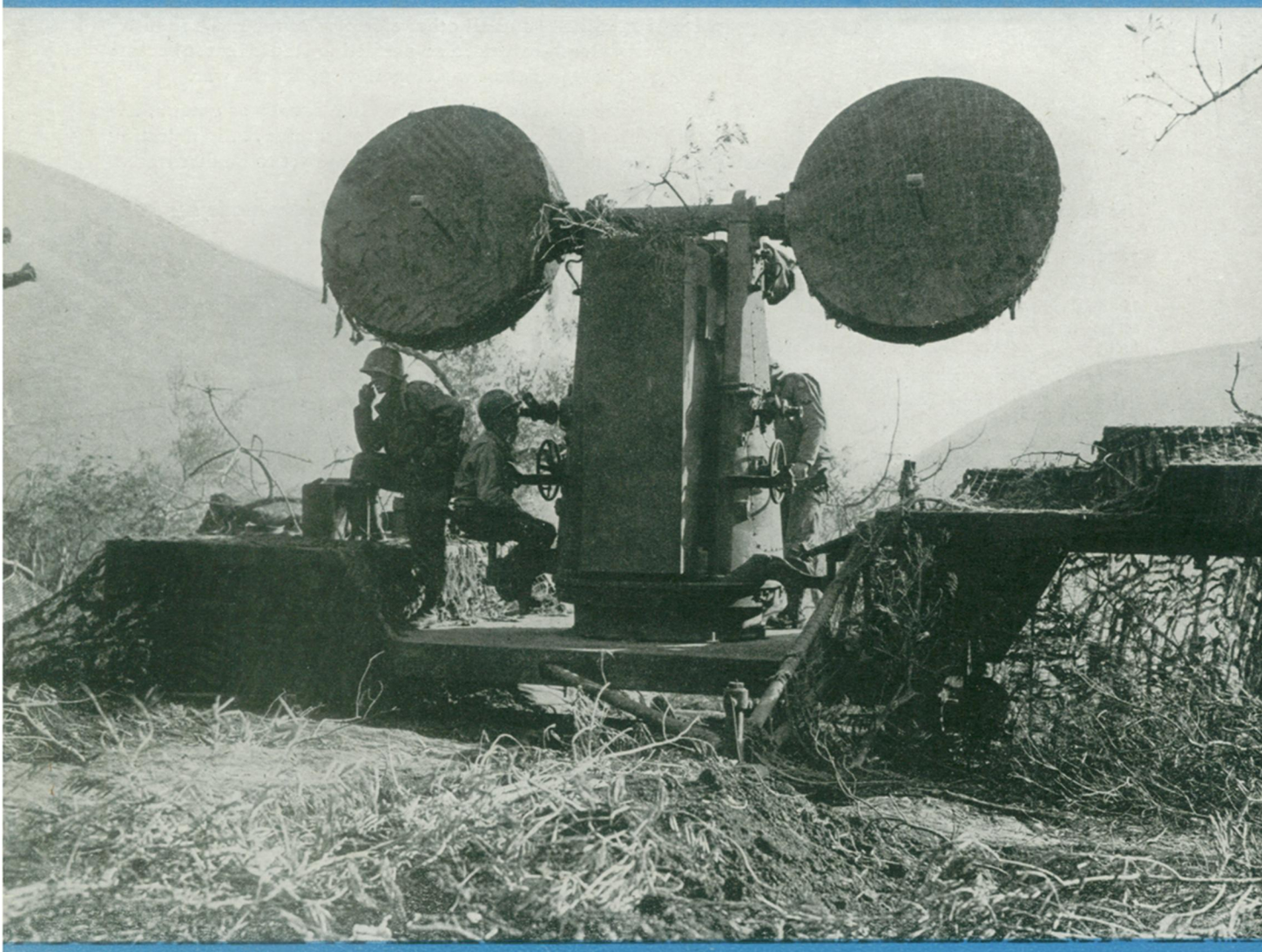
15¢

SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • SEPTEMBER 8, 1945

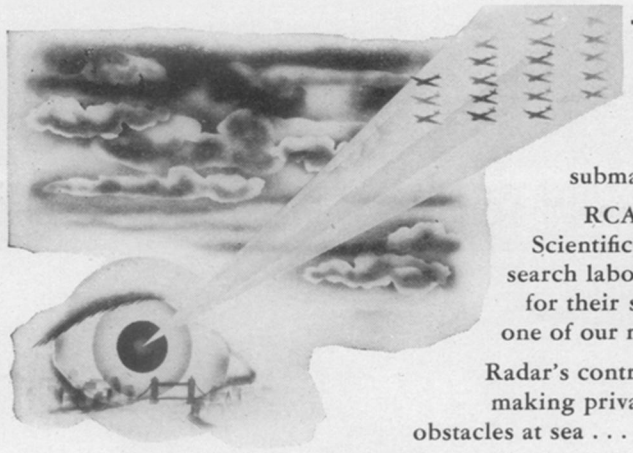


"Mickey Mouse"

See Page 151

A SCIENCE SERVICE PUBLICATION

RCA's role in RADAR



The story of Radar—the magic beam that enabled the United States Navy to sink a Jap battleship eight miles away at night . . . that helped save England in her darkest hours by detecting enemy planes . . . that automatically aims guns and detects submarines . . . this whole story is now officially released.

RCA takes this opportunity to congratulate the Office of Scientific Research and Development, the Army and Navy research laboratories and all other elements of the radio industry for their splendid work in so perfecting Radar that it became one of our most powerful weapons in winning the war.

Radar's contributions in peacetime will be equally as great . . . in making private and commercial flying even safer . . . in detecting obstacles at sea . . . and in hundreds of other ways yet to be discovered.

As for our part in this great effort, we here list the major developments in Radar made by RCA

1932—RCA Laboratories originated micro-wave equipment, which later was used in successful radar experiments.

1934—Echoes were obtained with micro-wave equipment set up near Sandy Hook. This experiment showed for the first time the potentialities of micro-wave radar.

1935—An experimental micro-wave pulse radar system was developed by RCA Laboratories. It was demonstrated to the Army and Navy in 1936.

1936—A lower frequency high power radar was supplied to the Army by RCA.

1937—RCA micro-wave radar was used to scan the Philadelphia skyline with cathode ray indication essentially the same used in today's newest radar sets.

1937—RCA developed an airborne pulse radar. This equipment operated very satisfactorily for detecting obstacles such as mountains, and was also invaluable as an altimeter. It was demonstrated to the Army and Navy in 1937, and at their request was classified as "secret."

1938—RCA started development of a practical altimeter employing FM principles. This and the RCA pulse altimeter later became standard equipment for the Army, Navy, and the British. A large quantity of altimeters of these types have been manufactured for controlling the height of paratroop planes at the time of jumping, for use in bombing enemy ships, and for other military purposes.

1938-9—RCA Victor manufactured the first radar equipment purchased by the Navy.

1939-40—Twenty high-power sets, based on the Navy's design, were developed and installed by RCA Victor in the Navy's important vessels.

1940—RCA developed and built radar apparatus which was especially suited for use on destroyers, and apparatus designed especially for submarines. These equipments were among the earliest procured by the Navy, and have proved very successful.

1940—Experience in the manufacture of vacuum tubes made it possible for RCA Victor to be the first and only manufacturer in the United States to produce a radar tube developed in England. RCA also produces many other types of radar tubes, including the cathode ray tubes of which RCA is largest manufacturer in the world. RCA's unchallenged leadership in cathode ray tubes for radar was made possible by extensive developments in television, since television, too, requires high quality cathode ray tubes.

1941—RCA Victor supplied receivers and indicators for the type of radar then used by the Army.

1942—Loran, a system of long-range navigation, was manufactured by several firms, but difficulties were encountered because of size and weight of the receiver. In 1942 RCA Laboratories undertook the design of a simplified, compact receiver, and achieved such success that large quantities were ordered from RCA Victor and from other firms instructed in RCA's design, and other types were discontinued.

• • •

Some of RCA developments are of major importance in developments of other concerns engaged in radar manufacture.

RCA gave complete design and instruction to other firms in altimeters, tail warning devices, bombing devices, tubes, Loran receivers and other radar equipment designed and developed by RCA.

Several hundred RCA specialists were abroad during the war servicing radar and communication services for Army and Navy equipment made by RCA and other firms.

RCA was represented on the National Defense Research Committee and on other government technical committees on war activities.

RCA engineers have been loaned to government laboratories for special radar projects.

RCA has co-operated with England in radar projects.

RCA

Radio Corporation of America

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.