



TEMPO

Soldiers' marching feet went off to the last war to such sentimental tunes as "There's a Long, Long Trail," but the next war in which America may be involved will need a new type of rhythm. In the beating feet of current jitterbug dances (top) and the music that makes them click experts see potentially America's wartime music of the future.

Fear of social disapproval.

And if you'd like to know what the seven common devices are for appealing to these almost sure-fire fears and desires, here's the list:

Name calling; using glittering generalities; suggesting by transfer that you can be like some admired person; testimonials; the plain folks line; card stacking; and the appeal to jump on the band wagon.

With life as complicated as it is today, and millions of people trying to run a democracy, there's no escaping propaganda, so the Institute concludes. The thing to do, as they see it, is to avoid being gullible. That means becoming a nation of critical thinkers, who make decisions after scrutinizing what we read, hear, or are told. They'd like propaganda analysis to become an American habit.

Science News Letter, July 15, 1939

CHEMISTRY

Natural Gas Yields New Family of Useful Chemicals

NOT often does chemistry present industry with a whole new assortment of chemicals, capable of extensive use in various fields, although single new chemical compounds, undreamed of in nature, are frequently produced. That is the reason chemists are somewhat excited by the development of the nitroparaffins by Commercial Solvents Corporation research. For they constitute a whole group of chemical compounds entirely different from any which have been available before.

The basic raw material for the manufacture of the new chemicals is natural gas, large quantities of which are being wasted daily. Methane, ethane, propane and other principal constituents of nat-

ural gas have been very difficult to entice into chemical combination. In fact they have been called the paraffins (par-affin meaning "no affinity") because of their inertness. What we commonly know as paraffin, the solid wax petroleum, is of the same chemical family.

Successful nitration of these gases by a new technique has produced nitromethane, nitroethane and four other similar compounds. They are colorless, mild-odored, heavy liquids which boil at slightly higher temperatures than water's boiling point. From these nitroparaffins a variety of chemicals are being made, while the new chemicals themselves are also proving useful.

A new explosive that may rival TNT

can be made from nitromethane, by reacting it with formaldehyde to form a nitrotriacol, which can be nitrated. This possibility first brought the nitroparaffins to public attention.

The nitroparaffins are direct and active solvents for nitrocellulose and for a wide range of synthetic and natural resins as well as for fats and some dyes. Mixed with alcohols, they are solvents for commercial cellulose acetates. Nitroethane is a heat sensitizer which brings about the gelling of rubber latex, while chlorinated nitroparaffins are anti-gelling agents, useful in rubber cements.

Market surveys indicate, according to Arthur D. Little, Inc., that ammonia derivatives of nitroparaffins may command markets in many industries for use in manufacture of synthetic organic chemicals.

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MEDICINE

New X-Ray Procedure Helps Fight Tuberculosis

A NEW X-ray procedure which promises to help in the fight on tuberculosis was described by Drs. Israel Steinberg, George P. Robb and Ursula J. Roche, of New York City, at the meeting of the National Tuberculosis Association in Boston.

The new method may enable doctors to determine the effect of lung collapse therapy, one of the new methods of treating tuberculosis, on the physiology of blood circulation in the lungs, and even to evaluate effectiveness of this treatment.

"It seems certain," the inventors of the method said, "that many problems in pulmonary disease which previously have been studied only in animals or in autopsy material may now be investigated during life."

The new procedure consists of injecting a concentrated solution of diodrast rapidly into the veins. This substance makes the veins opaque so they can be seen in the X-ray picture. Within a matter of seconds, the heart and the veins and arteries of lungs and chest of a normal person can be seen by this procedure.

Striking decreases in the number of veins carrying blood away from the involved areas of the lungs were found to be characteristic of pulmonary tuberculosis. Other changes in the lung arteries were seen.

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An electric eel at the New York World's Fair zoological exhibit is capable of electrocuting a man, and attendants handle it with rubber gloves.