

# Current U.S. Patents

Detailed, accurate information about blood pressure at various points throughout the cardiovascular system can be obtained with a new probing device

➤ A DEVICE being used experimentally to listen to heart sounds and check on blood pressure was granted a patent by the U.S. Patent Office.

The instrument is expected to be in commercial production within a year, its inventor, Dr. Michael L. Polanyi of Webster, Mass., told SCIENCE SERVICE. He assigned rights to patent 3,249,105 to American Optical Company, Southbridge, Mass.

The cardiovascular probe can be inserted into a blood vessel to measure both fluid and sound pressures wherever desired. It is of simple, rugged and inexpensive construction, and convenient to use, Dr. Polanyi said.

Bundles of tiny glass fibers inside the inserted catheter carry light waves to the point being measured. The light is reflected by a membrane that responds to sound and blood pressures, returning through the catheter via other optical fibers.

The reflected light is detected photoelectrically, providing an electrical signal that varies in rhythm with the changes in sound or fluid pressures. These signals show whether or not the heart is functioning normally, yielding "detailed and accurate information as to blood pressures at various locations throughout the cardiovascular system."

## Aid for Paraplegics

A valuable aid for paraplegics that can also be used by all persons who have difficult walking problems earned patent 3,249,368. Dr. Mejer Ginzburg of Brooklyn, N.Y., who is developing the "ambulatory device," assigned rights to New York University.

He told SCIENCE SERVICE that the third model of the basic design now patented was scheduled for clinical tests in June. The walking device allows the patient to move about without expending any more energy than a healthy man walking at medium speed on his own two legs.

A paraplegic using the device gains not only psychological and physiological advantages but also vocational ones, since he can work standing, up with his hands free. The first prototype was tested on a paraplegic who had spent the previous 17 years in bed or on a stretcher and is now holding down a job.

Negotiations are now underway, Dr. Ginzburg said, to manufacture the walking device commercially. He estimated that the least expensive version would cost about \$100 and that the



Mejer Ginzburg

**HANDS FREE**—This patient, formerly confined to bed, stands erect in a para-walker. With his hands free, he is ready for vocational rehabilitation.

most elaborate model would sell for about \$200.

Dr. Ginzburg stressed that the ambulator was also valuable for amputees living at home. The latest version allows the amputee to get in or out of the device without help.

## Other Interesting Patents

An astronomical clock that displays such varied information as the positions of the stars, the sun and the moon, as well as the approximate times of sunrise and sunset, earned patent 3,248,866 for Dr. Athelstan F. Spilhaus of the University of Minnesota Institute of Technology. The clock, now commercially available, is also a calendar.

An automatic deep-sea exploration apparatus that can be sent to the deepest parts of the ocean, gather the desired information concerning conditions there, rise to the surface after a predetermined time and then send out a coded signal to facilitate detection and recovery was patented. Abraham Silverstein of Hyattsville, Md., assigned rights to patent 3,248,939 to the Government through the Secretary of the Navy.

• Science News, 89:399 May 21, 1966

## Birth Control for Poor Is Highly Successful

➤ NEW YORK CITY'S birth control program is handling an estimated 44% of all low-income families who need help, and services are expanding daily, reported Dr. Alonzo S. Yerby, Commissioner of Hospitals, New York City, to the first National Conference on Family Planning in Washington, D.C.

The total load of 67 clinics, both public and private, is about 73,000 patients, proving conclusively, stated Dr. Yerby, that large numbers of impoverished families of all ethnic backgrounds want family planning services if they are treated with even a modest degree of dignity and skill.

Dr. Yerby noted that New York, with the largest program in the country, could be a possible model.

Reports from other areas of the nation indicate that the Government's birth control program under the War on Poverty is also off the ground but on a much smaller scale. Three community directors from St. Louis, Grand Rapids and Minneapolis told the conference their projects are non-controversial.

• Science News, 89:399 May 21, 1966

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