

## MEDICINE

# Restoring Sight, Sound

**Based on nerve research now in progress, prediction was made that stimulating the brain electrically would restore sight, hearing and motion to the disabled.**

► **MAKING** the lame walk, the blind see and the deaf hear will come out of the realm of miracles and into everyday life when brain and nerve research now under way reaches its goal.

Some of the research which, in theory, makes possible this prediction was reported by Prof. Wendell J. S. Krieg of Northwestern University Medical School at a meeting at the University's campus in Evanston, Ill.

Electrodes placed in or on the brain, to stimulate by electrical impulse the motor points of muscles or the seeing and hearing points of the brain, are the means which Prof. Krieg believes will accomplish the miracles.

A person who has become blind may again obtain the sensation of light if a point at the back of the brain is stimulated electrically, he said. If a number of electrodes were distributed over the surface of the brain in a prearranged pattern or sequence, the person might perceive outline or movement. He could read if single letters were transmitted one at a time as in news flash signs by trainer operating a typewriter whose keys set off electrical switch patterns.

"It is only a technological step," Prof. Krieg said, "to devise an appliance to scan the visual field in the same manner as a television scanner and to transmit that which is seen and recorded to the cortex (of the brain) in the same sequence and scanning pattern."

The fact that man sees and hears with his brain, not with his eyes and ears, is what makes such applications possible. Eyes

and ears merely receive and transmit stimuli. Use of electrodes to provide the stimulating signals will become possible, Prof. Krieg believes, as scientists learn more about the brain and nerve tracts and which ones to stimulate for sight, hearing and muscle movement.

Although much basic study will be needed before the theory can be put into practice, it "is not so much in the clouds as it sounds," Dr. Richard H. Young, dean of Northwestern's medical school, commented.

Future progress and research in neurology will be in this direction, he said, and achieving the goal of restoring sight, hearing and muscle movement is "perfectly possible."

Science News Letter, November 19, 1949

## PSYCHOLOGY

## Old Brain Drives the Intellect Via Feelings

► **THE** old brain, old in the sense that it came first in man's evolutionary development, deserves more credit than it usually gets, Dr. Stanley Cobb, Harvard University neurologist and psychiatrist, declared at the New York Academy of Medicine in New York.

This old brain is the part of the brain through which we feel and smell and it is much more than a relic left over from an earlier evolutionary stage for the lost art of living by smell.

"To the sorrow of many persons who believe they can rule their emotions by intellectual will power," Dr. Cobb said, this

earlier evolved brain, because it is the feeling brain, drives the intellect, motivates it and mobilizes the body to action.

But the hypothalamus, that walnut-sized part of the old brain which controls many vital functions, is not, Dr. Cobb said, "the seat of the emotions" as it has been called.

Among the functions under the influence of the hypothalamus are temperature control, water excretion, fat and sugar utilization, sleep and consciousness, blood pressure, and to some extent sexual function.

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