

## THE ROSENWALD INDUSTRIAL MUSEUM

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*Rosenwald Industrial Museum, Chicago.*

Founded by Mr. Julius Rosenwald's gift of \$3,000,000 for equipment, the Rosenwald Industrial Museum (as it is provisionally called) will eventually occupy the old Fine Arts building in Jackson Park on Lake Michigan, the building to be suitably reconstructed in steel, cement, and stone. For this purpose, the South Park Commissioners of Chicago have issued bonds to the value of \$5,000,000.

Already unsolicited donations of exhibits amount to over half a million dollars, and undoubtedly the museum collections will eventually reach a total of at least \$30,000,000, thanks to the interest and generosity of the scientific and industrial world. In Germany, when the famous Deutsches Museum of Munich was founded, about 1903, many cities, rulers from the Emperor down, and every important manufacturing corporation, contributed either machines or money to insure its success.

Visual education will be presented here in a new form. Whereas the scientific and industrial museums of Europe have been satisfied to show the historical sequence of technical principles and processes, the Rosenwald Industrial Museum—and this is a most significant forward step—will interpret the cultural effects of science and industry.

This will be done by dramatization—using three-dimensional models (operative by crank, push button, or lever), paintings, charts, motion pictures, machines sectioned to show their internal mechanisms, and dioramas, acting as miniature stages on which the model of an entire industrial plant can be shown against a painted background. By this means, one sees the plant in its proper setting, while a motion picture reveals scenes of activity and depicts the actual processes of the work being carried on within the factory itself.

Interrelationships will be brought out, so that one may grasp the social and economic problems raised by the various inventions.

It is possible to link machinery and instruments to human progress in a striking way, if for example we consider the microscope and the telescope as extensions of the human eye. Think, too, of a huge bucket, steam-actuated, as the extension of the five fingers of the human hand (which grasps a few ounces as compared to the tons of earth so displaced), and the comparison can easily be carried further.

Power—when unleashed—is a demon of destruction. When controlled, it becomes man's servant. How has man slowly but steadily harnessed energy and made it his slave? How much energy is generated by the human body in health and in disease? The Museum will answer the question: "What do inventions mean in our lives?" Have they in reality increased our social and economic problems while apparently lessening our labor?

Without machinery, could the civilized world of today be fed? Suppose there were no chemical fertilizers, mechanical plows, or agricultural machinery; no transportation by steamship and railroad? Suppose the surplus of one year's harvest could not be preserved by packing, canning, and refrigeration? What of the deficiency of a lean year?

This opens long vistas of thought. In our machine age, industrial problems of housing and sanitation have arisen, which science must solve. We turn to the bacteriologist and the sanitary engineer to drive out typhoid and tuberculosis and to provide suitable lighting, heating, ventilation, and sanitary systems.

Again, to what extent is the invention of the elevator responsible for Chicago's skyscrapers and apartment buildings? Is it not socially related to vehicles of transportation, such as the bus, the elevated, the street car, the suburban train?

Then, too, what economic pressure has determined an invention such as the steam engine? In England, when the forests were exhausted, coal became a necessity. Horse-pumps proved inadequate to drain the mines, but it was at least a century before the steam pump was evolved. Progressing from the steam pump, James Watt's steam engine became a possibility. Could he have evolved it without the former invention? Later, men built upon these primitive efforts, until now we have the super-locomotive and the modern silent steam turbine. Today the inventor is rapidly becoming anonymous, and technical progress is systematic and predictable. Organized research, sponsored by business men and carried on in laboratory groups, may one day usher in an era when

some of our foods may be commercially synthesized out of familiar gases.

For the chemist has invaded fields seemingly other than his own. He assists the metallurgist, for example, and to him is due the long list of products now obtainable from coal tar. Synthesized drugs, perfumes, even explosives, mark some of his achievements.

Chemical and physical experiments, too, may be performed by the public. For example, imagine the reproduction of a corner of Michael Faraday's famous laboratory, and see yourself performing some of the very experiments by which the great experimenter reached conclusions of such significance to modern electrical engineering.

The Rosenwald Industrial Museum will have a hall devoted to "Concepts of the Day." Here, proposals that are under consideration, projects that are worthy of study, may be shown temporarily (such as the English Channel Tunnel scheme, for example). What seasick traveler would not welcome a train trip from England to France instead of the present uncomfortable and much-dreaded channel crossing?

Television, too, would be represented by a model which would show its underlying principle and indicate the possibility of producing in one city a play that is seen and heard in other great centers.

Frequently time and space must be telescoped. Hence, the development of the street from seventeenth century London to our day may be shown, in perhaps 50 feet, by a street divided into periods of time. Here one progresses from the mud, filth, and flickering torches of Elizabeth's reign, by various stages, to brilliantly lighted Michigan Avenue, sectioned to show its asphalt, its water and sewer mains and underground conduits.

Since space forbids the inclusion of every important railway vehicle of the past century, a car will be divided into periods. The first compartment will be mechanically shaken to reproduce the discomforts suffered by our grandfathers. A glance out of the window will show the landscape of that time by means of an illuminated painting, traveling ceaselessly on rollers. The last compartment will be a modern Pullman sleeper, its motion scarcely perceptible, while from its windows arises a painted vista of the skyscrapers of Chicago.



In Germany, museum visitors walk through ten miles of exhibits and do not seem to quail before a curator's lecture of one hour and three-quarters on the objects in his division alone.

In Chicago we shall not tax the inquiring mind so heavily, but we hope that the thrills of descending to a real coal mine, or seeing for the first time the bones of one's own fingers portrayed upon a fluorescent screen by means of the X-ray, of watching an engine turn a crank-shaft, or facing electricity flashing and crackling, may so engross a boyish mind that dinnertime will be forgotten.

While science can not crowd crime off the front page of the World's Greatest Newspaper, it is hoped that the Rosenwald Industrial Museum may help many an earnest lad to find his life's vocation, and prove an inspiration and encouragement to students, engineers, and inventors, by showing them something of the trend of the future, as well as retelling the story of the past.