

PUBLIC HEALTH

Disease Danger in War

Plague, cholera, typhus fever, smallpox, rabbit fever, anthrax and glanders are among the ills that an enemy might spread.

► **PLAGUE**, cholera, typhus fever, smallpox, rabbit fever, anthrax and glanders are among the diseases an enemy might try to spread in our country if he wanted to use germ warfare against us.

These diseases are named in the federal government's official booklet, **WHAT YOU SHOULD KNOW ABOUT BIOLOGICAL WARFARE**. It is almost the first time diseases are named in any official publication in this connection.

Biological warfare is the technical name for germ warfare. BW is its short name. BW attacks may be made against people, against domestic animals such as cattle and poultry, or against food crop plants.

BW weapons include "living agents," such as bacteria, viruses and other disease-causing things. They include toxins, which are the special kinds of poisons produced by living things. Botulinus toxin, cause of botulism, is one such poison. Tetanus toxin, cause of lockjaw, is another.

BW weapons also include chemicals known as artificial hormones or growth regulators which can kill plants. Some weed killers now in use are chemicals of this sort developed as possible BW weapons during World War II.

BW weapons could be spread through fine sprays or mists such as come from the bathroom atomizer or a DDT bomb or spray gun. These sprays are called aerosols.

Big ones, for major BW attacks, "could be loosed from special sprayers carried in airplanes, if an enemy could succeed in making an attack pretty close to the ground. Or the aerosol machines might be carried aboard submarines," the BW booklet states.

"Biological warfare is no secret super-weapon," the booklet declares. "There are defenses against it."

Defenses exist in the health and agricul-

ture departments, federal and local, which keep our water, milk and food free from germs and poisons and which keep out of our country infected people, animals and plants or their products that might spread disease.

Vaccines and medicines, such as the sulfa drugs and penicillin, are other defenses against BW.

The difficulty of spreading disease germs among large numbers of people makes a kind of defense against BW.

The fact that some people have resistance to one or another of the disease germs

ENGINEERING

Multiplex Without Errors

► **NO ERRORS** in messages transmitted by radio telegraphy will occur with the use of a new RCA Electronic Multiplex and associated apparatus, Naval Academy advanced students were told by Sidney Sparks of RCA Communications, Inc.

The associated apparatus is known as ARQ, the "A" standing for "automatic." Atmospheric disturbances and equipment failures have been among the causes of undetected errors in encoded messages, Mr. Sparks stated. The combination of these two devices, he said, "reduce almost to the vanishing point the risk of undetected errors that might destroy or radically change the meaning of encoded messages."

Electronic Multiplex provides four channels of high-speed wireless communication on a single radio frequency. These channels can handle an unlimited volume of coded or straight traffic, he declared. The new model is entirely electronic, and represents a great advance over earlier types.

The Automatic RQ, which operates with the Multiplex system, converts transmitted signals into a type of code which permits positive detection of error. At the receiving end it translated the characters back into the standard five-unit teleprinter code after performing an automatic check.

A signal distortion in this system produces an unprintable combination rather than one that might result in the printing of a false character. If such a signal is received, the device automatically flashes back to the sending station a signal which stops the transmitter and causes it to repeat the distorted character. It will con-

SIX SURVIVAL SECRETS

Biological warfare defense instructions issued by the federal government advise:

1. Keep yourself and your home clean.
2. Report sickness promptly.
3. Give all possible help to authorities.
4. Don't rush outside right after a bombing.
5. Don't take chances with food and water in open containers.
6. Don't start wild rumors—don't believe wild stories.

and can throw them off without getting sick gives another kind of defense. Even during the 1918-1919 influenza epidemic, probably the worst epidemic of modern times, not everyone got sick.

The BW booklet can be obtained from the U. S. Government Printing Office, Washington 25, D. C., for 10 cents.

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tinue to do this until the character is correctly received and printed.

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STANDARDS

Government Colors Reduced from 500 to 187

► **GOVERNMENT PAINTING**, from office walls to battleships, is now limited to 187 colors, reduced from 500 colors previously used. This is the result of a recent Federal Specification which standardizes and limits the colors of paints that may be used in the Federal services. (**FEDERAL SPECIFICATION COLORS: READY MIXED PAINT**).

To ease the job of purchasing agents for various agencies, a color card book in loose leaf form has been prepared under sponsorship of the General Services Administration, and is available at \$4.50 a copy from the Government Printing Office.

The book consists of deposits of stain and fade-proof color squares on paper, grouping the 187 colors in three classifications of gloss, semi-gloss and lustreless. Studies leading to the specifications were made by representatives of the General Services Administration, National Bureau of Standards, and government users of paint.

The Federal government expends about \$100,000,000 a year for paint. By settling upon fewer colors money will be saved because inventories carried will be much smaller, and agencies will be able to exchange excess quantities.

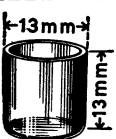
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