



# INTERNATIONAL MOTION PICTURE CO., INC.

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## Japan Screen Topics

ISSUE No. 77-6

### TAPPING SOLAR ENERGY

76 feet 2 min. 7 sec.

1. (BRIGHT SUN) The sun, potential energy source of the future. Now heavily dependent on foreign-produced oil, Japan, like many countries, is looking for alternative energy sources. Solar energy is one good prospect. Under its "Sunshine Project," the government, in collaboration with a leading electric appliance maker, has built this house in Atsugi, south of Tokyo, to conduct experiments to further improve existing solar homes. Scientists are now trying to find the most economical method of balancing the use of solar energy and the reserve energy needed when solar energy is unobtainable.
2. (PIPES) Water is heated up as it passes through a network of pipes in the roof solar panels and then collected in a large tank. The water is kept circulating in a continuous cycle and reaches temperatures of 90 degrees on a sunny day and 60 degrees on a cloudy one.
3. (KITCHEN SINK) The water that actually comes out of the taps is heated up in pipes passing through the collection tank. On a sunny day this can produce hot water up to about 60 degrees.
4. (WHITE PIPES) The sun can also provide power for air conditioning. The water from the solar panels can turn liquid fluorene into gas at 90 degrees. The gas under pressure then drives a

turbine engine to operate the cooling system. Obviously this will not work in an overcast day, in which case a reserve heater must be used. Installation of the solar energy facilities requires an investment of approximately \$14,000... an investment which can be recovered after about five years.

5. (LONG SHOT OF NURSING HOME) The Atsugi home is not occupied, but at Numazu, near Mount Fuji, some people are already gaining from the benefit of solar energy. This is a nursing and rehabilitation center for the elderly. It has been running partly on sun power since April this year.

6. (OUTDOOR TANKS) The principal is the same as the Atsugi house, but on a larger scale. It provides the hot water for baths as well as some of the power for the nursing home's cooling system.

7. (WHIRLPOOL BATH) The sun, for example, has heated the water used in this special whirlpool bath for patients who are paralysed.

#### MASS SCANNING FOR CANCER

68 feet 1 min. 53 sec.

1. (GIRLS) Uterine cancer is one of the greatest health dangers for women today. In Japan, there are two to three cases for every thousand women.

2. (SAMPLES) The black areas in these magnified uterine samples are the dreaded cancer cells.



4. (START BUTTON) Fifty slides of uterine cell samples can be inserted in the machine at one time. A multifibre scanner checks each slide against criteria contained in the computer's memory bank. The machine cannot actually say if cancer is present but draws attention to anything suspicious for further examination.

5. (COMPUTER PRINT OUT) The results are read and evaluated by a technician on a computer print-out.

#### TOOTH PROTECTION DAY

73 feet 1 min. 2 sec.

1. (MODEL TEETH) Teeth have their own day in Japan. Every June 4th, the Tokyo Metropolitan Government's Dental Association sponsors demonstrations to teach children the best methods of dental care. Like many advanced countries, Japanese youngsters these days have a high rate of cavities. Dentists believe one of the main reasons is that the children do not know how to brush their teeth properly. Hence this demonstration at Tokyo's Ueno Zoo.

2. (CHIMP) Miss Amy, one of the star chimpanzee attractions, shows the children the excellent condition of her teeth as a result of a candy-free diet.

3. (CHIMP BRUSHING TEETH) A good brushing technique is the key to healthy teeth, as Miss Amy tries to demonstrate.

4. (HIPPO) In their natural habitat, hippopotami have their teeth cleaned by small birds. But living in the zoo, hippo Dekao needs a giant toothbrush for giant teeth.

#### CREATING TOUGHER PLANTS

102 feet 2 min. 50 sec.

1. (TRAFFIC) Traffic congestion: a problem in all major cities, along with the pollution it brings. Tokyo has been trying to project a greener image recently with more trees and plants lining major roads. But the problem is to find species able to survive the exhaust gas emissions.
2. (LONG SHOT OF BUILDINGS, POND) At the National Institute for Environmental Studies at Tsukuba, north of Tokyo, scientists have found a hormone that controls the pores through which plants breathe. This triggers a defence mechanism that closes the pores if the air becomes too poisonous.
3. (LAB INTERIOR) Experiments are now being carried out to find the toleration levels of various plants to sulfur dioxide, or SO<sub>2</sub>, from car exhausts. The next step is to find ways of controlling the operation of the hormone to make plants more adaptable to pollution. The plants are put into chambers where they will be subjected to streams of sulfur dioxide.
4. ( WITHERED PLANTS) The result in this case is severe withering of the leaves.
5. (CHECKING PLANTS) After the gas treatment, technicians check each plant for blotching and withering.

6. (CHAMBER WINDOW) One experiment is checking the relationship between the amount of the hormone in a plant and its ability to withstand pollution. Chlorophyll is extracted from spinach leaves of which some have received doses of  $\text{SO}_2$ .

7. (TECHNICIAN) Light is then passed through the samples to study any differences in photosynthesis on which plants depend. So far, it's been found that tomatoes and peanuts, for example, have strong natural defenses against  $\text{SO}_2$ , while radishes are very susceptible.

8. (CHAMBER DOOR) Using the hormone as a base, scientists hope to develop a fertiliser, medicine or special spray that will make plants more resistant to exhaust gas pollution -- a major step toward a greener environment.