to its thousands upon thousands of readers.—Senator Arthur Capper.

As a faithful and intelligent interpreter of the march of science, **Popular Mechanics** for thirty years has stimulated the inventive genius of the average American and encouraged his study and research along scientific lines.

—Patrick J. Husley, Secretary of War.

Popular Mechanics Magazine has not only served in disseminating information regarding the progress of science during the most remarkable period of its development, but has been a stimulant to greater achievement.—Senator J. T. Robinson.

Popular Mechanics is the one magazine that symbolizes the age in which we live.—Lowell Thomas.