

• New Machines And Gadgets •

⚙️ **"BOMB BOTTLERS"** have been developed for filling practice bombs five at a time with 90 pounds of hot, dry sand. The machine does the work of 10 three-man teams of soldiers, releasing them for other duty. Thousands of practice bombs are prepared daily by the machine which resembles a giant soda pop bottler.

Science News Letter, July 24, 1943

⚙️ **HUGE WOODEN** trailers for ground transportation of gliders are being used experimentally. Two units carry a glider: one for the wings and one for the fuselage.

Science News Letter, July 24, 1943

⚙️ **MORE UNIFORM,** accurate and less costly production of small tools is expected from a newly designed, electric salt bath furnace. Heat treating tools of extreme length, such as saw blades, is now possible.

Science News Letter, July 24, 1943

⚙️ **LIGHTHOUSE** of health, a new type of ultra-violet ray unit, has just been installed. Improvements have reduced operation costs to make regular irradiation of large numbers of war workers practical. Standing in a circle around the unit, 15 persons can simultaneously receive ultra-violet applications.

Science News Letter, July 24, 1943

⚙️ **ELECTRONIC** heaters, such as the one shown in the picture, are now being



used in metal industries to perform hardening, brazing and soldering operations in seconds instead of minutes.

Science News Letter, July 24, 1943

⚙️ **A RECOIL DAMPING** device for aircraft machine guns is used by gunners on all types of bombing planes. The device is a portable, lightweight cradle consisting of two steel tubes and a hydraulic absorption unit. Its use permits more accurate shooting.

Science News Letter, July 24, 1943

⚙️ **A BLACKOUT** venetian blind has been patented. When properly installed, a flick of a cord will fully close the slats and prevent any light from seeping into the outer darkness.

Science News Letter, July 24, 1943

⚙️ **CARBURETOR** and supercharger diaphragms of warplanes are now made of a synthetic rubber and nylon. Compared to previous diaphragms they are said to be eight times as strong and have a flex life nine times as long. The product withstands effects of high-octane and aromatic fuels and operates efficiently at temperatures from 175 above to 65 below zero.

Science News Letter, July 24, 1943

⚙️ **MAILING PICTURES** to men and women in service, as well as to distant civilian friends, is simplified by a combination letter and snapshot album now on the market. The recipient can use the inexpensive unit as a handy pocket album.

Science News Letter, July 24, 1943

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington 6, D. C., and ask for Gadget Bulletin 166.

PHYSIOLOGY-PSYCHOLOGY

School of Alcohol Studies Opens at Yale University

➤ **THE SCHOOL** of Alcohol Studies in Yale University, first formal school of its kind in the academic history of the United States, has just opened in New Haven, Conn.

Those who have to deal with the victims and potential victims of "Demon Rum" make up the student body. They include school principals and teachers, social workers, court probation officers and clergymen.

The faculty of the school, under the directorship of Dr. E. M. Jellinek of

Yale, includes physicians, physiologists, psychologists and psychiatrists who will explain how alcohol affects the human body and mind, and sociologists, jurists and clergymen who will report their findings on the role of alcohol in the human social structure.

Science News Letter, July 24, 1943

CHEMISTRY

Synthetic Lubricants Show What Makes Good Oil Good

➤ **THE PROBLEM** of what makes a lubricating oil good or bad is being attacked in a new way by Robert W. Schiessler and other chemists at Pennsylvania State College.

They are making their own lubricants, building them up synthetically from pure hydrocarbons of known molecular structure, so that when the oil is made they know what's in it and what its molecules are like. Then if the oil is good they know what made it good, and if it is poor they know what made it that way.

Natural lubricating oils are for the most part mixtures of hydrocarbons of high molecular weight which cannot easily be separated. This makes it difficult and often impossible to determine what each component contributes to the lubricating qualities of the oil. Putting the oils together instead of taking them apart promises to solve this problem.

Science News Letter, July 24, 1943

AERONAUTICS

Finishing Touches Put on New Type Convoy Balloons

See Front Cover

➤ **A NEW** type of convoy balloon is being turned out by the B. F. Goodrich plant at Akron, Ohio. These balloons are 33 feet long, with a diameter of 13 feet and a capacity of 3,000 cubic feet of gas.

The illustration on the front cover of this week's SCIENCE NEWS LETTER shows women workers putting the finishing touches on these balloons which are destined to hover protectively over war-bound ships.

Science News Letter, July 24, 1943

● RADIO

Saturday, July 31, 1:30 p.m., EWT

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Howard L. Alt of Northwestern University Medical School in Chicago will speak on "Use of Red Blood Cells for the Treatment of Anemia."