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SCIENCE NEWS LETTER

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New Horizons for China

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A SCIENCE SERVICE PUBLICATION

THE SEARCH THAT NEVER ENDS



IN THE industrial life of America, research has been of constantly increasing importance. And today it is a national resource, for the research of industrial and college laboratories is proving its value in War.

To the Bell System, research is an old idea, for the telephone itself was born in a laboratory. Behind its invention, sixty-nine years ago, were researches in electricity and acoustics and in speech and hearing.

And, ever since, there has been a laboratory where scientists have searched to know more about these subjects; and with their associated engineers have applied the new knowledge, fitting it with all the old, to make the telephone better and better.

Their fields of inquiry have broadened and deepened through these years; they inquire into all the sciences and engineering arts which have any promise of improving the telephone. Much has been learned but still more will be, because their search goes on. That is why the telephone laboratory grew to be Bell Telephone Laboratories, Incorporated, today the largest industrial laboratory

in the world. And it exists to improve telephone service.

Improvements in industry can be left to chance in the hope that some one, sometime, will think of something useful; that some good invention will turn up.

The other way to make improvements is to organize so that new knowledge shall always be coming from researches in the fundamental sciences and engineering arts on which the business is based. From that steady stream will arise inventions and new methods, new materials and improved products.

This is the way of Bell Laboratories. Its search will never end. And as fast as it can the Laboratories will apply its new knowledge practically to the design of equipment and communication systems.

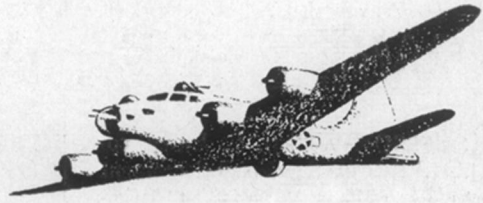
At present — and this started before Pearl Harbor — its trained scientists and engineers and all their skilled associates are concentrating on products of importance to our armed forces. But when this work is happily over they will be ready to continue their developments for the needs of peace.



BELL TELEPHONE SYSTEM

"Research is an effort of the mind to comprehend relationships no one has previously known; and it is practical as well as theoretical." . . . BELL TELEPHONE LABORATORIES

the Jewels



A WOMAN GIVES A MAN

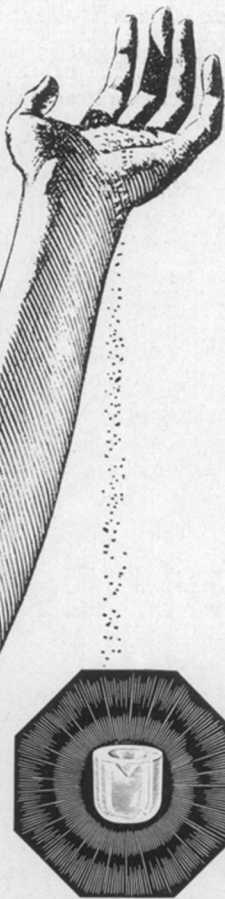
MORE planes might be named Diamond Lil if pilots and crews knew what this woman knows—that bombers wear jewels!

This woman is one of a little group of war workers whose job is producing synthetic jewels for electric aircraft instruments. The jewels are tiny bearings for moving parts which must be as accurate, and are almost as small, as the parts of a fine watch. They are made from glass by a secret process at a mass production rate, but each jewel must pass an inspection as exacting as a jeweler's appraisal of a precious stone. These jewels, which women are giving men to fly by, are given in painstaking devotion to precision—in manufacture and inspection.

The development of these jewels is an example of the application of General Electric research and engineering to small things, as well as large. Before the war, and before G-E scientists developed a special process for making these jewels synthetically from glass, we used sapphires for these bearings—importing many of them. Think what it would mean, with America's thousands of planes requiring millions of instruments, if we were still dependent upon a foreign source!

Small things perhaps, these jewels a woman gives a man—but in war, as in love, there are no little things. *General Electric Company, Schenectady, New York.*

Hear the General Electric radio programs: "The G-E All-girl Orchestra" Sunday 10 p.m. EWT, NBC—"The World Today" news, every weekday 6:45 p.m. EWT, CBS.



This magnified glass jewel, one of several types, is actually smaller than a pin head. As one of the largest makers of aircraft instruments, and as a supplier of jewels to other instrument makers, General Electric is unofficial jeweler to many American planes.

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192,000 employees of General Electric are on their jobs producing war goods and buying over a million dollars of War Bonds every week to hasten victory.