## Gentlemen: If you purchase this shaver, we promise never to repair it.

But we will promise you this, and in writing: If anything goes wrong within one year we will send you an all-new ACCUMEN Shaver. After that one-year guarantee period, and if you are unhappy with the shaver for any reason, return it to us—even if it's thirteen years from now—and for just \$12.95 we'll send you the newest "top-of-the-line" model available at the time. (We fully realize that \$12.95 may be worth only \$2.95 thirteen years from now. But that's our hard luck). And then you can start this all over again with that new shaver—for another thirteen years if you wish. That's why we call it the "ACCUMEN LifeTime Shaver Plan."

If this sounds like an unprecedented offer, you are correct. It is. And if you think there must be some "gimmick" involved, you are also cor-rect. There is. We would not stick our necks out so far and for so long if we weren't quite sure that the ACCUMEN will give you trouble-free satisfaction from now until the cows come home. What makes us so sure? Just this: We have observed the ACCUMEN's performance for years in Europe and since we introduced it to this country. We have talked to hundreds of really satisfied owners. We have "fan letters" by the score. Finally, we know what it's made of and how it's made. It will be a rare ACCUMEN that falters or disappoints.

This is the Ultimate Shaver — we think this is the finest shaver made in the world today. Cordless or otherwise. In our opinion it makes all others obsolete. Very few of our competitors describe their shavers as "second best," so we quite understand if you take all of these claims with a heaping spoonful of salt. But, here, for your consideration, are the principal reasons why we believe the ACCUMEN to be "The Ultimate."

- 1. The Powerplant: A high-potential nickel-cadmium battery, which will give you at least ten to fifteen good shaves before recharging. As an aside: The president of Witte & Sutor (manufacturers of the ACCUMEN) is none other than Herr Waldemar Witte, the inventor of the rechargeable flashlight. He ought to know!
- 2. The Motor: The "synchromesh" motor is a 6000 rpm. marvel of German engineering. Barium ferrite permanent magnets, self-lubricating bearings and copper-carbon brushes assure a long, hardworking life.
- 3. The Shaving Head: Shaving area 21/2 times larger than that of any other rotary shaver. Ultrathin foil (.00315"). Four stainless steel cutters are individually sprung and balanced and can operate independently to adapt to the minutest contour of your face (this is a truly radical innovation - have you ever noticed how your present shaver is built on the same principle as a lawn mower?)

And then the marvelous extras: The patented "LumiRing" that spotlights the working area for perfect shaves in any light. Vacuum action that keeps your whiskers from your clothing. And, as far as we know, this is the only shaver in the civilized world that is rechargeable directly from any wall socket—no transformers, no "power cords." The ACCUMEN is lockable, to keep it exclusively yours (sorry, teenagers). Then, there is a built-in shave counter. Last, and probably least, women are wild about the ACCUMEN, because the shaving head is round and smooth and has no sharp edges. (But, please, buy her

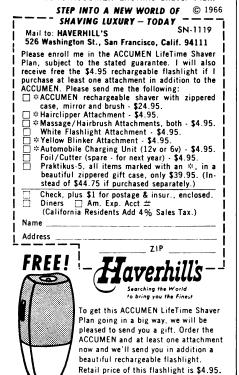
Still more. The ACCUMEN is not just the finest shaver in the world. The optional attachments make it a complete grooming system — among other things. Look at the choice in the coupon and help yourself.



Should you Buy a Shaver by Mail - Sight Unseen? It may be unorthodox, but the only way to buy this shaver at this price (on this side of the Atlantic) is from us, the exclusive importer/retailers. Be that as it may—why not? What's the risk? You order the ACCUMEN not only with the one-year new-shaver guarantee; not only with the \$12.95 ACCUMEN LifeTime Shaver Plan, but with this added assurance:

Unconditional Promise: Try the ACCUMEN for two weeks. Then, if you don't agree it is in-deed "The Ultimate," send it back to us and we'll return your money by air mail and write you a nice thank-you letter.

That's it. For the price of an ordinary, run-ofthe-mill shaver you can now shave with the pride of Europe. The ACCUMEN. The Ultimate Shaver. The only electric shaver that shaves close enough (in the woods or at home) to satisfy "blade men." And the only shaver in the world that will never be repaired, but that offers the exclusive ACCUMEN LifeTime Shaver Plan.



PUBLIC POLICY

## Congress Goading Sea Science

by Charles A. Betts

➤ THE SPECTER of Soviet competition is being raised to goad the U.S. into greater activity and more singlemindedness in the drive toward exploitation of the ocean's riches.

Oceanography and ocean technology, currently being supported by Washington at a \$200 million annual level and scheduled to double in the foreseeable future, has long been the pride of Washington organizers of the federal science effort.

But there are signs that pride goeth before a fall; with many nations making an effort to understand and exploit the seas, Congress is showing less and less patience with the level of U.S. progress. And while government planners are feeling the pressure, U.S. oceanographers may soon feel a groundswell of support for their efforts.

"The Russians are beating us" will be the refrain heard more and more.

'Quite clearly, the Soviet Union has surpassed Great Britain and Japan and is now second only to the United States," Dr. Robert S. Dietz, research oceanographer with the U.S. Coast and Geodetic Survey, said after a recent visit.

Dr. Dietz further estimated that the total effort of the Soviet Union in ocean sciences now "appears to be one-half to two-thirds the size of our own." He said overall expansion of this science was about 10 percent annually in Russia.

The U.S. is currently upgrading its oceanographic fleet; Soviet progress seems to be more general.

One of the leading exponents of increased United States oceanographic progress, Rep. Paul G. Rogers (D-Fla.), found cause for considerable concern following a trip to the Soviet Union early this year.

In a "Report on the Soviets and the Seas," Rep. Rogers and his colleague on his trip, Rep. Edward A. Garmatz (D-Md.), chairman of the Committee on Merchant Marine and Fisheries of the House of Representatives, found that the "Soviets plan to master the seas.

Moreover, they found that: "Comparatively speaking, we seem to have been stumbling along with programs that are largely uncoordinated, fragmented and in some instances overlapping. More than 20 different government agencies are involved in one way or another with oceanography. All these agencies collect and use oceanographic data—but the means of collating it and distributing it to those with a need are woefully inadequate. "Our so-called national oceanographic program is considered by some

"Our so-called national oceanographic program is considered by some to be little more than a score card compilation of figures, charts, and other tabulated information simply describing what the individual agencies independently plan for themselves."

The Rogers report also disclosed that the authors' critical view of U.S. oceanography is shared by some Soviet scientists. The report stated, "One prominent Soviet scientist recently commented that, 'The administration of U.S. oceanography reminds me of a contemporary abstract painting render-

ed by an ape.''

On the plus side for the United States, the Rogers report said that the U.S. "still has the potential to win this race. We appear, for example, to be ahead in basic oceanographic research—a key element in the potential blossoming of imaginative developments. Deep diving research vehicles, man in the sea projects such as Sealab, underwater use of nuclear power, offshore drilling for oil, computer processing of oceanographic data, and instrument design are generally acknowledged areas of U.S. supremacy."

Rogers' committee has long sought to establish tighter control over the

scattered oceanographic effort.

Following the report and with considerable private and public attention directed on the issue, Congress this year enacted two pieces of legislation which Rep. Rogers saw as opening a "new chapter" in U.S. oceanography. One was the Marine Resources and Engineering Development Act which set up a National Council on Marine Resources and Engineering Development and a National Commission on Marine Science, Engineering and Resources.

The role of the council is to search for more coherent and comprehensive oceanographic policies. The commission is to review existing programs and propose a coordinated national marine science program and a governmental organizational plan. Vice Pres. Humphrey, Council chairman, has already hinted at "use" rather than "study" as the probable future emphasis.

The second major new legislation in this field was the establishment of a national sea grant college program. This bill, introduced by Rep. Rogers and signed into law by the President, seeks to strengthen institutions of higher learning engaged in oceanographic research, training, education and ser-

vice.

Gulf Coast, New England and West Coast Congressmen were particularly interested in this one. Though the initial authorizations are small, the sea grant college program should provide the scientific underpinning for any national policy and expanded program proposed by the council.

In the internecine warfare between the Congress and the Administration over direction of science policy, the legislators seem to be seizing the initiative in oceanography. They seem determined to have the U.S. "catch up."

Here from the Rogers report are some of the figures underlying the Congressional push behind the U.S.

underseas program:

The Soviet Union has between 8,000 and 9,000 men and women working full time in the marine sciences. Of these 1,500 are professional level oceanographers.

The United States has 3,000 men and women full time in the marine sciences. Less than 1,000 are in the

professional category.

(Dr. Dietz estimated in January 1966 that the United States has from 1,500 to 2,000 oceanographers compared to

1,200 professional in Russia.

(Dr. Dietz discounted the validity of drawing conclusions based exclusively on numerical comparisons. "—the number of oceanographers is not a useful criterion, especially as the definition of this term can be variously interpreted. A much better measure is the quality and number of the research papers published in scientific journals.").

But Dr. Dietz was impressed as well with the caliber of Soviet research libraries and the number of technicians in support of each scientist. He said, "The Soviet oceanographer at the PhD level can expect a group of five to ten junior scientists and technicians to assist him in his research. By contrast, many U.S. oceanographers work essentially alone."

Moreover, Dr. Dietz found that women play a far greater role in Soviet science than they do in this country. "At the oceanographic institutes, women make up perhaps 30 percent of the work force," he said, "and at the biological institutes, women outnumber the men."

Going on with the oceanographic balance sheet, the Congressional report said the Soviets have more than 200 oceanographic and hydrographic research vessels conducting research in every ocean in the world. Among these is one of the largest, if not the largest oceanographic research ship in the world, the 6,000-ton Mikhail Lomonosov. This ship was built in East Germany and is operated by the Marine Hydrophysics Institute at Sevastopol. She explores the Black Sea, the Mediterranean, and the Atlantic Ocean.

The Soviet Union has in addition demonstrated preoccupation and achievement in many other diversified areas of ocean research and development. Many of these were highlighted at the Second International Oceanographic Congress in Moscow last summer.

For example, a recent meeting of the Soviet Academy of Sciences was told of elaborate plans to transfer waters from the rivers of Siberia to halt the shrinking of the Caspian Sea. In another paper, three chemists wrote of oil and petroleum research, along with work being done to bring chemistry to bear in developing new food stuffs from the sea. Among other recommendations, this paper called for the establishment of a vast new oceanology research center in Vladivostok.

The Soviet Novosti Press Agency (APN) reported plans to construct a "whole fleet" of laboratory ships, each to carry 27 different laboratories and a crew of 170, including 80 oceanologists."

Another APN report dealt with two floating aquaria, "Akvarium" 1 and 2. These floating fish markets can take 30 tons of live fish in one trip. They are especially designed vessels with 10 metallic compartments for the cargo. Special injector units enrich the water with oxygen. The fish are unloaded by a pumping process. The goal is to transport live fish in great quantity to large population and distribution centers as an additional source of food.

In the field of research, one of the most significant Soviet developments is a new deep-water oceanographic apparatus. The U.S. Department of Commerce Clearing House for scientific and technical information summarizes it as follows:

"The Marine Hydrophysics Institute of the Academy of Sciences Ukranian SSR has developed a deep-water automatic instrument whose configuration resembles that of a single stage rocket. It can be submerged to a depth of 12,000 meters and return data on the physical processes transpiring in all layers to the very bottom.

"This autonomous abyssal turbulence meter has electronic measurement devices and memory units, a current source and automatic balancing devices. A half-ton plate is attached to serve as a weight; the instruments react to commands from a programming unit which is built into the apparatus.

"When the program of measurements is completed, a special signal causes detachment of the half-ton weight and the apparatus floats to the surface. Upon reaching the surface, a buoy is released to mark its position; this buoy has a transmitter which sends out special call letters, facilitating recovery of the apparatus. The collected data are analyzed by computer."

The U.S., of course, is not standing still. Along with recent modernization of large segments of the nation's fleet of oceanographic vessels, the U.S. now boasts considerable progress in deep submergence, undersea communications and the development of remote automated buoys, among other advances.

The big question marks for the future appear to be whether the Soviet Union is geared to forge ahead with frontier research, as well as technology, and whether the new U.S. efforts will lend impetus to American oceanography. For the present, the evidence supports a conclusion of tremendous Soviet advancement, and more to come.