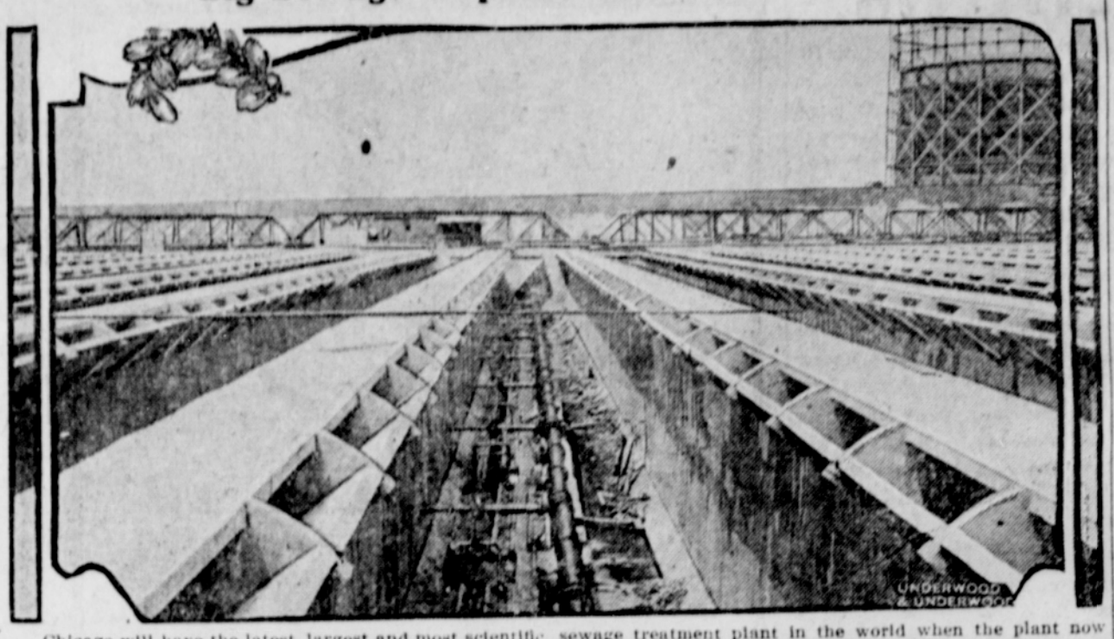
Big Sewage Disposal Plant for Chicago



Chicago will have the latest, largest and most scientific sewage treatment plant in the world when the plant now under construction is completed in 1927. It will cover 180 acres and will cost $13,500,000. The plant consists of acres of aerating filters through which the sewage passes and receives its first chemical treatment, and of three huge batteries of settling tanks and grit chambers where the sludge process is completed. After being treated, the sludge remaining will be piped away, dried and sold for fertilizer. The illustration shows one of the many compartments in the plant.

Grade Crossings Cause 2,000 Deaths

Fatalities and Injuries Increase Every Year.

By C. B. AUOL, President National Safety Council.

Chicago.—More than 2,000 persons lost their lives at grade crossings in 1924, and there were more than 6,000 injured. In spite of the fact that railroad officials, automobile manufacturers and state and county road commissioners have co-operated to provide suitable warning in the form of mechanical devices to attract the motorist's attention and prevent him from crossing the tracks in the face of a locomotive, the fatalities and injuries have increased from year to year.

Various methods have been suggested for relieving the situation, the principal and most discussed of these being the elimination of grade crossings by separation of grades. Indeed, this would prevent any further railroad crossing accidents, but it is estimated that such elimination would cost $25,000,000,000 and would take at least 300 years. Most people are familiar with the much-talked-of and sometimes-tried schemes of warning at railroad crossings. Motorists all know the railroad cross-buck grade crossing signs at the side of the highway; in some sections of the country the motorists are familiar with the bumps in the road opposite to the grade crossing, they are familiar with the bell systems and the light systems of warning. These devices are effective in that they give warning, but beyond this they are useless.

Drivers to Blame.

It is not the crossing wherein the accident hazard lies. It is not the locomotive which bears down on an automobile that is the cause of an accident. It is not the automobile itself. All of these devices are almost mechanically perfect and are not dangerous in themselves, but in their operation. Simmered down to a fine point we shall all have to admit that it is those of us who drive automobiles who are chiefly responsible for grade-crossing accidents.

Strange as it may seem, 70 per cent of all the grade-crossing accidents, wherein motorists are killed, occur in broad daylight. Sixty-three per cent occur at grade crossings where the view is entirely open and unobstructed. Fourteen per cent of grade-crossing accidents are due to the driver of an automobile colliding with the side of a moving train. Twenty-five per cent of all automobile drivers fail to use reasonable care in approaching and passing over the railroad grade crossing. Yet, it is estimated that only about 5 per cent are extremely reckless, using no care whatsoever. On the assumption that we have 17,700,000 automobiles in this country this year, it means that there are 875,000 reckless drivers, each one of whom is a potential train wrecker.

Laws Inefficient.

Laws compelling the motorist to stop at grade crossings would be ineffective because we Americans do not react to law and discipline of the person as do other people whose life history has been less rugged. The whole matter of preventing public accidents—and grade-crossing accidents are only a part of the great number of avoidable mishaps which occur every year in this country—can be laid to the public conscience. Without a crystallization of that inner feeling against the public accident, the safety movement will fail.

Undoubtedly a great step toward the solution of this problem will have been taken when the various states require the mental and physical examination of every automobile driver in the country, and do not let him or her drive an automobile upon the streets and highways without essential qualifications.

Puts Radio in Coffin for DX After He Dies

Los Angeles, Cal.—Sam R. Kimball, elderly San Fernandino valley rancher, has placed an order with a Los Angeles undertaker for a $1,200 steel coffin equipped with a radio receiving set.

Kimball explained that he is convinced that the soul lingers near the body until the Day of Judgment, and that he will be able to "hear what is going on in the world" after he dies.

WICHITA'S CHOICE

Miss Wildeana Withers, eighteen years old, who has been named as "Miss Wichita" for the annual beauty pageant to be held at Atlantic City. She excells in sports, is an excellent swimmer and diver and ranks at the top in collegiate activities.

Sweden Develops Radio at Expense of Cable

Gothenburg, Sweden.—Wireless transmission of messages has so developed in Sweden that the government's station at Grimeton now sends about 95 per cent of all telegrams from Sweden to the United States. The receiving station, on the other hand, gets only about 40 per cent of the telegrams coming from the United States.

In order to meet the new competition the cable companies have reduced their prewar rates.

The Grimeton wireless station was built for direct communication with the United States.

Keep Contact With M'Millan by Radio

New Short Wave Length Sending Is Success.

Washington.—"WNP calling, will you relay a MacMillan message to the National Geographic society?"

The sender is John L. Reinartz, amateur radio "wizard," aboard the Bowdoin.

On the receiving end is an amateur radio operator—one day in New Brunswick, Canada; the next day at St. Petersburg, Florida; again out in Cleveland, and on some occasions in England.

For it is one of the interesting aspects of the MacMillan Arctic expedition which is using the new instruments of aviation and color photography that its news transmission also is by a method so new that it is yet experimental.

But the experiment is working—nightly, and also at midday—which is one of the new things about the new short wave length sending.

Even to the "listener in" the name Reinartz may be strange; but to every amateur, code-using radio operator the world over, the name Reinartz means a special "hook up." And these amateurs, whose amateur standing is attested and guarded by the membership in the American Radio Relay league, are on their toes to "catch Reinartz."

Reinartz has to his credit not only the development of a well-known receiving circuit, but holds numerous long-distance records for transmission of signals.

Keeps Clipping Waves' Length.

Reinartz' greatest accomplishment, however, was making possible the sending and receiving by amateurs with inexpensive equipment, of waves shorter than the most powerful professional station could send a few years ago.

Mr. Reinartz was born in Crefeld, in the Rhine provinces of Germany, in 1894, and is of French extraction. After four years of schooling in Crefeld, he came to America at the age of ten, and settled in South Manchester, Conn., where he completed his schooling and has since made his home.

On leaving school he became a clerk in a drygoods store. He stood this one year, meanwhile dabbling with things electrical in his spare time. He had taken up this hobby while still in school in 1908, and with the assistance of some friendly telephone engineers—the telephone was then still in its hand-cranking days—had begun experiments in the infant radio field. Radio was then a matter of "coherers" and "de-coherers," and rather crude signals could be gotten over only limited distances with the equipment then available to amateurs.

After a year of clerking in the drygoods store, Mr. Reinartz became a clerk in the electrical department of a big silk mill. Each year he became more actively connected with electrical work, and prior to his recent selection to have charge of radio communication on the MacMillan expedition, he was in charge of electrical disposition in the mill.

When the crystal detector came in, Mr. Reinartz was one of the first amateurs to make use of it. With home-made transmitting and receiving equipment he kept up his experiments with fellow amateurs until America went into the World war. An accident at training camp incapacitated him and he spent the remaining period of the war teaching radio in a trade school, fitting men for the service which he had not been permitted to enter.

As soon as the war restrictions on radio activity were removed, Mr. Reinartz fell busily to work again at his radio experiments. By 1921 he had designed the Reinartz regenerative circuit, which he improved in 1922. This soon became popular with broadcast listeners-in because of its simplicity of tuning and its sensitivity.

Amateurs "Talk" With France.

At this time "bands" of wave lengths were being allotted for various uses. The amateurs of one country were given a band near 50 meters, but by special arrangement they exchanged this band for one of much higher wave lengths, asserting that it was impossible to get as low as 50 meters. Reinartz believed that it could be done, and had been pegging away steadily reducing his wave lengths. Finally, in 1923, he reached 70 meters, the record at that time for amateurs. He explained his methods to a French amateur, De Loy, who had a station in Nice, and to officials of the American Radio Relay league in Hartford Conn.

In October, 1923, the first two-way amateur communication between France and America was established with the equipment that Reinartz had designed.

After achieving 70 meters, Reinartz succeeded in August, 1924, in getting down to 40 meters and got the 40-meter signals through first to the Pacific coast and then to England, Scotland, France, Belgium, Sweden, South America and Australia. These were night signals. By October he was using 20-meter waves and at this remarkably short length or "high frequency" had established two-way communication at night with Santa Monica, Cal., from his home at Manchester, Conn. Until this contact Reinartz had the 40 and 20 meter field practically to himself.

The first daylight transcontinental transmission between amateurs was accomplished by Reinartz last December, the signals going through clearly at noon on 20 meters.

Jackknife Used for Removal of Tonsils

Cordova, Alaska.—A tonsil operation was performed recently at Bering River, on Controller bay, 60 miles east of here, by Dr. W. W. Council of Cordova, with a jackknife and denatured alcohol.

When Doctor Council arrived at Bering River from a hunting trip he was called on to handle the case. He had no instruments.

With the crude outfit he performed the operation with success. No anesthetic was administered. The alcohol was used to sterilize the knife.

Prince Bibesco Thinks U. S. Girls Heaven Born

Atlantic City, N. J.—American women must have come from heaven, in the opinion of Prince Antoine Bibesco, Rumanian minister to the United States, who is seeing quite a few of them on the boardwalk during his sojourn here. Making it clear that he was not discussing evolution, he proceeded: "Some countries have beautiful women and some have brilliant women, but it has been left to America to produce women both beautiful and brilliant." Princess Bibesco was an English girl.

"Old Faithful" Geyser Alters Eruption Period

Yellowstone National Park.—Even Old Faithful, supposed to be the most constant, and certainly the most celebrated geyser in the world, is undergoing changes.

This year, Old Faithful is erupting every 67 minutes and his outbursts last for about five minutes. In the memory of living scientists, this geyser became active every 60 minutes, and there is much speculation as to changes beneath the earth's surface which are slowing down this old wonder.

Many geysers in the basin of the Fire Hole river, the greatest geyser area in the world, have ceased shooting entirely within the last 50 years, while others which were formerly inactive are again shooting.

Old Faithful still sends steam and water into the air to a height of 150 to 200 feet and is surrounded day and night by throngs of tourists awaiting his outbursts.

Mussolini Writes Fascist History

Tells of Political Creed He Brought Into Power.

Rome.—Not satisfied with having created Fascism, with having put it into effect during three arduous years, and with bearing the herculean responsibility of holding simultaneously five cabinet posts, Benito Mussolini is now undertaking the task of incorporating his achievements by becoming the interpreter and historian of the political creed he brought to power.

Undaunted by the almost superhuman exertions and responsibilities of his unusual position, the premier has found time and energy to contribute to the political monthly, Gerarchia (Hierarchy), which he founded, two carefully written articles, explaining the Fascist conceptions of the "1922 revolution" and of the new labor union.

Points the Way.

The articles, apparently the initial ones of a series, each militant and controversial in tone, survey the historical background of the subject matter, justifying the Mussolinian point of view, and aggressively point out how the 1922 revolution and the Fascist labor union can be used as weapons in the struggle to Fascistize Italy.

Writing on the labor unions organized by his party, Mussolini argues they are different from those in all other countries in two respects: they accept fully the idea of fatherland, rejecting any internationalism which implies political adherence or class fealty breaking through national boundaries, and they consider capital not as an element to be suppressed, but as one to be liberated and strengthened for the benefit of the fatherland.

Insists It's Insurrection.

Supporting the thesis that Fascism came into power by a revolution and is now defending itself as a revolutionary government, the premier asserts that the two years before the now famous "March on Rome" constituted a war between Fascism and the government then in power.

Answering the objection that the march on Rome was a parliamentary coup d'etat, Mussolini maintains that it was an insurrection, adding that a revolution does not necessarily coincide with its most important insurrectional acts which, he declares, is but a single moment of the revolution and often not the first one. If the Fascist revolution were comparatively bloodless, it was merely because the government in power realized it would have been folly to resist.

The premier concludes his survey with a plea that Fascists realize the possibilities and necessities of the revolution, that they keep ever in mind the need for defending it and using it militantly against its opponents who are hence not merely peaceful parliamentary enemies but traitors and subversives.

WILL MARRY A PRINCE

Miss Anita Bai Lihme, daughter of Mr. and Mrs. Bai Lihme of Chicago and New York, who late this summer will be married to Prince Edward Joseph Lobkowicz of Vienna, member of the nobility.

TWELVE BILLION INCOME FROM 1924 FARM CROPS

Largest Return in Any Year Since 1921.

Washington.—Farmers received a gross income of $12,136,000,000 from agricultural production for the year ending June 30 last—a larger gross income than in any year since 1921—according to figures made public by the Department of Agriculture. For the year ending June 30, 1924, the figure was $11,288,000,000.

In arriving at the gross income the department deducts cost of feed, seed and waste from the value of production. According to the department's experts, the increase over last year, amounting to about 7½ per cent, was due almost entirely to higher returns from grain and meat animals, particularly wheat and hogs.

Exclusive of live stock and feed sold to other farmers the gross income from sales was $9,777,000,000, as compared to $8,928,000,000 in 1924. Food and fuel produced and consumed on the farms was valued at $2,359,000,000.

Expenses of production for the year were put at $6,486,000,000, or approximately 2 per cent more than for 1924, when the figure was $6,363,000,000. The net cash income from sales was $3,291,000,000, as compared with $2,565,000,000 in 1924. The net income from production, including the net cash sales and the value of food and fuel produced and consumed on the farms, was $5,650,000,000. This figure shows an increase of 14.75 per cent over the previous year's $4,925,000,000.

Still, the average net income per operator, including all farmers, tenants as well as owners, amounted to only $876 in 1924-'25, compared with $764 the preceding year, and covers the return on the farmer's equity in his property as well as earnings for the labor of himself and his family for the year.

Yellowstone Park Staff Recruited in Colleges

Ashton, Idaho.—Yellowstone park has a vocabulary all its own, and tourists visiting it the first time have many surprises in store for them. An automobile driver is never a chauffeur in a park. He is a "gear-jammer." A waitress is always a "heaver" and a cook is known only as a "meat-burner."

Most of the employees in the hotels and camps of the park are students. Twenty universities and colleges are represented among the hundreds of waitresses and housemaids working in the big hotels and camps. There are also many school teachers among the women employees, and this year most of these motored to the park in their own cars. The chauffeurs and other men employees of the transportation and hotel companies also came chiefly in their own autos. Many of the students motored all the way from New York and large numbers of them came from California.

More Water to Be Given Minnehaha

Minnehaha falls, the beautiful and famous waterfall at Minneapolis, has been nearly dry for some years owing to the diversion of water. The city has now arranged to supply water for the falls either from wells or by tapping an underground stream, and Minnehaha will be restored.

Maoris Trace Forbears to Hawaiian Islands

Honolulu.—Many of the Maoris of New Zealand consider their race had its origin in Hawaii centuries ago, it has been revealed by Ratina Jakoba, a prominent Maori. He is here with a group of Mormon church-workers from Australia to visit the famous Mormon temple at Lale, Oahu.

Jakoba said he had traced his ancestry back to a chieftain named Hema, who ruled the island of Hawaii. After a devastating war in which Hema was defeated badly and forced to flee from the island for his life, he and a few companions set sail for the south in huge war canoes. Maori legends have it that they landed in New Zealand.

Jakoba said the Maoris had established the names of the canoes in which their ancestors went from Hawaii to New Zealand.