each different kind of metal known, so that if the "fingerprint rays" could be sorted out in some fashion a chemical identification is possible.

The apparatus for analyzing the tell-tale secondary X-rays consist of a crystal of pure salt shaped into the form of a cylinder. This cylinder does for the mixed-up secondary X-rays what an ordinary prism of glass or a spectrum grating does for white light—it breaks it up into its colors, or wavelengths.

As the X-rays come from the salt crystal they strike a photographic plate at different places and leave marks which distinguish each metal present in the original sample of metal.

Dr. Hamos is carrying out his research in the Rikmuseets Mineralogiska Avdelning in Stockholm. His method is adapted for the rapid analysis of metals and metallic ores where the sample's appearance must not be changed.

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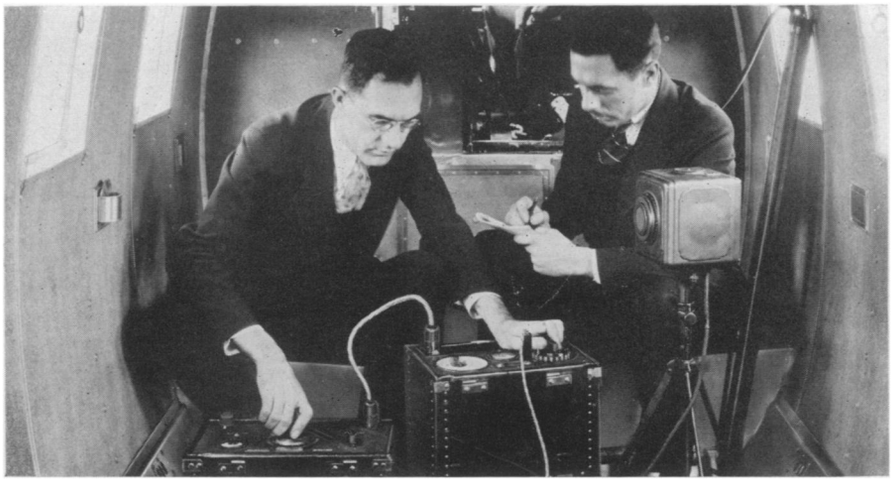

AIRPLANE NOISE ANALYZED DURING FLIGHT

The fact that an airliner is noisy is common knowledge, but the elements of which the noise is composed are of great interest to scientists because they may show the way to curing airplanes of many of their sound ills. Westinghouse engineers are taking data on all the sound vibrations occurring in an airliner cabin while the ship itself is in midair.

PHILATELY

Government Now Honors Science on Postage Stamps

WITH the issue on Aug. 15 of the General Goethals 3-cent Canal Zone stamp, commemorating the twentieth anniversary of the opening of the Panama Canal, another phase of American science was dedicated to the mails.

Postage stamps have recorded history for the people more widely than history books, but most of their illustrations have been kings and presidents.

When the new commemorative stamp went on sale at Colon, the Post Office Department of the Canal Zone placed on visual record George Washington Goethals, chief engineer and administrator of one of the world's greatest engineering feats.

His first two names bring to memory another engineer and builder, who was later to become the first president of the United States. First a surveyor, and then a civil engineer, George Washington built power dams and canals, many of which are still visible in Virginia. He appears on the standard 2-cent and 3-cent U. S. postage stamps.

Benjamin Franklin, whose likeness appears on the present 1-cent stamp, is better known for his scientific work than Washington. As a pioneer in the field of electricity, much of the credit for our present comforts should be given him.

Thomas Jefferson, although chiefly famed as a barrister, diplomat and statesman, was a student of the sciences. He is said to have made use of higher mathematics, especially the calculus, all through his life, and he studied fossil bones in the White House East Room.

There is a custom in this country which forbids the use of any living person's picture on a United States postage stamp. Even a living person's name was once barred. Because of the importance attached to Lindbergh's flight across the Atlantic in 1927, a 10-cent stamp bearing his name made him the first living man to be immortalized by the Post Office Department. Two years later the rule was broken a second time, when a postage stamp appeared which carried the name of Thomas A. Edison. This issue honored the fiftieth anniversary of the first Edison electric light.

Stamps are used for other purposes than postage. For the benefit of game birds, especially ducks, a dollar hunting license stamp will be issued, the receipts to be used for the development of bird sanctuaries. J. N. ("Ding") Darling, noted cartoonist and now chief of the U. S. Bureau of Biological Survey, designed the stamp.

Foreign countries have given philatelic honors to their famous scientists. The physicist Volta, pioneer in electricity for whom the "volt" was named, was commemorated by Italy in a stamp issue. Pasteur, father of bacteriology, and Berthollet, the chemist, have both appeared on French stamps.

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PHYSICS

Speech "Compressed" To Carry Across Atlantic

USE OF the radio-telephone for commercial communication with Europe is commonplace today. But few people who sit down in New York and call London over the air realize the tricks of electrical engineering which make possible the proper transmission of their voices across three thousand miles.

Radio telephone users do not know that voice, for example, must first be "compressed" before it is sent out on the radio waves and then "expanded" back to something like its normal characteristics at the receiving end.

Transatlantic telephone companies use a device called a compandor to raise the energy in the voice tones so that they can more successfully compete with static on their lightning-like journey to Europe.

Ordinarily the energies coming into a radio telephone may have a range from