

we have gone to extremes, and we have disregarded rights.

"We have put all our emphasis on preventing some of our secrets from leaking and no emphasis to speak of upon getting some secrets that might be worth leaking and into this situation came the Executive order, and I think it was poorly drawn, has been poorly interpreted, and has made the situation much worse than it was before."

Science News Letter, November 6, 1954

## PUBLIC HEALTH

## Pinpoint Smog Sources

► WITHOUT SHUTTING down oil refineries, other industries and without reducing auto use, high-speed computing machines can pinpoint the sources of smog, research at the National Bureau of Standards has shown.

Dr. Francois N. Frenkiel, a physicist at Johns Hopkins University's Applied Physics Laboratory, Silver Spring, Md., has reported that Standards' electronic computer, SEAC, had been put to work on the Los Angeles smog problem. (See SNL, Oct. 30, p. 279.)

Using actual wind velocity measurements, the machine traced the movement of smoke puffed into the air. Mrs. Luis Marden, a Standards mathematician, supervised the pilot study of the smog problem on the machine.

Although the machine's calculations were made for a past situation, an electronic "brain" could also be used to figure conditions or to predict smog prevalence a few hours in the future.

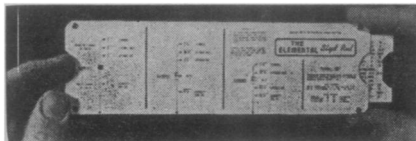
Shutting down only a few sources for a short time might be sufficient to alleviate the smog hazard.

Refineries, Dr. Frenkiel pointed out, contribute to the smog in a "non-negligible proportion," but so also do cars, filling stations and incinerators. Removing one or more of these sources would "clean the air," Dr. Frenkiel said, but wrong conclusions as to their responsibility in causing the smog might then be reached.

Although the October Los Angeles smog did not threaten to become as dangerous as the London smog of December, 1952, nevertheless it was an unknown health hazard.

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## INVENTION

### Color TV Tube Given Patent

► DR. ERNEST O. Lawrence, University of California Nobel Prize physicist, has received patent No. 2,692,532 for his color TV tube, which is being shown in an exhibit dramatizing the growth of electronics.

Science News Letter, November 6, 1954

Present regulations for dealing with the smog situation may no longer be "appropriate," Dr. Frenkiel said.

Although he recommended long-range basic research on the problem, he urged that present knowledge be put to use right away.

"Los Angeles county, which largely owes its livelihood and its high living standards to the existence of many sources of pollution, can find how to live with the sources which are necessary to its comfort without letting them become a health hazard," Dr. Frenkiel predicted.

Science News Letter, November 6, 1954

## SURGERY

### Post-Cancer "Milk-Arm" Relieved by Operation

► OPERATIONS WHICH relieve the pain and swelling of "milk-arm" and "milk-leg" were announced by Drs. Lyndon A. Peer, Manouchehr Shahgholi, John C. Walker Jr. and Alvin Mancusi-Ungaro, all of St. Barnabas Hospital, Newark, N. J., at the meeting of the American Society of Plastic and Reconstructive Surgery in Hollywood, Fla.

"Milk-arm" is a swelling of the arm which affects a small percentage of women who have undergone a radical breast operation for cancer. In this radical breast operation, removal of lymph glands of the armpits sometimes blocks drainage of the lymphatics of the arm and forearm. This results in the severe and progressive swelling known medically as lymphedema.

In the operation reported at this meeting, the thickened fibrous tissue surrounding the muscles is removed to allow blocked lymph glands to drain into the body circulation.

Improvement in five cases of "milk-arm" and two cases of "milk-leg" were reported by the Newark group.

"Milk-leg" is a swollen, painful condition of the leg due to the same lymph blockage that produces "milk-arm," although "milk-leg" develops when there has been no cancer operation. "Milk-leg" often starts during a young girl's adolescence.

One of the patients with "milk-leg" who got an "excellent" result from the operation is a 15-year-old girl. The other is an older patient who had the condition in both legs for 15 years.

Science News Letter, November 6, 1954

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