INVENTION

Patents of the Week

A fingerprinting method that stores prints on a plastic film has been patented. A secret radio communication system and a bleacher seat are other recent inventions.

➤ A FINGERPRINTING method designed for tracking down criminals or identifying victims of a nuclear attack has been patented.

Dr. William D. Stewart and Joseph A. Terek, research scientists at Atlantic Research Corporation, Alexandria, Va., received patent No. 2,986,831 for a fingerprinting process that forms a plastic "cast" of an imprint.

Designed originally for identifying mass casualties in time of an atomic war, the method is now extensively used for solving crimes by the Canadian Mounted Police and various police departments throughout the United States. The Federal Bureau of Investigation (FBI) is also reportedly interested.

A fine powder is first sprinkled on a fingerprint, followed by a spray of liquid plastic (polymer). The plastic film hardens in a few minutes, trapping a powdered imprint, and is then peeled off. The film does not smudge the fingerprint and can be stored as a permanent record, the patent claims. Dr. Stewart has already received more than 40 patents for various synthetic rubber compounds and plastics.

An ultra-secret radio communication system that discourages the enemy from intercepting radio messages during wartime was patented by Claudius H. M. Roberts, Washington, D. C., and Wilbur S. Hinman Jr., Falls Church, Va., who assigned rights of patent No. 2,987,614 to the U. S. Army. Speech is compressed and coded on tape into a series of pulses, lasting only a few thousandths of a second, and beamed over transmitters.

Spectators sitting in bleachers while watching basketball or other sports can sit more comfortably with a back rest invented by Robert S. Walworth, Berlin, Wis., who assigned rights of patent No. 2,987,111 to Consolidated Foundries and Mfg. Corp., Chicago, Ill. The back rest collapses easily when telescopic bleachers are pushed back into the wall for storage.

An "automatically controlled electric kettle" for boiling water won patent No. 2,987,607 for William P. Paulin of Barrie, Ontario, Canada, who assigned rights to Canadian General Electric Company, Limited, Toronto, Canada. The improved electric kettle has a pilot light that lights up when the boiling point is reached. A switch can adjust the timing of the thermostat to correspond to the boiling point of a particular region whether it is in the mountains or at sea level.

• Science News Letter, 79:389 June 24, 1961

BIOLOGY

Drying of Cells Allows Indefinite Storage Time

➤ A SIMPLE rapid method of drying cells for microscopic study was reported at the Syverton Memorial Symposium and 12th annual meeting of the Tissue Culture Association in Detroit, Mich. The new method permits indefinite storage of dried cells and eliminates chemical treatment that may disturb vital details of cell structure and function.

It was developed by scientists at the National Cancer Institute of the National Institutes of Health, Bethesda, Md. Henry C. Orr, Dr. Morris Belkin and Walter G. Hardy, all of NCI, and Dr. Ezio Merler, a former NCI scientist, now of the Harvard Medical School, Boston, reported the method.

Phosphorus pentoxide, put into jars with the cells to be treated, rapidly removes water from, and dries, the cells. Other methods require freezing and drying, or require application of chemical hardening agents.

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PSYCHIATRY

How to Be a Nobelist

➤ WHAT IS REQUIRED to win a Nobel Prize was learned from three scientists of world-wide renown, who attended the third World Congress of Psychiatry, Montreal, Canada, to report on creativity in science.

The three Nobelists are Lord Adrian of Cambridge, England, Dr. Linus Pauling of California, and Dr. Albert Szent-Gyorgyi of Hungarian-born biochemist.

Being born in the right kind of family was emphasized by Dr. Szent-Gyorgyi, Hungarian-born biochemist.

"I am the fourth generation in a family of scientists, and I have grown up in a very intellectual atmosphere where only scientific or artistic achievement counts. As children, we knew nothing about money or politics, but knew something of what was going on in art and science all over the world."

Dr. Szent-Gyorgyi also stressed the importance of a burning enthusiasm for work in the field of science.

"I find myself running every morning, at an early hour, very impatiently, to my laboratory," he said. "My work does not finish when I return from my workbench in the afternoon. I go on thinking about my problems all the time.

"Conscious thinking only acted as a primer for my brain, which seemed to have worked much better without my muddling, when I was asleep."

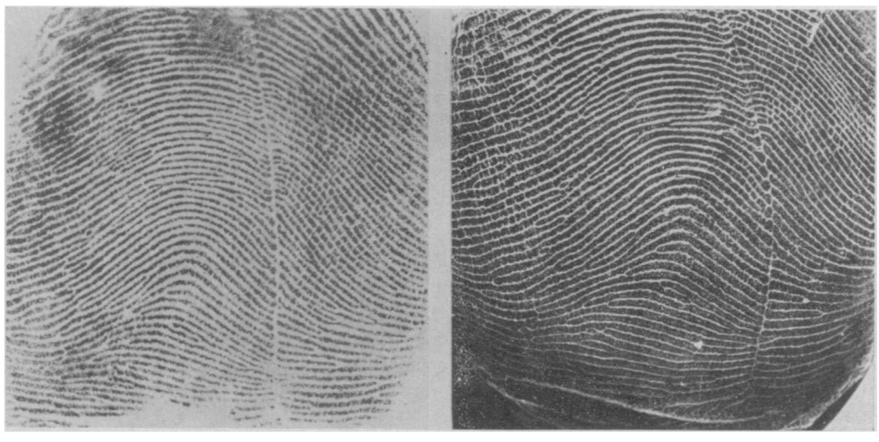
The importance of the unconscious in the birth of new ideas was also stressed by Dr. Pauling, Nobel Prize-winning chemist from the United States.

"From my own experience, I have come to the conclusion that one way for me to have a new idea is to set my unconscious to work on a problem.

"I doubt that the unconscious can be directed to work on a problem. But the problem can be suggested to it, and if it is interested in it, something may result."

Dr. Pauling told the Congress how he had trained his unconscious to help in the discovery of new ideas.

"I had developed," he said, "a habit of thinking about certain scientific problems as I lay in bed waiting to go to sleep. Sometimes I would think about the same problem for several nights in succession while I was reading or making calculations about the problem during the day. Then I would stop working on the problem and stop thinking about it in the period before going to sleep. Some weeks or months might go by, and then, suddenly an idea that represented a solution to the problem or the germ of a solution



INKED FINGERPRINT *PLASTIC FILM PRINT*