

The Russians have worked long and hard on the problem, and Americans have been able to avail themselves of the Soviet findings.

The Russians found that it is a losing battle to fight the forces of frozen ground simply by using stronger materials in construction or by resorting to more rigid designs. They learned that construction designs should appreciably minimize or neutralize the destructive effect of permafrost. Frost forces are utilized to play the hand of the engineer rather than against him.

Used as Construction Material

Permafrost can itself be used as construction material but, if so, steps must be taken to see that it is kept frozen. If that cannot be done, it must be destroyed, and then steps taken to see that it does not come back.

All construction problems are individual and they depend on the nature of the permafrost. Is it expanding, is it stabilized, or is it being destroyed by nature? What kind of material is in the permafrost, how deep does it go? These are some of the questions the engineer has to answer for himself before he begins planning each individual construction job.

Artificial freezing, during a few hours on summer days, can be used to treat bad slides on roads and railroads, settling under expensive buildings, loosening of the foundations of dams, bridges and towers.

Scientists and engineers emphasize that much future research into the nature of permafrost is needed. The surface, literally and figuratively, has been barely scratched.

"As our civilization presses northward," says Robert F. Black, permafrost expert of the U. S. Geological Survey, "the practical needs of construction, water supply, sewage disposal, trafficability, and other engineering problems must be solved speedily and economically. Our present knowledge is relatively meager, and trial-and-error methods are being used too frequently."

Science News Letter, July 19, 1952

TECHNOLOGY

First Anti-Sub Sub Has Extra Sonar Gear

See Front Cover

► THE USS K-1, the Navy's first anti-submarine submarine, is shown on the cover of this week's SCIENCE NEWS LETTER. The sub recently visited Washington to give Navy officials a chance to see the latest developments in undersea warfare.

The boat is 195 feet long and displaces 750 tons. Her appearance differs from many other submarines because of the added sonar equipment, used to locate submarines by sound wave reflection, housed in the forward bulge.

Science News Letter, July 19, 1952

Chloromycetin Dangers Investigated After Death

► "QUITE A substantial number of deaths" were among the almost 300 cases of blood disorders found by the Food and Drug Administration among people who had been given the wonder drug, Chloromycetin (chloramphenicol).

Some of the cases of blood disorder have already been diagnosed as aplastic anemia. Experts are checking on the rest.




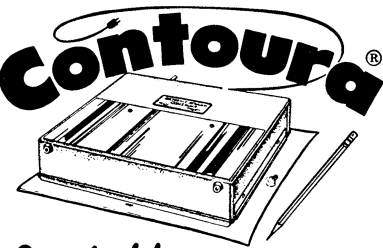

Whether they are actually due to the use of the first practical synthetic antibiotic or merely a coincidence will be determined by a panel of physicians and blood experts to be called by the National Research Council's medical division. It was pointed out that several million people all over the world have been given Chloromycetin and, perhaps, thousands of lives have been saved by the new drug.

Physicians have been warned, in administering the drug, to watch for signs of disorders in the blood-forming functions of the body, particularly if the medicine is given over a period of time, or for a second time after a long interval.

It was pointed out that many of the new wonder drugs have side effects and physicians have learned to watch for them. A study will be made of such cases.

Science News Letter, July 19, 1952

4 SHORT-CUTS FOR SCIENTISTS

<ul style="list-style-type: none"> ★ CUTS TIME ★ CUTS COSTS ★ CUTS ERRORS ★ CUTS EFFORT 	 <p style="font-size: small;">End drudgery of long-hand-copying and proofreading notes. Contoura-copied manuscripts, bound abstracts and articles are letter-perfect, need no checking.</p>	 <p style="font-size: small;">Make record copies of research notes right from test-finding lab notebook, longhand memos, sketches, projected ratings and verified readings.</p>	 <p style="font-size: small;">Contoura-copy excerpts, or entire pages up to 8 1/2" x 14", from non-circulating books without lugging heavy volumes to photo copy company.</p>
 <p style="font-size: small;">Contoura Portable PHOTO-COPIER</p>	<p style="font-size: small;">TRULY PORTABLE! Only four pounds; fits easily in briefcase or desk drawer. Use it anywhere! COPIES ANYTHING written, printed or drawn up to 8 1/2" x 14"! Lastingly clear copies only 7c! Contoura's unique cushion reproduces tightly bound pages despite curved binding! NEEDS NO DARK-ROOM; make exposures under normal artificial light; develop prints, at leisure, in standard photo chemicals. ELIMINATES DRUDGERY and inherent errors of longhand-copying, typing and proofreading! Users everywhere say Contoura affords time and money savings they never thought possible.</p> <p style="text-align: center; font-weight: bold;">MODELS AS LOW AS \$39.00</p> <p style="text-align: center;">★ WRITE FOR FREE FOLDER TODAY ★</p> <div style="text-align: center; margin-top: 10px;">  <p style="font-size: small;">44 Pease Rd. Woodbridge, Conn.</p> </div>		

