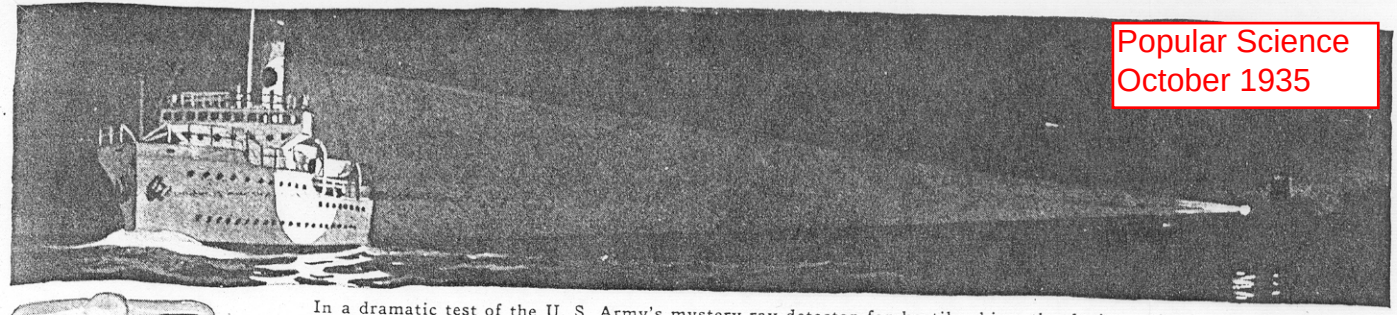
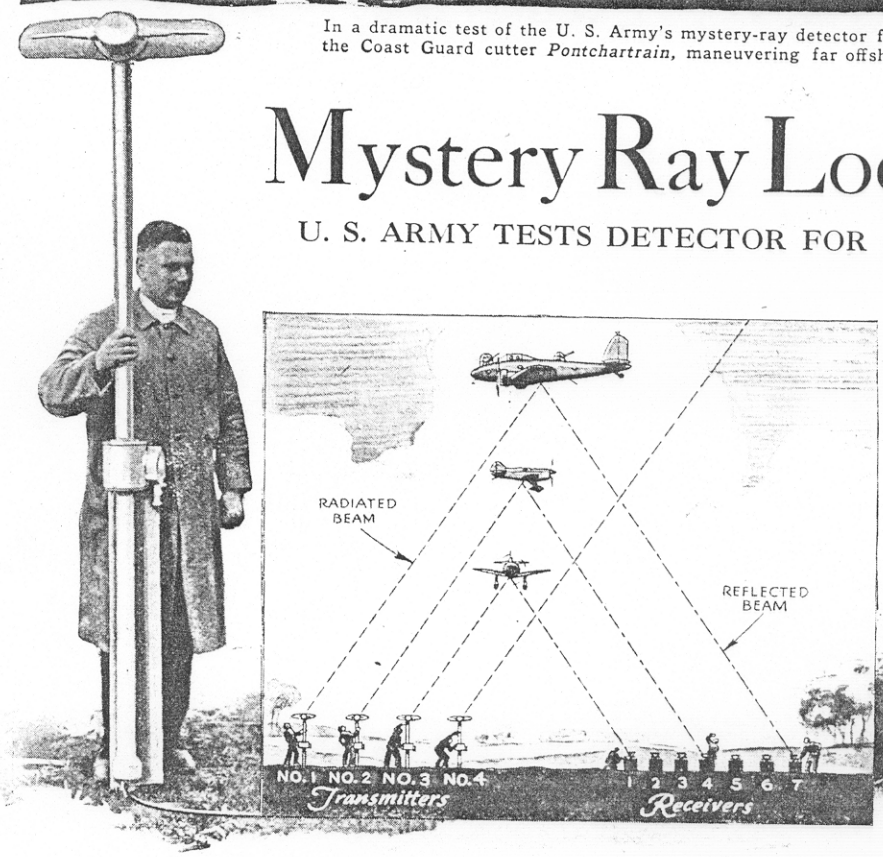
Popular Science
October 1935

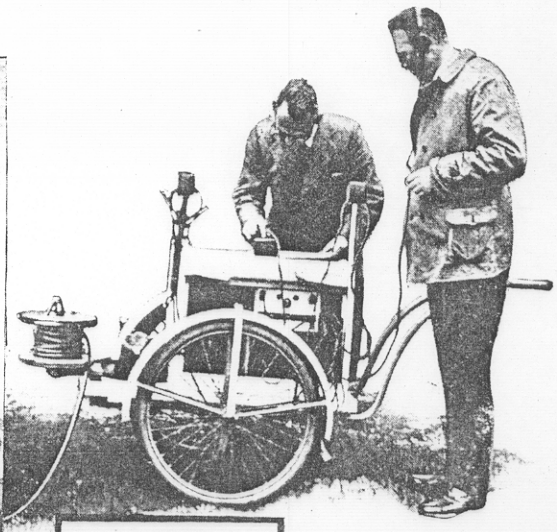


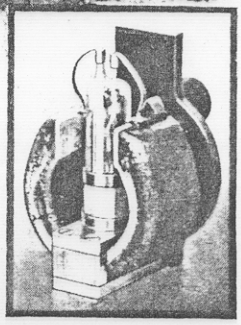
In a dramatic test of the U. S. Army's mystery-ray detector for hostile ships, the device trained a searchlight on the Coast Guard cutter *Pontchartrain*, maneuvering far offshore in the darkness, as depicted above by our artist

Mystery Ray Locates "Enemy"

U. S. ARMY TESTS DETECTOR FOR HOSTILE SHIPS AND PLANES







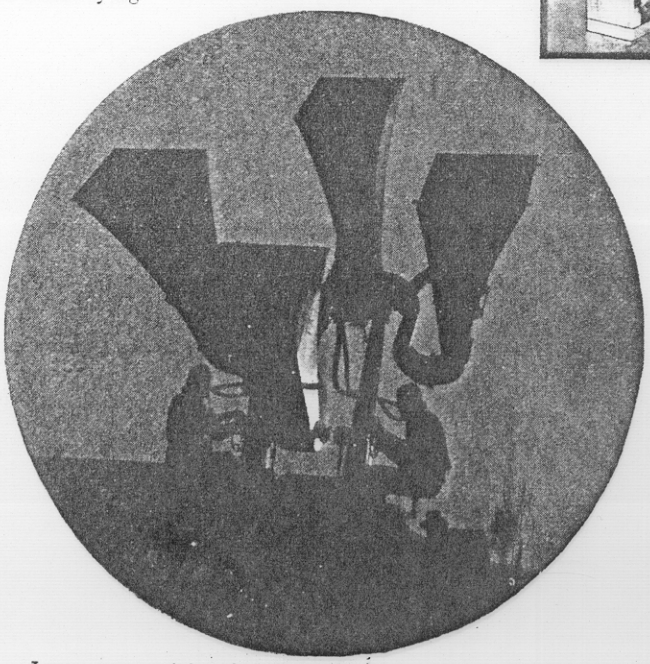
Portable transmitting unit of the German ultra-short-wave field equipment for detecting enemy aircraft. Diagram shows how plane reflects the radio beam. At right, close-up view of the diminutive transmitting unit

ARMED SENTRIES barred visitors from approaching within 200 yards of the Navesink Lighthouse Station on the New Jersey coast, a few nights ago. Behind the enforced barricade, U. S. Army experimenters were trying out a secret new weapon invented by the Signal Corps for use against possible invaders—a "mystery-ray" device reputedly capable of locating an enemy vessel as far as fifty miles at sea.

Twenty times the ray detector trained a huge mobile searchlight upon an invisible target — the Coast Guard cutter *Pontchartrain*, maneuvering without lights somewhere in the darkness offshore. Once, when the beam was lit, it grazed the vessel's stern. The other nineteen times, it struck the *Pontchartrain* squarely amidships, to score perfect bullseyes! Had the detector been used to direct the fire of the big coast defense guns at Sandy Hook, as it would do in war, the ship would have been at their mercy. Declaring the test a complete success, the experimenters prepared to try out the detector next for spotting hostile aircraft, another of its reported capabilities.

How the mysterious ray detector works is the Army's secret. The merest hint as to its nature is taboo, under stringent new regulations cloaking projects of vital importance to national defense. Whether it resembles a radio airplane detector recently reported under development in Germany, therefore, is open to speculation. The German apparatus is said to make use of the fact that ultra-short radio waves behave like light rays and are reflected by solid objects. When a curtain of parallel radio beams is projected skyward and receivers are suitably arranged, any plane intercepting the beams will reflect them back to earth and betray its position.

In this country, meanwhile, the "mechanical ears" used in listening for aircraft have been improved. Soundproofing shields the latest-type detector from exterior noises, so that it can work undisturbed amid city noises or in a howling gale.



Latest-type antiaircraft "ear." Soundproof shielding eliminates exterior sounds, so the instrument can work undisturbed in a gale

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30 CHURCH STREET

NEW YORK

October 10th, 1935

United States Signal Corps Lab.
Fort Monmouth, N.J.

Gentlemen:

We are very much interested in the "Mystery Ray" device described on page 29 of the October 1935 issue of "Popular Science Monthly", which we understand you have developed.

We shall, therefore, appreciate it very much if you will kindly send us at your earliest convenience any further information regarding the "Mystery Ray" that you can.

Thanking you in advance for your kind and prompt attention to the above request, we remain

Yours very truly,

OKURA & COMPANY

Manager.

K/B