

# How it works

**H**ow is color television transmitted? (See page 166 of THE WAY THINGS WORK.) How is electronic data processing done? (See page 302). How does a helicopter fly? (See page 560.) How does "dry cleaning" clean? (See page 407.) Why does a record player play? (See page 314.) How does the simple switch operate? (See page 96.) Why do vending machines reject counterfeit coins? (See page 324.) What happens at the telephone exchange? (See page 112.) How does a Polaroid camera produce pictures? (See page 172.) What makes gunpowder explode? (See page 448.) What does a nuclear reactor do? (See page 54.) What happens in "supersonic speed"? (See page 556.)

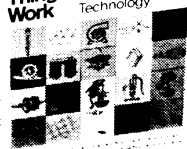
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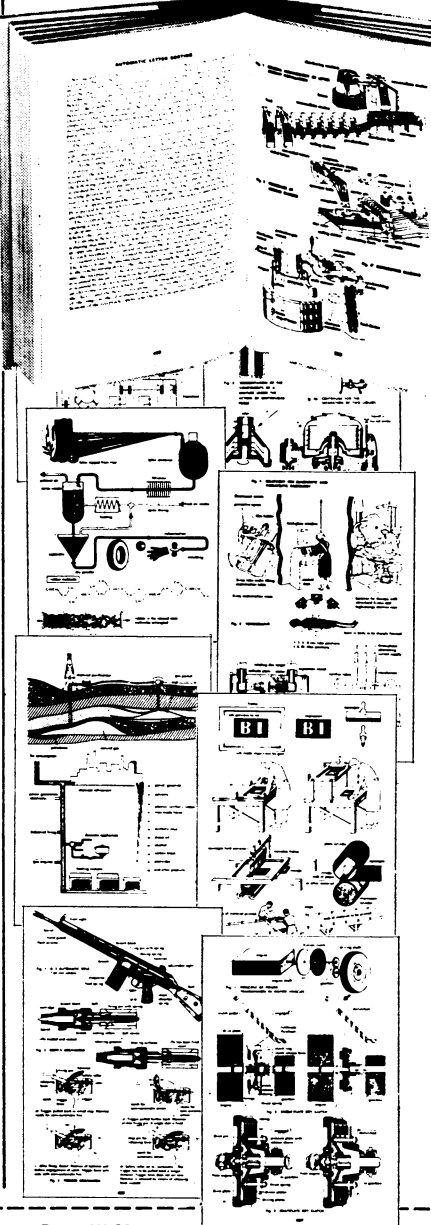
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## LETTERS

# to the editor

## Syphilis epidemic

Sir:

May I compliment you on your prompt and accurate reporting on the syphilis epidemic in rural Mississippi (SN: 10/12, p. 362).

The venereal diseases, especially syphilis and gonorrhea, do constitute a threat to the health of our nation that too few recognize, or are willing to admit.

Certainly, one of the most exciting, yet unnoticed and unrewarded stories of contemporary public health is the relentless battle being carried on by a dedicated corps of fewer than 1,000 local, state and Federal venereal disease control workers.

*William J. Brown, M.D.  
Chief, Venereal Disease Program  
Communicable Disease Center  
Atlanta, Ga.*

## 20 billion humans

Sir:

Those who do not accept the conclusions drawn by Pope Paul in his encyclical Human Life fail to take into consideration the circumstances upon which are based the Church's doctrine on birth control, as expressed by the Roman pontiff.

For example, these dissenters do not seem to know that relative to the number of people and their needs there is really more than enough food, fiber, and fuel, and the practice of artificial birth regulation would be disastrous.

Admittedly, millions are starving. This unquestionably deplorable truth is caused by many simple facts and intricate situations. Overpopulation, however, is definitely not one of those causes, popular writers' opinions notwithstanding. On the contrary, more people would create a healthier world economy.

One of the basic reasons why many are not getting enough food and other necessities is the irrational distribution of both necessities and people.

Millions of farmers over the globe are penalized both by their governments and by an absurd economic system whenever they produce more than a predetermined amount. As a matter of fact, members of the European Common Market in compliance with the accepted rules have deliberately destroyed millions of tons of wholesome food. Meanwhile poor human beings elsewhere were starving.

This shows that there's an abun-

## films OF THE WEEK

dance, even an overabundance, of food. There is also an abundance of means: land, oceans, hydrofarms, seed, fertilizer, other agricultural and aquacultural chemicals, laborers, techniques, machinery, power, and many other ingredients for producing many times more food than is needed to satisfy abundantly the needs of billions more humans, if we allow them to enter into our world.

Considering the latest techniques for producing, preserving and distributing the essentials of life, there is no doubt whatsoever that the earth presently is able to support over 20 billion humans.

*The Rev. Guy J. Cyr, S.M.  
Marist Fathers' Novitiate  
Rhinebeck, N.Y.*

### Thanks from Temple

Sir:

I was delighted by the article and the photography for the article "Psychiatry without doctors" (SN: 10/5, p. 345) and want to thank you and all of the people who worked on this for the excellent job that was done. I believe Patricia McBroom very much captured the concepts underlying our center and gave a very accurate portrayal of what we are trying to do in a number of areas.

*Elmert A. Gardner, M.D., Director,  
Community Mental Health Center,  
Temple University  
Philadelphia, Pa.*

### Mental health

Sir:

I just saw your issue of October 5th, 1968 which contains a story about the Day Program at the Temple University (See p. 462)

**ACEL REVISITED: AUTOMATED CIRCUIT CARD ETCHING LAYOUT.** 16mm, color, sound, 20 min. ACEL is a computer program which designs printed circuit boards and produces the drawings for their construction with the input encoded from an engineer's schematic diagram by a clerk without knowledge of electronics. Outputs are a schematic, parts list, printed circuit negative, assembly drawing, and a hole drilling list. Describes the operational aspects of the system as well as the 7 usual algorithms used to accomplish the design feat. Audience: professional. Purchase \$58.94 from Calvin Productions, 1105 Truman Rd., Kansas City, Mo. 64106, or free loan from AEC field libraries or Audio-Visual Branch, Division of Public Information, Atomic Energy Commission, Washington, D. C. 20545. (Updated version of 1965 film.)

**CRYSTAL GROWTH IN GELS.** 16mm, b&w kinescope, sound, 30 min. Discussion of recent work in the growth of crystals in gels. Describes the method, shows some of the products, and discusses potential applications to the production of unusual materials in highly ordered single crystal form. Experiments in gels also throw new light on corpuscular phenomena. Audience: industry, professional groups, teachers. Purchase \$100 or rental \$6.10 from Audio Visual Services, The Pennsylvania State University, University Park, Pa. 16802 (inquire for price of video tape version).

**DRUGS AGAINST CANCER: THE BATTLE IN THE CELL.** 16-mm color, sound, 29 min. An account of the methods used for drugs which will kill cancer cells within the body without harming normal cells. Explains the difference between normal cells and cancer cells. Discusses the deficiencies of presently available drugs, and demonstrates the methods used to ascertain the effects of individual drugs on both normal and cancer cells. Audience: college, adult. Purchase \$240 or rental \$8.65 from NET Film Service, Indiana University, Audio-Visual Center, Bloomington, Ind. 47401.

**HOT TO HANDLE: THE TWO FACES OF RADIATION.** 16mm, b&w, sound, 60 min. Film seeks the answers to four questions: What is radiation and how can it benefit man? If it is misused what are the dangers to animal and plant life? How do we dispose of the intensely radioactive waste from our nuclear reactor? Do living creatures have any defense against radiation? Filmed on location at M. I. T., the A. E. C., and centers around the world. Audience: general. Purchase \$250 or rental \$25 from Peter M. Robeck and Co., 230 Park Ave., New York, N. Y. 10017.

**LIFE STORY OF A SOCIAL INSECT: THE ANT.** 16mm, color or b&w, sound, 11 min. Observes the structure of an ant colony and the tasks performed by different types of ants. Audience: intermediate grades. Purchase color \$135 or b&w \$70 from Encyclopedia Britannica Educational Corporation, 425 North Michigan Ave., Chicago, Ill. 60611.

**STOP RUINING AMERICA'S PAST.** 16mm, b&w, sound, 21 min. The story of the campaign to save archaeological sites in Illinois from destruction by urban and industrial expansion. One local industry has supported this work. Audience: general. Purchase \$125 or rental \$4.65 from NET Film Service, Indiana University, Audio-Visual Center, Bloomington, Ind. 47201.

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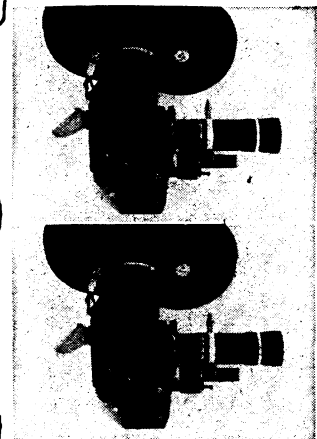
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