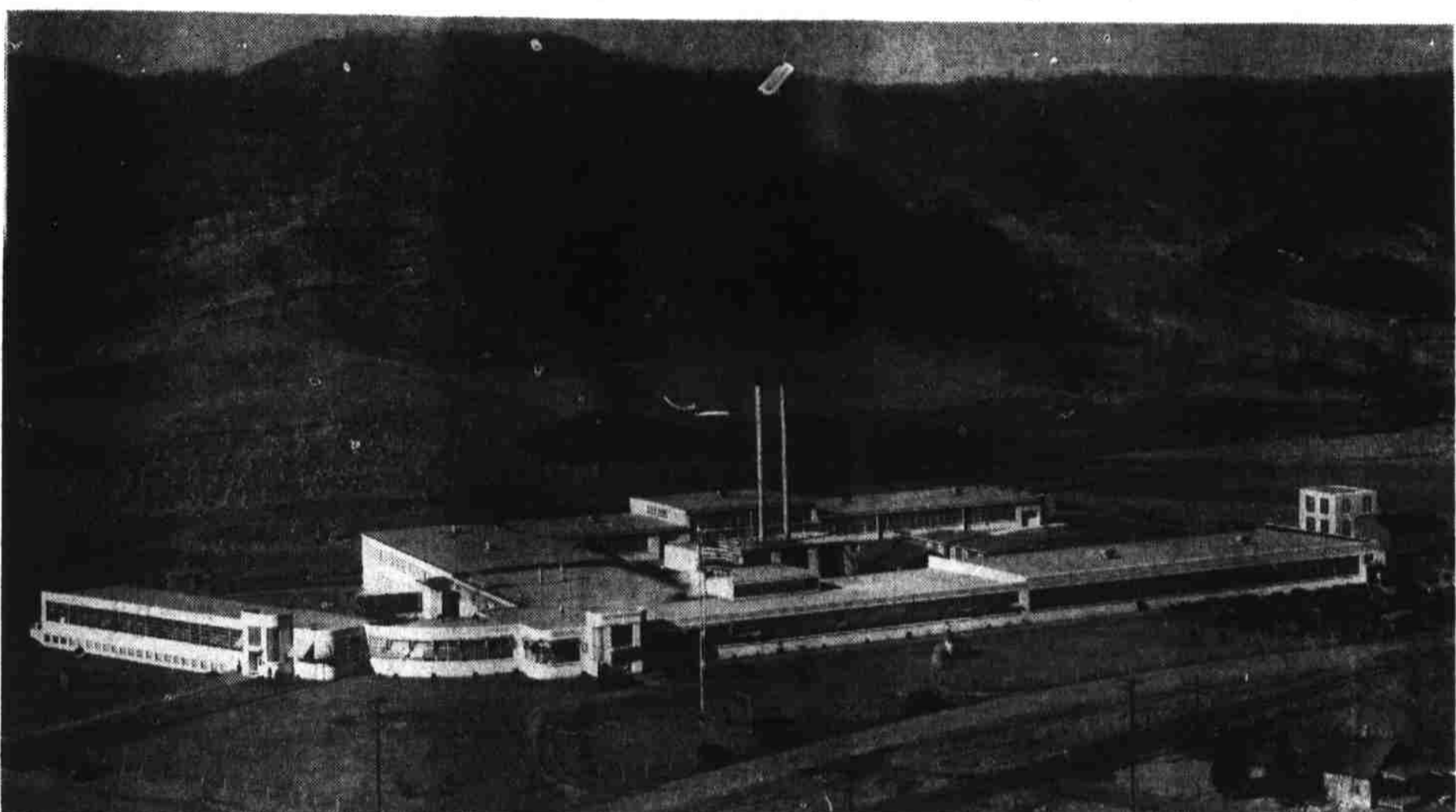


Dayton Plant Built For Synthetic Rubber Work

Dayton Oxygen Hose Used On B-29 Raids

An Abundance Of Cold Water Was Big Factor In Plant Coming Here

This Is The Modern Plant Of The Dayton Rubber Manufacturing Company In Waynesville



This striking and recent view of the Dayton plant, was made from the reservoir hill across the highway. This is the first published picture to show the new additions to the plant and the recently completed Banbury Mill on the extreme right. The two wings on the right and to the back of the picture were finished some time ago, and one of them houses the important oxygen hose production department.

Used On
to Raid
Enemy Areas

Oxygen Hose Plays
Important Role in All
High-Altitude Raids
Enemy.

FIELD, O.—Partly because of the splendid production of life rafts and oxygen hose the Dayton Rubber manufacturing plant here for the Japanese well at the end of the year.

Superfort bases being
Japan. The weight
that can be dropped on
stands may reach 10,000
single raid. General Cook
out. This tonnage is
that loosed on Berlin
marked the closing days
European war.

for this achievement,
Cook emphasized, be-
workers who contribute
production, not only in
plants that produce the
also in the hundreds of
and shops throughout
which build engines,
instruments, radio
and thousands of other
to go into the combat

Textiles
Made With
on Cots

New Banbury Mixer To Speed Up Production

Plant Manager



FRANK ROGERS is plant manager of the Waynesville plant of Dayton Rubber. He has been in the rubber business many years, and is experienced in all phases of operations.

Frank Rogers Is "Veteran" In The Rubber Industry

Frank Rogers, factory manager of Dayton Rubber, has an experienced and thorough background in the engineering and production of rubber products. His first job was in the process engineering division of a large rubber plant. And he has worked with rubber and its problems ever since.

Before coming to Waynesville he was connected with rubber companies in Akron, Ohio, and, more recently, as a trouble-shooter on plane production at Vogt-Sikorsky and Curtiss-Wright whose fighter planes were shipped to the Marine Corps and the Navy.

Infantryman in the last World War for three years gives him a kindred sympathy and understanding for the fighting men of this war. He's the kind of factory manager who will roll up his sleeves, step up to a machine and find a strange gasket or leaking valve. He plays a fair game of golf and likes to fish.

Spice Juices
A pleasant way to drink fruit juices in chilly weather is to have the juices hot and spiced.

In operation for some weeks, Dayton Rubber's new Banbury is running at full speed to help get out the rubber materials needed for production of war equipment.

The Banbury mixer is one of the most important developments in the field of rubber production since the discovery of vulcanization more than a hundred years ago. Its use makes possible the mass production of rubber.

The name "Banbury" comes from its inventor—F. H. Banbury, who built the first Banbury in 1916. It was first developed to take dust and dirt out of the mill room and the first mixers were used for the master batching of carbon black and crude rubber. Its principle of operation is somewhat the same as a mechanical bread mixer and its design is fairly simple. It consists of enclosed mixing chambers, double-cylindrical in form. In each of the cylindrical sections is a hollow rotor and formed in an interrupted spiral. In revolving, each rotor provides surfaces that converge with the walls of the chamber. The rotors are enclosed in a barrel-like section whose upper part is lifted by an air cylinder so that materials can be put into the Banbury to synchronize with the loading. Cycles of the rotor can be arranged for fitting various compounds.

After a batch is given its various cycles in the Banbury, the bottom portion of the barrel is withdrawn by hydraulic cylinders and the contents are emptied into a chute which drops over the 84" mill. After milling, the rubber is slabbled off, dipped and hung up to cool.

When the rising tide of war in Europe placed a premium on the production of war equipment, the Navy "E" award was extended to embrace those plants and organizations which showed excellence in producing ships, weapons, and equipment for the Navy.

Then came Pearl Harbor—and with it a demand for war production such as the world has never known—an awareness that our fighting forces and the men and women of American industry are partners in the great struggle for human freedom and on the part of all Americans a grim and enduring resolve to work and fight together until victory in the struggle is final and complete.

From that high resolve was born the Army-Navy Production Award which stands today as our fighting forces' joint recognition of exceptional performance on the production front—of the determined, preserving, unbeatable American spirit which can be satisfied only by achieving today what yesterday seemed impossible.

Plug Hole
To mend a small hole in a metal container, insert a nail and solder around the head.

Army-Navy E Award Started Back In 1906

The "E" award made to The Dayton Rubber plant on June 5 has an interesting history.

In 1906 the Navy instituted in the Fleet an award for excellence, which has been known ever since as the Navy "E". First awarded for excellence in gunnery, this was later extended to include outstanding performance in engineering and communications. An honor not easily won nor lightly bestowed, it became and has remained a matter of deep pride to men of the service who receive it.

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Head Of Dayton Rubber Pioneered In Developing Synthetic Rubber

Dayton's President



A. L. FREEDLANDER, president of The Dayton Rubber Manufacturing Company.

Radiator Hose Department Aids In War Effort

Radiator Hose for many years has been a highly competitive article. Because of this its manufacture necessitated the use of reclaimed rubber even before our entry into the war. Previously, however, ample supplies of graded reclaimed materials were available for incorporation into this product and its standard could be maintained, as well as the working qualities of the material in the

A. L. Freedlander Has Been An Official Of Dayton Rubber For 26 Years.

A. L. Freedlander, president of The Dayton Rubber Manufacturing Company, has been with the firm more than a quarter century, and is an international recognized authority in the rubber industry. He joined the company as factory manager in charge of research, engineering and production.

Mr. Freedlander is a graduate of Case School of Applied Science, where he received a degree in chemical engineering.

His vast knowledge and wide experience in working with rubber and synthetic rubber has made it possible for Dayton Rubber to pioneer many developments in rubber products. Among them were the first white sidewall tire, the first low air pressure tire, the first all-synthetic rubber passenger car tire, the first V-shaped cog belt, the first all-synthetic rubber printer's roller and others.

Mr. Freedlander has played an important role in the development of synthetic rubber, having devoted considerable time to its since the early 1920's. As early as 1926, a patent was obtained on a roller with a renewable surface which today is known as the Dayco Roller, the leading synthetic rubber roller on the market.

He has also played a leading

The establishment of the Waynesville plant of the Dayton Rubber Manufacturing Company dates back nearly six years, though actual construction did not start until 1941.

When Germany invaded Poland in 1939, the management of the company became war conscious and immediately began studies on its operation as a war plant. Realizing the important part synthetic rubber would probably play during a war, surveys were made to determine the location of a new modern plant especially designed for the production of synthetic rubber products.

Cool nights and the availability of cool water were two factors to be considered. Many localities were considered and early in 1940 the present site was chosen because of the high altitude and the fact that the water temperature went as low as 40 degrees, thus making the location ideal. Also, the location was in the heart of the textile industry, ideally suited for the manufacture of the company's rapidly expanding textile division.

Construction was started in 1941 and was nearly completed by Pearl Harbor. In 1942 Dayton obtained its first contracts from U. S. Army Engineers for the production of pneumatic pontoons which has been continuous ever since.

In 1943 the first contract was secured on A-3 pneumatic life rafts for the U. S. Army Air Forces. To obtain the high degree of quality, required, it was necessary to train over one hundred new employees, install special equipment, and even build an air-conditioned room in which the humidity could be accurately controlled. Every precaution is taken to prevent failure of performance, and research is constantly being carried on to make these rafts better.

Also in 1943 Dayton started the development and production of oxygen tubing for the U. S. Army Air Forces. Specifications were rigid, requiring a hose that could stand wide extremes in temperature and tremendous elongation or stretch. It had to function perfectly in icy-cold air 65 degrees below zero and in baking heat of 185 degrees, and at the same time be able to stretch as much as 50% of its normal length. Having had previous experience in wire inserted radiator hose, the problem was tackled with confidence. So efficient was the development that Dayton Rubber has been the largest supplier of oxygen hose to the government.

The plant was soon too small, and an addition was built to handle the required production. About six months ago, a small two-story Banbury building was added to the plant to increase its milling capacity.

Headquarters of the Dayton Rubber Manufacturing Company are in Dayton, Ohio, where the company manufactures Dayton tires, tubes, tire repair materials, V-belts for industrial use, special type V-belts for railroads, fan belts for autos and trucks, printing rollers, industrial rollers and special molded rubber parts.

The company was founded nearly forty years ago and has since been constantly expanded until today it operates three plants. Dayton has always maintained a large research staff who, together with A. L. Freedlander, president, have pioneered many developments in the field of rubber products. Among these are the first white sidewall tire, the first cog type V-belt, the first all-synthetic rubber printing roller, and others.

Through the experience gained from developing printing rollers, Dayton was able in 1938 to market an all-synthetic rubber spinning cot for textile mills, which is now manufactured in the Waynesville plant. A very recent development in the local plant is a spinning cot that greatly reduces troublesome "eyebrowing" and is being widely acclaimed by textile mills. Other innovations have been developed and only await the end of the war to be put into production.

Dayton has had laboratory experience with practically every type of synthetic rubber available today and uses many of them in its present products. For many years, just prior to the war, Dayton Rubber was one of the world's largest users of synthetic rubber.

The Waynesville plant is the newest of Dayton's facilities and is exceptionally well-equipped for the production of both rubber and synthetic rubber products.

Members of The Board of Directors of Dayton Rubber



J. A. MacMILLAN, Chairman of the Board, founded Dayton Rubber in 1905 and soon thereafter developed the first practical airless tire.



L. V. BAKER, Treasurer, maintains his headquarters in New York City. Not long ago he succeeded his father who was treasurer for many years.



W. G. PICKREL, Vice President and Secretary, has been legal advisor to the company for many years, and was once Lieutenant Governor of Ohio.



P. J. MAYLE, Comptroller, has been with Dayton Rubber since 1936, and was formerly associated with the McClaren Tire Company of Charlotte.

Life Rafts Save Lives Of Yanks

After 33 days in a life raft drifting over 400 miles in an open sea, four Liberator crewmen have returned with a story of painful survival on a diet of fish and birds.

While the airmen were floating on the ocean, they sighted five Japanese submarines and a number of enemy planes. During the first day they bobbed on the sea in the life preservers until a bomber spotted them and dropped a life raft and water rations. When salt water ruined most of the rations they had to depend on what the sea would give them for sustenance. The birds and fish they ate raw. They were able to get water from a few rainstorms.

Dayton Fan Belts Used On All Vital Equipment

Many of the huge compressors used to bottle oxygen in cylinders used in aircraft in conjunction with Dayton Oxygen Hose, are equipped with Dayton Thorobred V-Belts. The compressor units are mobile so that they may be moved forward to any battle-front airfield. Over 100 V-Belts are installed on each unit and the only belt failure reported was due to mis-aligned pulleys—a common cause of failure for any type of power transmission belt.

Buy War Bonds and Stamps.