



### Victory Over Vectors

► UNINVITED and unwelcome camp-followers in all wars throughout history have been insects. Fleas and lice made themselves at home in all camps and castles, flies swarmed over the soldiers' food, mosquitoes and other winged blood-suckers pestered them on the march and bred by billions in moats and defensive ditches. Until very recently they were



### METAL-TO-GLASS SEALS

**Intricate glass work and tubes made to your specification**

The Universal X-Ray plant specializes in the production of metal-to-glass seals. Intricate glass seals are made to customers' specifications for electronic tubes, transformers, resistors, capacitors, condensers, vibrators, switches, relays, instruments, gauges, meters, and other scientific apparatus.

A strong metal-to-glass bond assures unflinching protection against rust, corrosion, and extreme climatic conditions in a vacuum-tight seal. Good deliveries can be made on volume orders. Submit your metal-to-glass seal problems to the Universal engineers for recommendations and estimates.

**UNIVERSAL X-RAY PRODUCTS INC.**  
1800-H N. Francisco Ave. • Chicago 47, Illinois

considered infernal nuisances, but bearable as compared with other campaign discomforts. The men scratched their bites, slapped at the flies, cursed routinely; but that was about all. (A knight in plate armor was well protected against mosquitoes; but it must have been tough when a flea or a cootie bit him and he couldn't get at the itchy spot.)

Late in the nineteenth century, however, after Pasteur had firmly established the germ theory of diseases, it began to be realized that many of the worst germs were carried about by these uninvited intimates of the camps. Typhus and plague, typhoid and dysentery, malaria and yellow fever—the list of indictments and convictions lengthened year by year. The foe might slay his thousands, but insects their tens of thousands.

During the first World War some efforts were made to conquer these insect disease carriers, or vectors as they are called in medico-entomological terminology. Some success was scored against flies, a little against lice, but nothing much against the other plague-bearers. One of the chief handicaps was the lack of a really effective insecticide.

DDT changed all that, so radically that it seems almost miraculous. Body vermin wilted before the medics' powder-guns like Japs before a flame-thrower. With them went the menace of typhus. Sprayed wholesale from planes in certain jungle-island experiments, it exterminated whole mosquito populations—though, regrettably, it also wiped out many harmless insects, such as butterflies.

However, the victory over vectors was not won with one weapon alone. Fumigation cabinets and bags, for example, have played a great part in delousing operations. Just keeping things well cleaned and screened has kept down the flies around established camps. The triple program of draining, oiling and poisoning has made swamps and ponds inhospitable to mosquitoes wherever time and means have been available to put it into practice.

One of our great air bases carved out of a jungle in the southern hemisphere, for example, has a fair-sized lake at one end of it. You would expect to encounter swarms of mosquitoes, with everybody compelled to wear head-nets and gloves. But there isn't a mosquito in sight. In their recreation time, the men play games bareheaded and with their sleeves rolled up, as if there were no such things as insects in the whole wide world.

*Science News Letter, June 16, 1945*

### PHYSICS

## General Electric Plans \$8,000,000 Laboratory

► WITH PLANS for expanded post-war research and development well under way, the General Electric Company has announced the pending erection of a new building to house its laboratories, at a cost of about \$8,000,000. Construction will begin on a 219-acre estate near Schenectady as soon as WPB approval can be obtained. Dr. C. G. Suits, vice-president and director of research, revealed plans to expand the laboratory staff by several hundred workers.

A feature of the new building, to be built in the shape of a giant T, will be movable walls and partitions that can be set at 18-inch intervals so that rooms can quickly be made large or small as desired. Benches and all furnishings will be standardized.

The site of the new building is on a high elevation, thus permitting experiments with radar, high-frequency jet engines and other devices. The rocky cliff foundation will be useful in conducting experiments with X-rays, possibly permitting increases above 100 million volts.

*Science News Letter, June 16, 1945*

## YOUR Book in Print!



**Remarkable New Process Produces Even Small Editions at Amazing Low Cost**

A brand new service to scientists offers small editors of neatly printed, sturdily bound books at a remarkably low cost. As few as 250 or 500 copies of a book can now be printed and bound without the usual staggering cost of typesetting and binding. A new patented plate process is the secret. Small or large editions of any kind of manuscript can be produced at a per-copy cost that solves the problem of printing limited quantities. The type is permanent; later editions cost even less. This process includes the use of halftone and line cuts, footnotes, charts and graphs, index, appendix, table of contents, etc.

### Write for Sample and Literature

Ask today for full details, prices, terms—and sample of printing. No obligation whatever. Just send your name and address to

### THE HOBSON BOOK PRESS

52 Vanderbilt Ave. Dept. A-10  
New York 17, N. Y.