

INVENTION

Patents of the Week

A surface-connected airborne radar system, a high-flying device for prospectors and a drug for treating irregular heart rhythms have been patented.

► TO EXTEND the radar horizon so that low-flying aircraft can no longer escape early detection, an airborne radar system, carried in an egg-shaped helicopter tied by a cable to a ground-based generator, has been patented.

Inventor Raymond C. Shreckengost, Silver Spring, Md., received patent No. 2,995,740, and assigned rights to the U. S. Navy.

Run by an electric motor, the twin-bladed helicopter receives its power from the tethering cable. It is equipped with an autopilot capable of holding it at the desired altitude, which should be 1,000 feet or more, and stabilizing it against gusty winds.

The radar antenna is installed in the outer part of the fuselage, and can scan the entire horizon when this outer part is rotated around a stationary central section. Data received are then relayed to a ground station.

Mr. Shreckengost points out that the helicopter, capable of remaining aloft for long time periods, has strong advantages as a radar carrier over fixed-wing aircraft, which cannot stay in the same position, and captive balloons, which become unstable when high winds or icing affect them.

Another airborne device, patented by two British inventors, is designed for use by high-flying prospectors. The idea is to locate ore deposits by measuring the distortion of an electromagnetic field, caused by the ores, while an aerial survey is under way.

An amplifier and other detection equipment are linked to a receiving coil, mounted on one wing-tip of the surveying plane, and a transmitting coil, mounted on the other wing-tip. When disturbances indicating ore deposits below are recorded, the location can be marked on aerial photographs for later investigation by ground searchers.

The apparatus received patent No. 2,995,699, awarded to Eric Charles Snelling, Horley, England, and Peter Doidge Gribble, Old Coulsdon, England. Rights were assigned to the Mullard Radio Valve Company Limited, London.

A new drug compound used in treating irregular heart rhythms, clinically known as cardiac arrhythmia and most commonly present in a condition called atrial fibrillation, is the subject of patent No. 2,995,491. John L. Schmidt, Highland Park, Ill., assigned rights to Abbott Laboratories, North Chicago, Ill.

Mr. Schmidt describes the compound, called 1-(2-diethylaminoethyl)-5-ethyl-5-phenylbarbituric acid, as a non-toxic, white, crystalline, hydrochloride salt, soluble in water. He said it has been found "effective

in restoring normal patterns of cardiac contractions."

The compound can be given in injections or in tablet, capsule, powder or flavored liquid form.

Also patented was a child's "stretch" sleeping garment which can be stepped into through a neck opening designed to expand to "several times its normal size." The neck portion is a strip of folded two-way stretch material. A removable elastic band is inserted in the neck strip to assure a snug fit around neck and shoulders.

Inventor Charles E. Bevington, Linfield, Pa., said the garment will "fit persons of several different sizes." He was given patent No. 2,994,884, with rights assigned to National Knitting Company, Royersford, Pa.

An "instructional sky scanner" won patent No. 2,994,971 for Daniel T. Meisenheimer, Milford, Conn., and Louis W. Syarto, Fairfield, Conn. They assigned rights to the A. C. Gilbert Company, New Haven, Conn. The hand-carried device, lit by a battery-powered bulb, holds transparent plates depicting the location of stars and planets, so that the viewer can line up the picture with the actual constellations to learn their names while looking at them.

Patent No. 2,995,633 went to Henry K. Puharich and Joseph L. Lawrence, both of New York, for a hearing aid in the form of a tiny receiver designed to be surgically inserted into a tooth to touch the nerve endings. The user is "able to hear as though through the regular ear system" by sound signals transmitted to the brain through the facial nervous system, the inventors claim.

• Science News Letter, 80:143 August 26, 1961

Questions

ASTRONOMY—What surface temperatures on Jupiter were suggested by recent experiments? p. 134.

BIOCHEMISTRY—How much of a newly discovered fat was found in animal tissues? p. 131.

PUBLIC HEALTH—Why are football helmets with more "give" recommended? p. 136.

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