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HEATING SYSTEM—Stanley Meyer begins installation of the heat exchanger in the storage cavity of the solar thermal electric power generation system he is building on Marlane Drive. A translucent silo-lens structure will be constructed above the storage cavity to collect sun rays.

Solar Ene

Local Project

By ROBERT J. TAMASY
RECORD Editor

A revolutionary solar energy device being constructed just outside Grove City could have a phenomenal impact upon the national economy and the continuing search for cheap and plentiful sources of energy. But its inventor-designer says government officials at both the federal and state levels appear unwilling to give his concept any consideration.

Stanley Meyer, of 1063 Urlin Ave., Columbus, last week told the RECORD he believes his recently-patented "solar thermal electric power generation system" is vastly superior to flat-plate collector solar energy system which are presently commanding national attention, but to date efforts he has made to communicate his ideas to officials in both Washington, D.C. and Columbus have been fruitless. He is hoping a planned July 4 demonstration of the pilot system he is installing at the Charles Hughes home, 2222 Marlane Drive, will change that.

Meyer, who studied optics engineering, electronics and mechanics at the U.S. Army Engineering College in Washington, D.C. and later was employed as an electronics technician for a Battelle Institute affiliate company, said he developed the solar energy system in the basement of his home, using "new concepts based upon known, proven principles."

Basic to the system is the commonly observed

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phenomenon of concentrating sunlight through a magnifying glass to burn a hole in a sheet of paper or a dry leaf.

The inventor said his system, which uses plastic lenses about one inch thick constructed into a silo-shaped translucent structure, creates a similar effect, using high temperatures, although other sections of the system provide for heat retention, storage and the generation of electricity.

Meyer explained the system he is building locally will provide the complete energy needs for the two-story home—including electricity, heating, air conditioning, hot water, and even gas for gas appliances—but its applications extend far beyond that of a residential power source.

He said "with only slight modifications" the system could be used to provide complete energy needs for new and vintage houses, high rise buildings, commercial structures, and "is readily adaptable to many industrial uses," including creation of electricity for huge megawatt power plants, heating and melting of metals, and ultimately making available vast amounts of raw petroleum, which lie unclaimed in U.S. oil reserves.

Actual work on the new system did not begin until July, 1975, but Meyer said he gave the project his full attention, since "I was an individual who became very aware of the energy problem facing our country and the effect it would have on every phase of our economy. I was also aware of the elaborate studies the federal government and industry were planning, which would take several years. However, I did not

feel we could afford to wait that long for their solutions and decided to work on my own."

He received a special U.S. energy patent on the system in December, 1975, only about three months after filing the initial application, making it one of the fastest patents ever awarded.

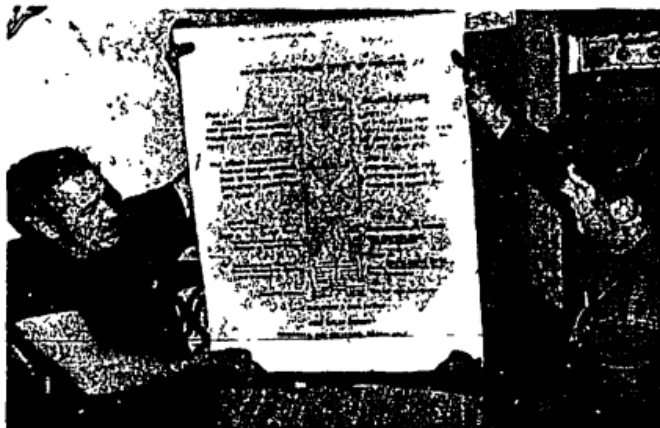
After that he began efforts to gain governmental support for the system. The attempts included a personal letter to Gerald Ford and a request to speak personally with Gov. James Rhodes, but in both cases there was "no response."

Meyer said he did succeed in speaking briefly with U.S. Rep. Samuel Devine (R-Columbus), who promised to arrange a meeting for him with prominent energy officials in Washington. That promise, however, resulted only in a five-minute talk with Samuel Taylor, whom Meyer said was "in charge of solar energy policies in Federal Energy Administration director Frank Zarb's office." Taylor said he was only interested in flat plate collectors, according to the inventor.

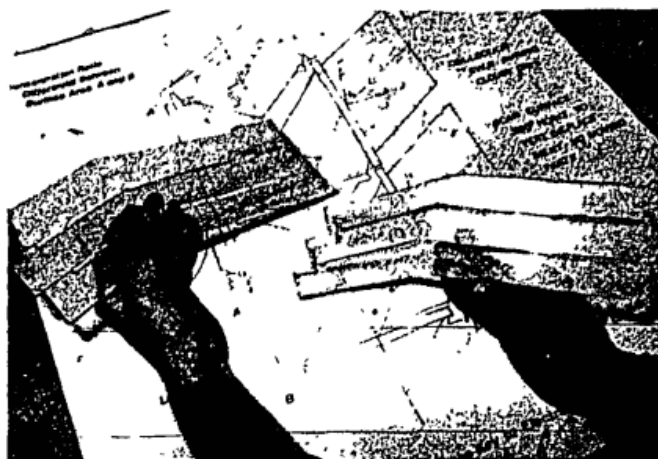
He was also discouraged in an effort to seek funding from the federal Energy and Research Development Administration when he determined it would likely take more than a year for his application to be acted upon.

Private industry's reaction to his solar energy system was not more promising. Meyer characterized the general response to his invention as "a combination of greed and apathy."

See Solar Device, page 5.



UNITIZED MODULAR design and utilization is an important aspect of Meyer's unique solar energy power and storage system. Meyer, right, studies the plan for the system with Charles Hughes, owner of the 2222 Marlane Drive residence where the pilot-demonstration system is being installed.



LENS MODELS—Meyer is shown holding enlarged models of light guides which will make up the silo lens for his solar energy system. The models, made up of the same clear plastic as the actual lenses, are 24 times actual size. Below the models is a diagram of the silo lens structure.

Solar Energy Device

From page 1.

"I have received several approaches regarding the purchase of my concept, but the proposals are all subject to controls which would restrain its uses in the economy," he said.

The companies, which Meyer declined to identify, desire either to keep use of the system to themselves or to squelch the entire concept, apparently out of fear of losing their corner of the energy market, he claimed.

"I'm trying to get this energy system to the American people. I could probably sell the idea and become a millionaire, but it would not be helping to solve our national energy problems. I've been confronted with greed, apathy and governmental red tape, so I'm turning to the American people for their support. I am convinced this is a solution to

conical "focusing mode" (point of concentration), he said. Unlike conventional flat plate collector systems now in use, the efficiency of new radiant energy system would not be subject to the angle of sun rays since it is rounded and lenses would collect the sunlight from all sides.

Heat of the redirected rays would be retained in the solar insulation cavity, using a principle of "liquid stratification." The heat would boil water and turn it into steam in a heat exchanger, a system of copper pipes. The steam would then drive a steam turbine to power the electric generator.

A thermal storage cavity, made up of "suspended solid solution," would absorb all excess heat for use over extended periods of cloudy weather and at night.

This system, according to Meyer, would have numerous

our problems and we've got to put it into use as soon as possible."

Explaining the system's operation, Meyer said it consists of a lens system, a solar insulator, a storage cavity, and a steam converter. Except for the electric generator, there would be no moving parts, and would require no maintenance.

The silo-like lens assembly would redirect sunlight to a

This system, according to Meyer, would have numerous advantages over existing solar energy units. He said more than 80 percent of solar heat energy is lost through heat transfer, storage and distribution in popular systems, while heat loss in his device would be minimal, as low as one percent or less.

Commercial solar heating systems currently being marketed require custom construction since they must be installed directly onto buildings. Meyer said his system consists of common readily-available materials which can be mass produced, and since the system is built separate from the building it services, it can utilize existing heating and electrical equipment with no structural modifications necessary.

He said accepted systems function primarily to supplement conventional power sources, but his system would produce the primary energy, with conventional sources being supplemental.

Costs would also be considerably lower. Present solar energy heating systems are costing about \$15,000 (including fitting onto a house), while Meyer estimated his home heating system mass-produced would cost about \$3,200. Those figures would compare to conventional energy costs of \$20,000 or more over a 20-year period.

However, although meeting home energy needs would be a vital use for the system, he said its application in reclaiming untapped stores of fossil fuel would also be important, particularly since the plastic lenses are made of an oil distillate base product.

Meyer said contrary to popular belief, huge quantities of petroleum remain at the bottom of existing oil wells. They are beyond reach of primary drilling methods due to considerable drops in underground pressure which forces the oil above ground and the increased viscosity of the raw fuel in lower sections of the deposits.

Kirk Jordan, of the Ohio Oil and Gas Association, confirmed that, stating as much as 90 percent of the petroleum in a single deposit may be reachable only through various secondary recovery processes which sometimes require the use of large quantities of petroleum products to create steam to produce the new oil.

Meyer expressed concern about the United States' increasing reliance upon Arab nations for petroleum imports. Despite progress in the construction of the Alaskan pipeline,

he fears the U.S. may eventually be forced into a compromising relationship with the Arabs. If his system can be put into use in obtaining untapped oil supplies in this country and as a new and efficient energy-producing tool, he feels U.S. self-reliance would be assured and it would retain its preeminence among the nations of the world.

Acting true to his contention that he will need the support of the American public to succeed, the inventor said his own financial resources are very limited and he is depending upon donations from Columbus area business people to complete the Grove City system.

"I feel my system is divinely inspired, and that by the grace of God we will be able to put this system into operation in a very short length of time."

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