

INVENTION

Inventions Wanted

National Inventors Council asks public to put on its thinking cap, dream up ideas for defense. About 25,000 ideas and inventions a year already come into Council headquarters.

By **WADSWORTH LIKELY**

► **KNOW HOW** to transport an Army over the Arctic snows without leaving any telltale tracks? Got any ideas on how to transmit messages without using sound waves, light waves, radio waves, or even wires? Can you think of a way to make dry cream which will last for six months at temperatures up to 100 degrees Fahrenheit?

If you can, the National Inventors Council is looking for you.

The National Inventors Council is an organization set up in 1940 to receive and funnel ideas for inventions that would help the military in its tasks. It also has the job of publicizing the needs of the Armed Forces for certain things with the hope that some inventor will come up with the right idea.

Its chairman is Dr. Charles F. Kettering, automotive inventor and research consultant to General Motors. Its secretary is Lawrence Langner, noted theatrical producer and patent attorney. Its members include well-known inventors and industrialists and the U. S. Commissioner of Patents.

This body of eminent citizens, together with a staff set up in the Commerce Department's Office of Technical Services, sifts through about 25,000 ideas or inventions a year. The staff throws out about 95% of these as already invented, impracticable, or, in some cases, plain crackpot. About two out of five of the remaining five percent are sent to various council members for more checking. Finally only about 750 ideas or inventions a year are turned over to the branches of the Armed Forces which have or might have need of them.

Requirements Are Listed

Most of the usable ideas come through publication of lists entitled "Technical Problems Affecting National Defense." Latest of these lists has recently been published. It is distributed to scientific and technical journals and to a mailing list of established free lance inventors.

Perhaps the most valuable invention turned up through the National Inventors Council was the land mine detector which became famous during World War II. It saved countless lives and enabled troops to clear and go through mine fields in record time.

The land mine detector had already been invented, but it was not then called a land mine detector. It was developed before the

war for the purpose of looking for buried treasure. Publication of the need for a land mine detector brought the owner of the buried treasure hunter and the Armed Forces together. It worked as well for mines as it did for buried treasure.

On the other hand, lots of needs stay on the list for years, lots of ideas come in, but none of them are satisfactory. Many would-be inventors have had ideas, for instance, about covering tracks in the snow. Most of them involve a vehicle which scrapes up the snow in the tracks and sprays it down again. So far, this hasn't worked.

The invention of body armor made of nylon was not the result of the work of the National Inventors Council. But since then, through the Council, several new combinations of nylon fabric have been brought to light. Some of these are good enough to submit to the Army for testing. They might well be improvements on the body armor now in use in Korea.

The Council has on its latest list the need for some kind of clothing that will protect

the individual soldier against flame. This would be a boon in these days of flame throwers and napalm bombs. Such protection, however, must not materially increase the weight load nor the wearability from the standpoint of comfort of the uniform, the Council says. This rules out the bulky covering used by emergency fire fighters.

Sometimes the Council is successful in filling the Army's needs, only to find that the troops cannot be persuaded to use the invention. For instance, the Council publicized the need for a contraption which would utilize the heat from a soldier's breath in keeping his body warm.

Ideas Submitted Twice

Somebody invented a mask which fitted over the nose and mouth and which had connections to other parts of the body for distributing the heat produced by the breath. It worked well in tests—75% of the heat from the breath was distributed. But, in the field, soldiers refused to wear the constricting masks.

And once in a while the Army gets through the National Inventors Council an invention it has previously turned down. During World War II, the Army told the Council it was looking for a draft gauge



MINE DETECTOR—Discovered as a result of publication of the information by the National Inventors Council during World War II that a land mine detector was needed, the instrument had originally been developed for discovering buried treasure. This simple gadget, shown being used during the war, saved thousands of soldiers' lives and permitted rapid advances over mine fields.

for marine vessels. The Council listed this need. The American Hydromath Corp., considerably surprised, told the Council it had just the thing. In fact, it had been trying to sell its gauge to the Army for some time, but the Army turned the corporation down. Sure enough, the Council found out, this gauge was just what the Army needed.

For the first time, foods and food products are now being listed by the Council. Previously the Quartermaster Corps developed its own products. Now the Council is letting inventors know that the Armed Forces requires 100 canned meat items, distinctly different in flavor, texture and appearance characteristics. These must have a storage life of one year at 100 degrees Fahrenheit. Approximately 35 of these 100 are now available.

Also needed are canned seafood items, dehydrated precooked meat products and an all-purpose survival ration bar as well as the dry cream previously mentioned.

Among other technical requirements publicized by the National Inventors Council are insulating materials for various special purposes, improved load-carrying systems for individual soldiers assigned to special functions, waterproof clothing, a gelling agent for gasoline, a method of rapidly splicing field wire, an extra-light snow vehicle, a substitute for down and feathers in sleeping bags, and a personal heating system that does not involve an uncomfortable face mask.

Science News Letter, May 2, 1953

TECHNOLOGY

Easy-to-Build Gauge Tells Farmers of Winds

➤ AN INEXPENSIVE, easy-to-build wind gauge for use in agricultural spraying has been developed by two members of Texas A. and M. College, College Station.

Compact, rugged and simple in design, the gauge can be constructed in a farm or ranch shop with materials available from a local tinsmith.

Essentially the gauge consists of a swinging indicator suspended from a pin. The indicator is blown through an arc depending upon the force of the wind. A pointer on the indicator moves over a scale, graduated from zero to 10 miles an hour, from which the wind velocity is read. If the wind is blowing faster than 10 miles an hour, spraying should not be done—particularly from airplanes.

Wayne G. McCully, assistant professor in the department of range and forestry, and H. F. Miller, formerly of the department of agricultural engineering but now an agricultural engineer at the University of California, developed the gauge.

Their description, along with detailed drawings and graduated scales for different gauges and types of metals, has been published as Progress Report 1466 of the Texas Agricultural Experiment Station.

Science News Letter, May 2, 1953

ELECTRONICS

Synchronize 3-D Movies

➤ A LITTLE electronic gadget about the size of a football has been adapted to keep three-dimension movie projectors in step with each other.

Called selsyns, the devices produce an electrical coupling between the two projectors needed to show Natural Vision third-dimension movies. They do not have some of the disadvantages of the mechanical system formerly used.

The trick of showing 3-D movies such as "Bwana Devil" lies in keeping the two projectors in exact synchronization. That type of third-dimensional picture requires two films to be shown at once on a flat screen. The films are viewed through polaroid glasses so that each eye gets a slightly different picture to produce the illusion of depth.

If one projector gets ahead of the other, the screened picture gets out of step with itself and the third-dimensional effect goes haywire. To prevent that from happening, a mechanical coupling between the projectors has been used. But now the little selsyns, which are about the size of a football, can do the same job. And they can do it better.

If a 3-D short subject were included in a program of standard films, the mechanical coupling had to be connected and disconnected three to seven times a day. The spinning bar also consumed valuable space and made it difficult for the operator to thread his machines.

The selsyns connect and disconnect at the flick of a switch. They are attached to the projector in such a way as to require little space.

MEDICINE

Diagnose Heart Disease By TV in the Future

➤ DIAGNOSIS OF heart disease by TV is promised for the future by Westinghouse Electric Corporation and cooperating physicians at the University of Maryland School of Medicine.

A "revolutionary new X-ray unit," developed by Westinghouse, will make possible the televising of the heart and other internal organs as they would appear on the fluoroscope to a doctor examining the patient in person. A TV set in the doctor's office will give him the picture even if the patient is thousands of miles away.

A nation-wide audience saw a demonstration of this new diagnostic method on Sunday, April 26, when Dr. William S. Love of the University of Maryland demonstrated how the unit can diagnose different forms of heart disease and detect stomach ulcers.

Science News Letter, May 2, 1953

The largest deposits of anthracite coal in the U. S. are in eastern Pennsylvania.

When one projector begins to run faster than the other, currents flow between the selsyns through three wires. These currents cause the selsyns to act on the projector motors to keep them running at the same speed. While this happens, the audience is unaware that anything unusual is going on.

The selsyns cost about \$100 each and are being produced by General Electric at its Fort Wayne, Ind., plant.

Science News Letter, May 2, 1953

DEAFNESS

Made Me a Laughing Stock...



But That Was Before
This FREE BOOK Showed
Me How to
HEAR AGAIN!

It hurt deeply when I first found out, but now I can't blame folks for laughing at me. Some of my answers to half-heard questions must have been really ridiculous. But that's all past history now, thanks to a helpful FREE book which told me how the wonderful science of electronics had helped thousands like me to hear again with amazing ease and clarity. You, too, may find the same glorious good news in this book, so why not send for it today? It's yours 100% FREE of cost or obligation. Just mail the coupon.



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