

Copyright, 1919, by E. P. Co.  
 All During the World War There Were Hundreds of New Inventions Developed and Applied. One of These Was the "Hanson" Electrified A.C. Cable, Buried in the Mined Regions Where Our Ships Had to Travel. By a Suitable Listening Device Aboard the Ship the Navigator is Enabled Instantly to Ascertain Whether or Not He is Out of the Proper Course. A Great Stunt for Foggy Weather.

## Ships Guided by Electrified Cable

THE marvelous "fog tamer" invented by Earl S. Hanson, a young Los Angeles scientist, is to be thoroly tested by the Navy Department, it is said. The Hanson invention marks an important step to make practical what has been called the greatest development in marine travel since the discovery of the steam turbine.

Mr. Hanson's device makes it possible for steamships to navigate any channel with perfect safety, no matter how winding or treacherous, thru the heaviest ocean fogs or under the most adverse weather conditions. It will prevent the tying up of shipping outside of harbors while vessels wait for the weather to clear so that they can navigate the channel. Steamship service between New York, Liverpool, Brest, Southampton, Cherbourg and other channel ports will be as regular as railroad passenger trains arriving in the giant terminals of New York.

Tests will be made at once at the naval base at New London and later a greater test with some of the biggest liners of the world, such as the *Leviathan*, will be made

in Ambrose Channel, New York harbor. Material has been shipt to New London for the first test and men have already been detailed for this work. As soon as the official tests prove satisfactory all the great ports of the United States will be equip by the navy with the device to defy fog, hail, rain, snow and sleet.

By the use of the new invention in connection with the radio compass which the navy has now perfected, all danger or delay in ocean travel due to weather is absolutely eliminated.

The radio compass brings all shipping in sight of land and the new device, like a friendly hand, reaches out and takes the biggest of ships thru the most tortuous channels safely and quickly to its pier.

The new device is simplicity itself. A cable is laid in the center of the ship channel. Thru it is sent an electric current of low frequency which thru the listening devices on board ship gives off a sound of certain pitch that cannot be mistaken for any other sound. The ship hugs the cable from harbor line to the dock. On the bridge and in the captain's cabin listening

devices like telephone receivers are placed and attached by wires to the hull of the ship. The ship follows the course of the cable. Any variation away from the cable is indicated by visible indicators (sensitive galvanometers connected in the receiving coil circuits), which show in feet the distance away from the cable, and the ship is then put back over the cable by the steering rudder in the usual way. By the ear receivers the indicator may be confirmed at all times.

Vessels going into port will use one cable; those coming out another. *The sound on each is different* and there can be no confusion and therefore no collision.

Along the cable, at mile intervals, a section is sheathed with lead. Thru this no sound can come and therefore the man on listening duty can tell instantly how far the ship has progress, and by the cable chart in front of him, can tell where the cable turns and where the ship must be steered to follow the curve of the cable and the center of the channel. The new device, according

(Continued on page 831)



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## Ships Guided by Electrified Cable

(Continued from page 746)

to the experts of the navy who have tested it, and recommended its use, is fool-proof and as reliable as the telephone. It will work in all conditions of water and weather and no amount of electricity in the air or power of the wireless can affect it in any way.

Earl C. Hanson, who is only 28, has been granted basic patents on the system. During the war he donated to the government all his inventions.

Gen. Pershing directed Col. John H. Parker to secure the use of the device for communications in the first battle lines and trenches, and only the signing of the armistice prevented its universal use in the American Expeditionary Forces, it is said.

The cost of installation will be much less than the installation of lighthouses, buoys, lightships, and other fog signals, with the added advantage that the system works without interruption from storms or fogs or other atmospheric conditions, claims the inventor.

It is difficult to estimate the economical saving that will be brought about by the universal installation of the Hanson system, which is applicable to any type of harbor. It may be considered as a refining feature of the radio compass which was developed under the direction of Capt. S. C. Hooper, of the radio division, bureau of steam engineering, Navy Department. R. H. Marriott, expert radio aid of the Navy Department, has conducted tests using the audio system for guiding ships in tests on the Pacific Coast with gratifying results.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, of Electrical Experimenter, published monthly at New York, N. Y., for October 1, 1919.

State of New York, County of New York—ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Hugo Gernsback, who, having been duly sworn according to law, deposes and says that he is the Editor of the Electrical Experimenter, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations:

1. That the names and addresses of the publisher, editor, managing editor and business managers are: Publisher, The Experimenter Publishing Co., 233 Fulton St., New York City; Editor, Hugo Gernsback, 233 Fulton St., New York City; Managing Editor, H. W. Secor, 233 Fulton St., New York City; Business Manager, R. W. DeMott, 233 Fulton St., New York City.

2. That the owners are: Experimenter Publishing Co., 233 Fulton St., New York City; Hugo Gernsback, 233 Fulton St., New York City; Sidney Gernsback, 233 Fulton St., New York City; H. W. Secor, 233 Fulton St., New York City.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

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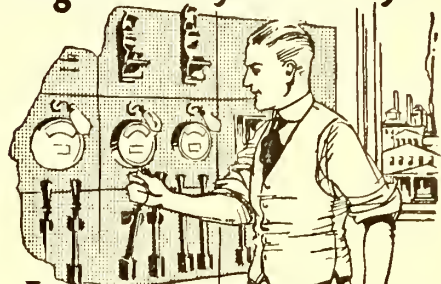
5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is—(Required only of daily publications.)

(SEAL) H. GERNSBACK.  
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(My commission expires Mar. 30th, 1921.)

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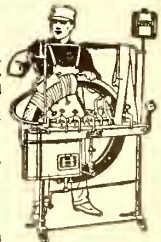
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