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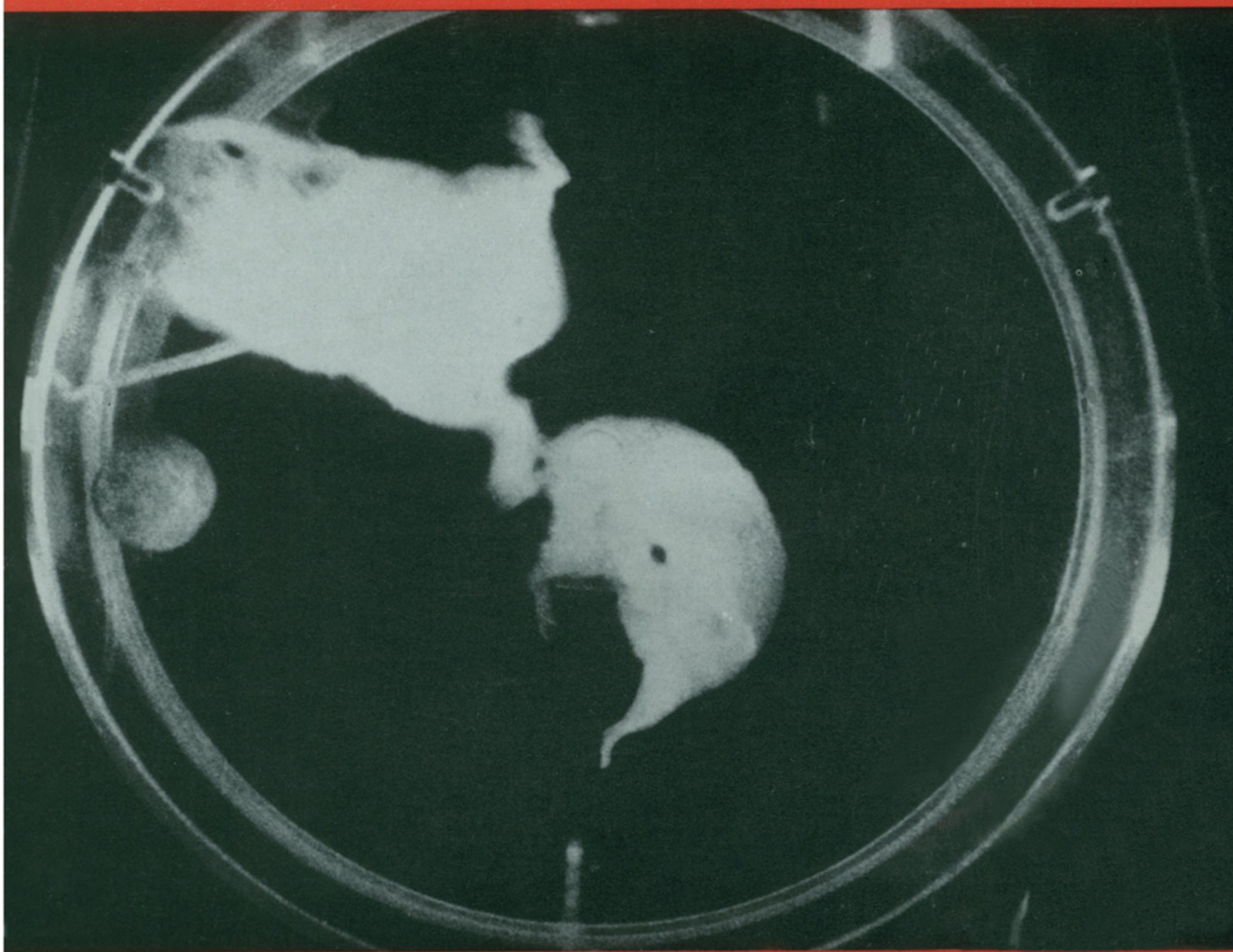
SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Gravity Zero

See Page 230

A SCIENCE SERVICE PUBLICATION

Adventurers in Research

John F. Peters

ENGINEER-SCIENTIST

One of the most brilliant engineering mathematicians in Westinghouse history. He started with Westinghouse in 1904 as an armature winder, and advanced rapidly to the point where he devoted his entire time to special engineering assignments. In 1926 he became the first Westinghouse-employe Consulting Engineer, which title he held until his retirement in 1950.

ONE DAY at Westinghouse in 1921, John Peters was called into the office of the Vice-President in charge of engineering. He was told, "We have to do something to get a better understanding of lightning. I want you to develop an instrument to measure lightning voltages." In a few months he returned with the klydonograph, which gave the impetus to a quarter century of lightning study, and for which he later received the Franklin Institute, Edward Longstreth Medal of Merit.

This special assignment is typical of those given John Peters. In his 46 years with Westinghouse, he developed scores of new devices and is recognized as one of the half-dozen best engineering mathematicians in Westinghouse history.

Yet this impressive record was compiled without benefit of an engineering education! In fact, John Peters' formal education ended with grade school.

Entirely self-taught, Peters was to see the day when experienced engineers stumped with a technical problem would "take it to John" for the answer. He played a little known, but vital part in the development and application of symmetrical components. The initial presentation of this now universally used form of mathematics was made by Dr. Fortescue in 1918. Peters was one of the few men who understood the subject well enough to interpret it to others, thus making its application possible.

An amazing range of tasks has befallen problem-solver Peters. He proved mathematically that heating of steel billets electrically was impractical. He was a major participant in the application of the world's biggest homopolar generator for pipe welding. For years, all inventors calling at Westinghouse were turned over to John Peters for him to locate the flaw—if any—in their proposals. When World War II came, he worked on gun-fire computers that are so complex as to cause most engineers to shudder.

Now, in post-retirement, he is engaged in a variety of defense projects. The newest is one that has thus far "stumped the experts"—a secret device related to nuclear-energy development. John wanted to rest—but the challenge of this "impossible job" has been too much to resist.

His has been a long career, rich in technical accomplishment. Westinghouse is proud of John Peters. It is men like him who have made America's industrial progress possible. Westinghouse Electric Corporation, Pittsburgh, Pennsylvania. G-10240

YOU CAN BE SURE... IF IT'S Westinghouse

SENIORS OF 1953 . . .

This is your big chance to share in ELEVEN THOUSAND DOLLARS in WESTINGHOUSE SCIENCE SCHOLARSHIPS and win TRIPS TO WASHINGTON.. in the TWELFTH ANNUAL

Science Talent Search

The Science Talent Search is conducted for H. S. Seniors by SCIENCE CLUBS OF AMERICA, a SCIENCE SERVICE activity, and sponsored by the WESTINGHOUSE EDUCATIONAL FOUNDATION, an organization endowed by the WESTINGHOUSE ELECTRIC CORPORATION for the purpose of promoting education and science.

Write a report of about 1,000 words on the subject, "MY SCIENTIFIC PROJECT." Your report should tell what you are doing or plan to do in science in the way of experimentation or other research activity. It should be original and creative in character. In December take the examination which tests your ability rather than your fund of information. Supply your teachers with information about yourself to be sent in with your report and examination papers.

Do these three things and you may be among the forty boys and girls who will win all-expense trips to the Science Talent Institute and compete for Westinghouse Science Scholarships for the continuation of your education. Of the forty, one will win a $2,800 and another a $2,000 WESTINGHOUSE GRAND SCIENCE SCHOLARSHIP; eight more of the forty boys and girls will be selected to receive WESTINGHOUSE SCHOLARSHIPS of $400 each; and $3,000 more in WESTINGHOUSE SCHOLARSHIPS will be awarded at the discretion of the judges. Every one of the forty boys and girls will, when in Washington, be awarded the GOLD EMBLEM OF SCIENCE CLUBS OF AMERICA.

If you are planning A CAREER IN SCIENCE and if you are a senior in a secondary school, you will want to take advantage of the opportunities offered by the Science Talent Search. In the past eleven years most of the 3,300 students (40 winners, 260 honorable mentions per year), because of their standing in this competition, have been offered scholarships from other sources in addition to the Westinghouse Science Scholarships.

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or write SCIENCE CLUBS OF AMERICA, 1719 N Street, N. W., Washington 6, D. C.

Here's the easy way to add sound to your films

the new RCA 16mm Magnetic Recorder-Projector

NOW ADD A SPARKLING, new sound track to every 16mm film you use. And do it in minutes—with the new RCA magnetic recorder-projector.

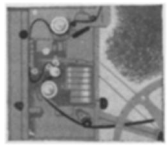
It's the easy, low-cost way to make your films work harder, offer more. With your own sound track on film—old films can tell a new story . . . a general message can be made specific . . . scratched optical sound tracks can be replaced . . . films can speak two languages—one on optical track and the other on magnetic sound track.

With this new RCA projector you can now add sound to your silent films after duplicating on single perforated stock. Or, put a new commentary on your sound films—without impairing your present optical sound track. Add a simple narration, or prepare a complete production in sound.

It's magnificent sound, because it's magnetically recorded sound. And it's just as easy to prepare as a tape recording. To make your own sound track with the RCA magnetic recorder-projector, here's all you do.

1. HAVE MAGNETIC STRIPE ADDED TO YOUR FILM

Laboratories are set up to add a narrow magnetic stripe to your films quickly, expertly—for only a few cents a foot. Exposed film or raw stock can be striped. Sixteen- or 24-frame speed can be used. Double-perforated films (films with two sets of sprocket holes) must be duplicated on single-perforation stock.



2. THREAD PROJECTOR AND SET CONTROLS

Thread the RCA projector as you would for a regular showing. Turn knobs to "record" position, thread film over magnetic recording heads and you're ready to record. No extra gadgets to attach. No extra equipment to set up.

3. WATCH PICTURE—SPEAK INTO MICROPHONE

Record your message on film as you watch the picture. Stop . . . erase . . . re-record at any time. You can plan your recording for a single showing—or use it over and over again.

Compare sound reproduction before you buy

Listen to the magnificent sound reproduction from the RCA magnetic recorder projector before you buy any type of sound projector. You've never heard such faithful sound on 16mm film. And RCA's quiet projector mechanism—the famous "thread-easy" mechanism—keeps irritating projector noise out of your recording. For a superb presentation of either optically or magnetically recorded films, listen to the RCA magnetic recorder-projector. Listen . . . compare . . . before you buy.

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